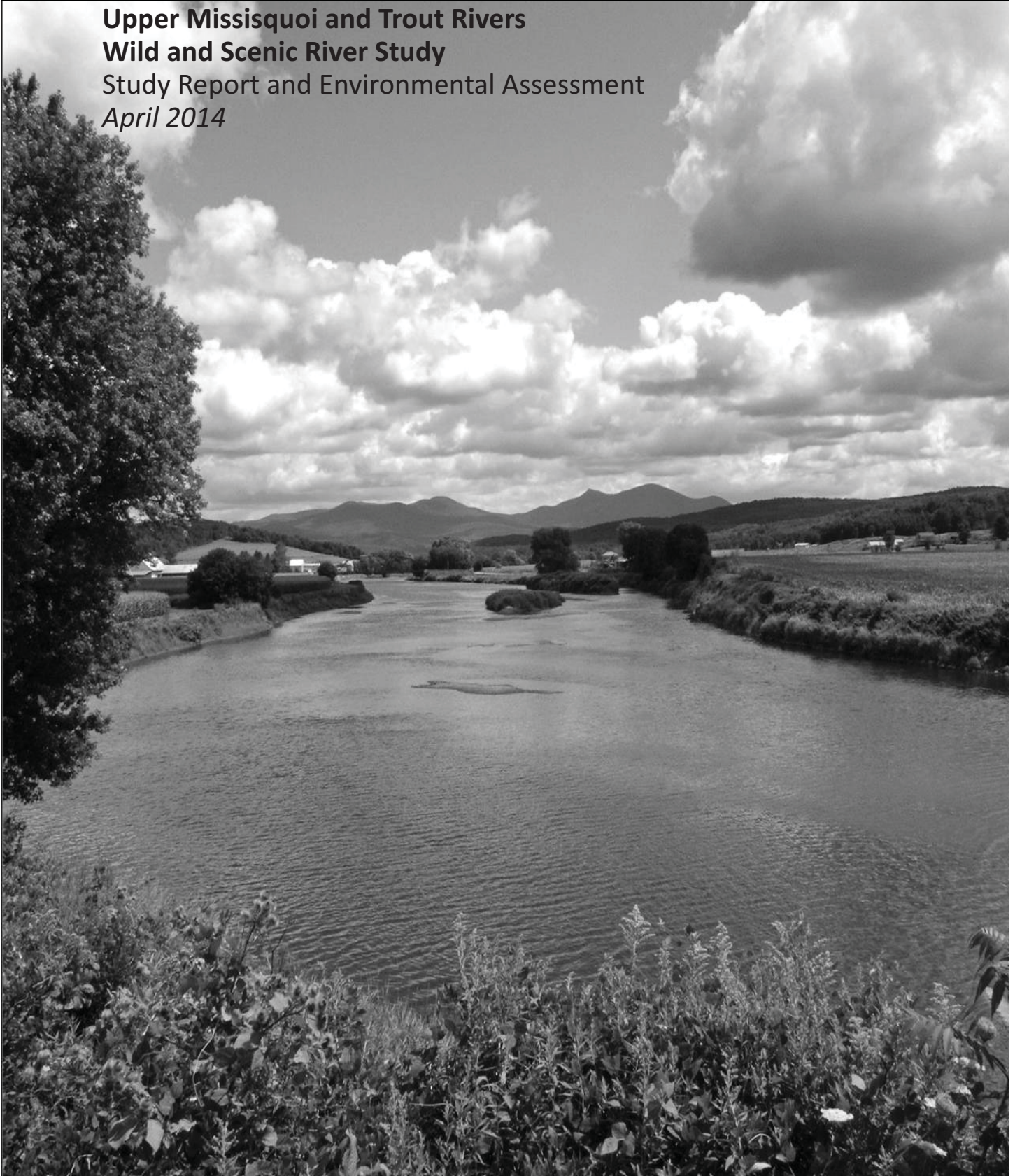


National Park Service  
U.S. Department of the Interior



**Upper Missisquoi and Trout Rivers  
Wild and Scenic River Study**  
Study Report and Environmental Assessment  
*April 2014*



**Front Cover Photo**

Missisquoi River – Dan Moriarty, courtesy of the Missisquoi River Basin Association (MRBA)

**Back Cover Photo**

Trout River, Comstock Covered Bridge – Mike Manahan

# Upper Missisquoi and Trout Rivers Wild and Scenic River Study Study Report and Environmental Assessment

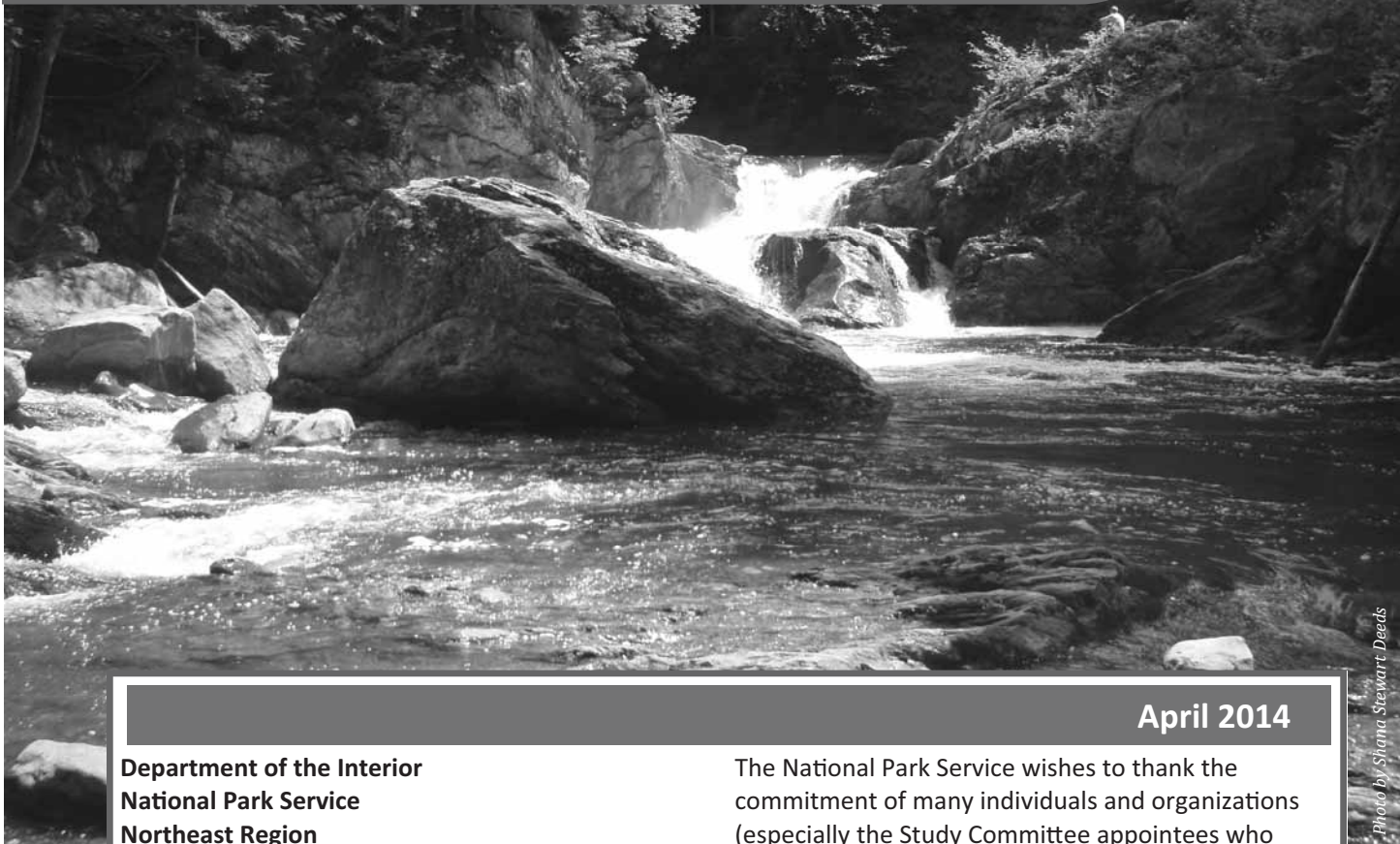


Photo by Shana Stewart Deeds

April 2014

**Department of the Interior  
National Park Service  
Northeast Region**

15 State Street  
Boston, MA 02109-3572  
617-223-5191

**National Park Service  
Northeast Region**

200 Chestnut Street  
Philadelphia, PA 19106  
215-597-6482

For more information on the Upper Missisquoi and Trout Rivers, or to see the companion document: the Upper Missisquoi and Trout Rivers Wild and Scenic Study Management Plan (Management Plan) please visit [www.vtwsr.org](http://www.vtwsr.org) or contact: **Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee**  
2839 VT Route 105  
East Berkshire, VT 05447  
802-393-0076  
[info@vtwsr.org](mailto:info@vtwsr.org)

The National Park Service wishes to thank the commitment of many individuals and organizations (especially the Study Committee appointees who volunteered their time for over four years). Many thanks also to Joyce Kennedy Raymes, the Wild and Scenic Coordinator for the Lower Farmington and Salmon Brook Wild and Scenic River Study, who generously shared her time and resources for use in this Report and its companion document, the Management Plan. Please see the Management Plan for a full list of acknowledgements and thanks to all who contributed to the Study.

Chuck Barszcz, National Wild and Scenic Rivers Program, Division Chief, National Park Service

Jamie Fosburgh, Northeast Region Rivers Program, New England Team Leader, National Park Service

Jim MacCartney, National Wild and Scenic Rivers Program, River Manager, National Park Service

Shana Stewart Deeds, Upper Missisquoi and Trout Rivers Wild and Scenic Study Coordinator



## Upper Missisquoi and Trout Rivers Wild and Scenic Study

Selectboard appointed Study Committee members:

### Berkshire

1. Carol Hickey
2. Todd Kinney

### Richford

1. Annette Goyne
2. Mary Robinson

### Town of Enosburgh

1. Edward G. Ellis
2. Ken Secor

### Town of Troy

1. Helene Croteau
2. Robert Langlands

### Village of Enosburg Falls

1. Mike Manahan (Secretary)

### Village of North Troy

1. Jim Starr
2. Eugene St. Onge

### Lowell

1. Mark Higley
2. Jeff Parsons

### Westfield

1. Jacques Couture (Chair)
2. Dianne Laplante (Treasurer)

### Montgomery

1. Todd Lantery (Vice Chair)
2. Keith Sampietro

And other regular participants:

Missisquoi River Basin Association: John Little and Cynthia Scott  
Northwest Regional Planning Commission (NRPC): Catherine Dimitruk; Bethany Remmers  
VT Agency of Agriculture, Food, and Markets (VAAF): Sylvia Jensen  
VT Department of Environmental Conservation (DEC) - Rick Hopkins, Cathy Kashanski, and Staci Pomeroy

Shana Stewart Deeds, Study Coordinator  
Upper Missisquoi and Trout Rivers Wild and Scenic Study  
2839 VT Route 105, East Berkshire, VT 05447  
802-393-0076  
info@vtwsr.org  
www.vtwsr.org

Jamie Fosburgh  
New England Team Leader  
Northeast Region Rivers Program  
National Park Service  
15 State Street, Boston, MA 02109  
617-223-5191  
jamie\_fosburgh@nps.gov

Jim MacCartney  
River Manager  
Wild and Scenic Rivers Program  
National Park Service  
54 Portsmouth Street  
Concord, NH 03301  
jim\_maccartney@nps.gov

# Upper Missisquoi and Trout Rivers Wild and Scenic Study

## Table of Contents

Cover Page .....	i
Study Committee .....	ii
Table of Contents .....	iii
<b>Summary – Principal Findings</b> .....	1
Eligibility .....	1
Classification .....	1
Suitability .....	1
Alternatives Considered .....	2
Upper Missisquoi and Trout Rivers Management Plan .....	2
Support for Designation .....	2
Partnership Wild and Scenic River Designation .....	2
<b>Chapter 1. Background</b> .....	3
The Wild and Scenic Rivers Program .....	3
Upper Missisquoi and Trout Rivers Wild and Scenic Study History and Methods .....	5
Preauthorization .....	5
Legislation Introduced to and passed by Congress .....	5
Study Committee Formed .....	5
Study Committee Meetings .....	7
Management Plan Development .....	7
Study Committee Outreach and Education .....	8
Study Committee Recommends Designation .....	9
Town Meeting Vote .....	9
<b>Chapter 2. Description of the Study Area</b> .....	11
Description of the Study Area .....	11
Segment by Segment Study Area Description .....	13
Regional Setting .....	15
Water Quality Characteristics .....	15
Study Area Municipalities .....	15
Franklin County .....	15
Orleans County .....	17
<b>Chapter 3. Eligibility and Classification</b> .....	19
Eligibility Criteria .....	19
Upper Missisquoi and Trout Rivers Study Findings .....	21
Eligibility .....	21

# Upper Missisquoi and Trout Rivers Wild and Scenic Study

## Table of Contents

Free-flowing Character .....	22
Free-flowing Character by Segment.....	23
Outstandingly Remarkable Values .....	26
Scenic and Recreational ORVs .....	26
Swimming Holes .....	27
Fishing.....	27
Paddling.....	27
Natural Resource ORVs.....	31
Geology.....	31
Waterfalls, Cascades and Gorges .....	33
Rare, Threatened and Endangered Species and Communities .....	35
Historic and Cultural ORVs.....	38
Archeological Sites.....	38
Bridges .....	40
Classification .....	42
<b>Chapter 4: Suitability .....</b>	<b>45</b>
Suitability Criteria .....	45
Existing Protections.....	46
Scenic and Recreational Protections .....	48
Natural Resource Protections .....	49
Water Quality Protections.....	50
Historic and Cultural Protections .....	56
Local Support .....	58
Management Framework .....	58
Designation Effects .....	59
General Effects of the Partnership Model.....	59
Effects on Dams.....	60
Summary of General Findings on Suitability.....	62
Segment-by-Segment Suitability Findings .....	62
<b>Chapter 5: Environmental Assessment .....</b>	<b>67</b>
Introduction .....	67
Project Description .....	68
Purpose and Need for Action.....	68
Alternatives.....	69

# Upper Missisquoi and Trout Rivers Wild and Scenic Study

## Table of Contents

Alternative A. No Action .....	70
Alternative B. Full Designation .....	70
Features Common to the No Action and Full Designation Alternatives.....	72
Alternatives Considered and Rejected Prior to the Wild and Scenic Study .....	72
Identification of Environmentally Preferable Alternative.....	73
Affected Environment.....	73
Impact of Alternatives.....	73
Impact of Alternatives - Tables .....	75
Impact of Alternatives - Discussion.....	80
Cumulative Impacts .....	81
Public Involvement, Consultations and Coordination.....	82
Local Support for the Management Plan and Wild and Scenic Designation .....	86
Preparers and Contributors .....	86
List of Recipients .....	87

# Upper Missisquoi and Trout Rivers Wild and Scenic Study

## Table of Contents

<b>Maps</b> .....	
Wild and Scenic Rivers of New England .....	4
The Upper Missisquoi and Trout Rivers Wild and Scenic Study Area .....	12
Study Area Segments .....	13
Tributaries, 3 <sup>rd</sup> Order or Larger, in the Study Area .....	14
Land Use in the Study Area .....	16
Dams and hydroelectric power facilities.....	22
Scenic and Recreational ORVs .....	28
Natural Resource ORVs.....	32
Highest Water Quality.....	34
Historic and Cultural ORVs.....	39
Covered Bridges in Montgomery, VT .....	42
Segments Proposed for Designation.....	65
Alternative B - NPS and Environmentally Preferred Alternative.....	71
<b>Appendices</b> .....	89
Appendix 1. Upper Missisquoi and Trout Rivers Study Act.....	
Appendix 2. Town Meeting Results on Designation .....	
Appendix 3. Designation Support Letters .....	
Appendix 4. Outreach and Education Examples .....	
Appendix 5. Hydroelectric Projects.....	



## Summary – Principal Findings

### Eligibility

The National Park Service (NPS) concludes that two segments of the upper Missisquoi River, all of the Trout River, and those tributaries evaluated are eligible for designation into the National Wild and Scenic Rivers System based on their free-flowing condition and the presence of one or more Outstandingly Remarkable Values. Short segments of the Missisquoi River are found to be ineligible due to their lack of free-flowing character due to hydroelectric facilities. The Outstandingly Remarkable Values (ORVs) described in this Study Report (Report) are **Scenic and Recreational, Natural Resource, and Historic and Cultural**, all of which are supported by healthy water quality in the watershed.

### Classification

The Wild and Scenic Rivers Act provides for three possible classifications of eligible river segments: **wild, scenic** and **recreational**. The criteria distinguishing these classifications are based on the degree of human influence and access to these rivers. Based on applicable criteria, the National Park Service (NPS) has assigned a preliminary classification of **recreational** to the segments of the upper Missisquoi and Trout Rivers that are eligible for designation. Some segments likely could have been classified as **scenic**; however, **recreational** was the best classification for the entire proposed designation.

### Suitability

The National Park Service concludes that approximately 35.1 miles of the upper Missisquoi and 11.0 miles of the Trout River are currently eligible and suitable for designation. Two short segments of the upper Missisquoi River are found to meet the standards of eligibility but are currently found unsuitable. Designation would end in Enosburg Falls upstream of the hydroelectric dam project area which is presently **unsuitable** for designation based on FERC licensing for hydropower generation and the wishes of

the Village of Enosburg Falls, the current project owner. The project boundary includes a 4.3 mile segment upstream of the dam that, while riverine in appearance, is under the influence of the dam, leaving the 4.7 miles of the Missisquoi presently influenced by the hydroelectric facility in Enosburg Falls **unsuitable** for designation. Should the project boundary ever be reduced, the upstream 4.3 mile segment would be suitable. A 3.8 mile segment in Lowell is also found eligible but presently **unsuitable** based on the level of community support at this time. The Missisquoi and Trout River tributaries were found eligible for designation due to their free-flowing character and ORVs; however, they were not evaluated for suitability based on a desire to move forward with designation of the mainstem of the Rivers, and timing constraints on the Study. They were not proposed for consideration at Town Meeting votes.

Additional findings of suitability include:

- Existing local, state, and federal regulatory and non-regulatory protections applicable to the upper Missisquoi and Trout Rivers are found to adequately protect the rivers consistent with the purposes of the Wild and Scenic Rivers Act. The Upper Missisquoi and Trout Rivers Wild and Scenic Management Plan developed as part of the Study provides an appropriate management framework for the long term management and protection of the waterways.
- Existing regulations at the federal level in Canada and the Province of Québec were also reviewed to assess applicable protections for the upper Missisquoi and Trout Rivers. According to Vermont Department of Environmental Conservation (DEC) staff, the agricultural regulations are more stringent in Québec than Vermont, and localities have strong regulations on riverine and lakeshore buffer activities. Additionally, Canada's partnership with the Lake Champlain Basin Program and the seeming lack of additional hydroelectric potential in the North Missisquoi River (the portion that runs through Canada locally called the Missisquoi du Nord) indicate sufficient measures in place in Canada to protect the Missisquoi in the long term.

- Based upon the official record of endorsement from local citizens, local governing bodies, and local and regional organizations in the eight municipalities, it is concluded that there is substantial support for designation under the Wild and Scenic Rivers Act based on the Partnership Wild and Scenic Rivers model.

### Alternatives Considered

This Study Report evaluates one Wild and Scenic River designation alternative in addition to the ‘no action’

#### Alternative A.

**Alternative B: Full Designation.** This alternative would designate all segments of the upper Missisquoi and Trout Rivers found to meet the criteria for eligibility and suitability. This total designation length would be 35.1 miles of the upper Missisquoi River and 11.0 miles of the Trout River. This alternative would designate the upper Missisquoi River from the Westfield/Lowell Town Line to Canada (excluding the property and project areas of the Troy and North Troy hydroelectric facilities) and from Canada to the project boundary of the Enosburg Falls dam; and the entire Trout River. This alternative is identified as the preferable alternative based on eligibility, suitability, provisions for the maximum protection to free-flowing rivers values consistent with the purposes of the Wild and Scenic Rivers Act, and based on the documented support of local citizens, organizations and state river management stakeholders.

#### Upper Missisquoi and Trout Rivers Management Plan

Development of the Upper Missisquoi and Trout Rivers Management Plan (Management Plan) has been one of the primary tasks of the Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee (Study Committee). The Management Plan is the product of an extensive collaboration effort between the Study Committee, local citizens, resource and regional experts, state agencies, volunteer partnership organizations and more. The Management Plan contains the vision and strategies for protecting and enhancing the Wild and Scenic River values identified as important at the local, regional, state or national

level.

If the upper Missisquoi and Trout Rivers are designated, the National Park Service concludes that the Management Plan would serve as the comprehensive rivers management plan required under Section 3(d)(1) of the Wild and Scenic Rivers Act (WSRA). It functions as a companion document to this Study Report. If the rivers are not added to the National Wild and Scenic Rivers System, the Management Plan will still serve to provide insight for state and local partners working to manage and protect the special values of the Missisquoi and Trout Rivers.

#### Support for Designation

At their Vermont Town Meeting Day (either March 4 or March 5, 2013), eight of the nine municipalities (Berkshire, Enosburgh/Enosburg Falls, Montgomery, Richford, Troy/North Troy, and Westfield) voted to seek Wild and Scenic designation based on the Management Plan. Only the Town of Lowell voted not to support designation at this time. In addition, many local and state partnership organizations expressed their support for designation as well. Municipalities voted on the following article:

*To see if the voters of the Town of \_\_\_\_\_ will petition the Congress of the United States of America that the upper Missisquoi and Trout Rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.*

#### Partnership Wild and Scenic River Designation

The Upper Missisquoi and Trout Rivers Wild and Scenic Study was conducted based on the established model of the Partnership Wild and Scenic Rivers. All members of the Study Committee thought that this model would work best in their communities. During the course of the Study, the Study Committee confirmed its preference for the Partnership model, and rejected any alternative model which increased federal management or acquisition of lands (including the formation of a National Park).

# Chapter 1. Background



This chapter provides an introduction to the Wild and Scenic Rivers Act and the Upper Missisquoi and Trout Rivers Wild and Scenic Study. It includes a review of the project's history, the Study strategy and process, the principal participants, and the major Study products and accomplishments.

## The Wild and Scenic Rivers Program

The National Wild and Scenic Rivers System was established by Congress in 1968 to protect certain outstanding rivers from the harmful effects of new federal projects such as dams and hydroelectric facilities. Since then 203 rivers or river segments totaling over 11,000 miles have been protected nationwide. To be considered "Wild and Scenic" a river must be free-flowing and have at least one river-related outstanding natural, cultural, or recreational resource value. The Congressional declaration of policy in the Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) states:

*It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-*

*flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.*

There are only eight designated Wild and Scenic River segments located in New England: the Eightmile and upper Farmington in Connecticut; the Allagash in Maine; the Sudbury-Assabet-Concord, Taunton, and Westfield in Massachusetts; and the Lamprey and Wildcat in New Hampshire. In addition to the upper Missisquoi and Trout

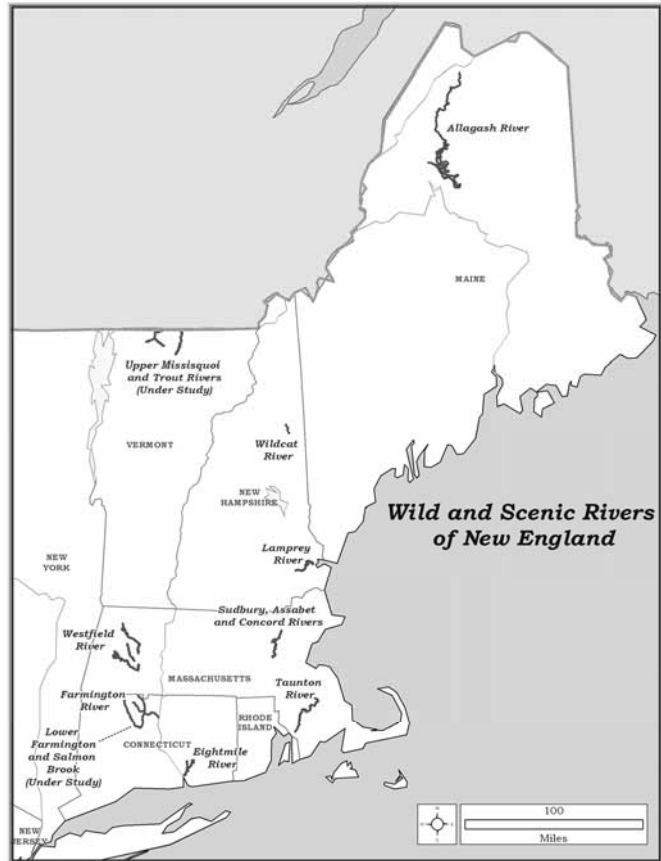
## Chapter 1. Background

Rivers in Vermont, there is an ongoing study of the lower Farmington River and Salmon Brook in Connecticut.

Each river designated into the national system receives permanent protection from federally licensed or assisted dams, diversions, channelization or other water projects that would have a direct and adverse effect on its free-flowing condition, water quality, or Outstandingly Remarkable Values, or, for projects outside the designated segments, that would invade the segments or unreasonably diminish the segment's fish, wildlife, scenic, or recreational resources. The Wild and Scenic Rivers Act explicitly prohibits any new hydropower dam and related facilities licensed by the Federal Energy Regulatory Commission (FERC) on or directly affecting a designated river segment. The determination of a proposed federally assisted water resource project's or FERC-licensed hydropower project's potential impacts on the river's "outstandingly remarkable" values, water quality, and free-flowing condition is made by the federal river administering agency, in this case the National Park Service.

Studies under the Wild and Scenic Rivers Act (WSRA) can bring additional local benefits such as the preparation of an advisory Management Plan, research studies, and cooperation among numerous river stakeholders. River designation may bring prestige and recognition to the region and can boost the local economy through tourism, possible funding through the National Park Service, matching grants, in-kind support, and volunteer assistance.

Before a river can be added to the National Wild and Scenic Rivers System, it must be found both eligible and suitable. To be eligible, the river must be 1) free-flowing and 2) possess at least one river-related Outstandingly Remarkable Value such as exceptional scenery, fisheries, and wildlife, water quality, or cultural resources. The suitability determination is based on factors such as public support for designation versus conflicting river uses (e.g., hydropower development), evidence of adequate existing resource protection, and lasting protection



**Figure 1.** There are eight designated rivers in New England (lead administrators in parentheses): Allagash, ME (State of Maine); Lamprey, NH (National Park Service); Wildcat Brook, NH (U.S. Forest Service); Concord, Sudbury, and Assabet Rivers, MA (National Park Service); Taunton, MA (National Park Service); Westfield, MA (Commonwealth of Massachusetts); Eightmile, CT (National Park Service); Farmington, CT (National Park Service). Other than the upper Missisquoi and Trout Rivers, the Lower Farmington River and Salmon Brook are under study in Connecticut. The five rivers administered by the National Park Service are Partnership Rivers.

measures such as are documented in the Management Plan.

Local residents, leaders, and organizations must show strong support of their intent to participate in the long-term protection of the river. The eligibility and suitability analyses are presented in the chapters that follow.

*Partnership Wild and Scenic Rivers, once designated, rely on pre-existing local and state regulations and management which continue even if designation occurs.*

## Upper Missisquoi and Trout Rivers Wild and Scenic Study History and Methods

### *Preauthorization*

In 2004, Missisquoi River Basin Association (MRBA) Chair John Little and Treasurer Wendy Scott attended a River Rally conference and learned about the Wild and Scenic Rivers program. Their interest was piqued when they learned that Vermont has no Wild and Scenic Rivers. They felt the Missisquoi River, should be considered for designation. There began a 5-year effort, primarily on the part of MRBA Board members John Little, Anne McKay and Chris O’Shea, of working with Selectboards, community members, and the Vermont Congressional delegation to garner support for a study to determine the eligibility of the Missisquoi and Trout Rivers for inclusion in the National Wild and Scenic Rivers System. MRBA members explored the Partnership Rivers model, and concluded it would be a good fit for the region. Ten municipalities (Berkshire, Town of Enosburgh, Village of Enosburg Falls, Jay, Lowell, Montgomery, Village of North Troy, Richford, Westfield, and the Town of Troy) presented letters of support for authorization and participation in the Study.

### *Legislation Introduced to and passed by Congress*

The Vermont Congressional delegation consisting of Representative Peter Welch and Senators Patrick Leahy and Bernard Sanders introduced legislation H.R. 146 to Congress to amend the Wild and Scenic Rivers Act to include the upper Missisquoi and Trout Rivers as Study rivers.

This legislation became part of the Omnibus Public Land Management Act of 2009, and was signed on March 30, 2009 by President Obama as Public Law 111-11. Title V, Subtitle B, Section 5101 of the act amends the Wild and Scenic Rivers Act to authorize a Study of three segments of the Missisquoi and Trout Rivers in Vermont and reads as follows.

**PUBLIC LAW 111-11—MAR. 30, 2009**  
**Subtitle B—Wild and Scenic Rivers Studies**

### **SEC. 5101. MISSISQUOI AND TROUT RIVERS STUDY.**

(a) *DESIGNATION FOR STUDY.*—Section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(a)) is amended by adding at the end the following:

“(140) MISSISQUOI AND TROUT RIVERS, VERMONT.—The approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy, the approximately 25-mile segment from the Canadian border in East Richford to Enosburg Falls, and the approximately 20-mile segment of the Trout River from its headwaters to its confluence with the Missisquoi River.”

(b) *STUDY AND REPORT.*—Section 5(b) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(b)) is amended by adding at the end the following:

“(19) MISSISQUOI AND TROUT RIVERS, VERMONT.—Not later than 3 years after the date on which funds are made available to carry out this paragraph, the Secretary of the Interior shall—

“(A) complete the study of the Missisquoi and Trout Rivers, Vermont, described in subsection (a) (140); and

“(B) submit a report describing the results of that study to the appropriate committees of Congress.”.

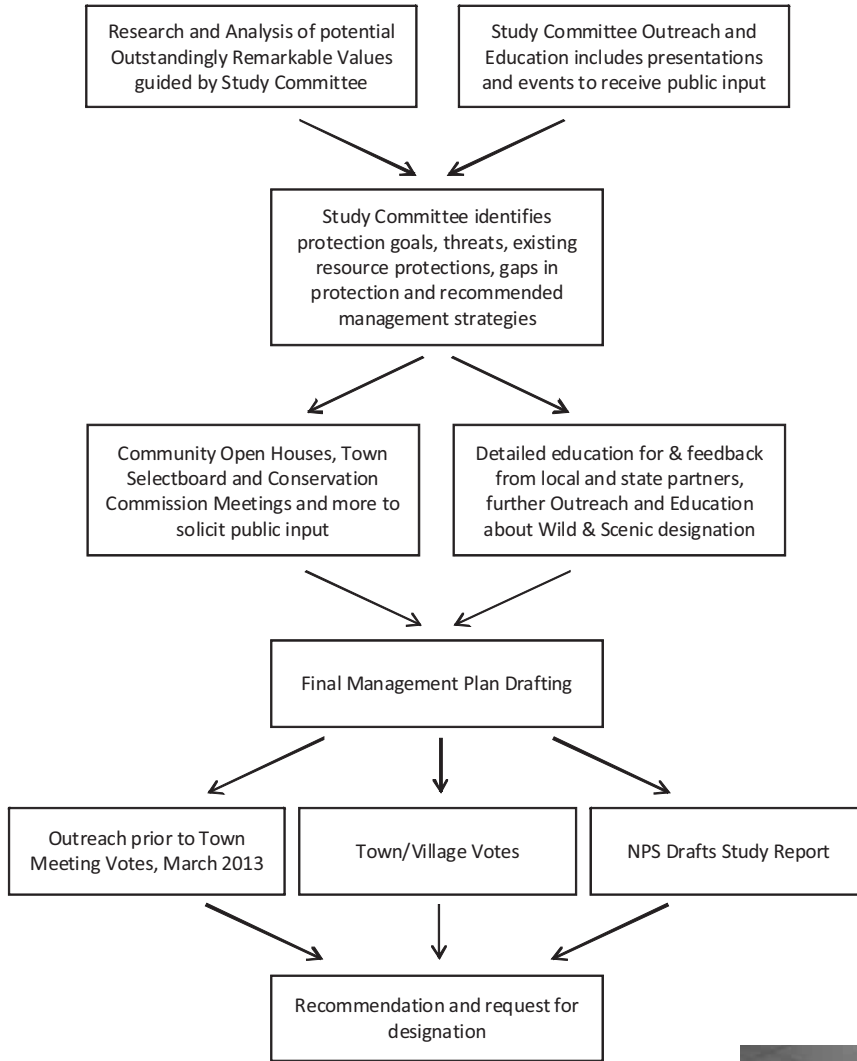
(c) *AUTHORIZATION OF APPROPRIATIONS.*—There are authorized to be appropriated such sums as are necessary to carry out this section.

### *Study Committee Formed*

This Study was conducted under the principles of Partnership Wild and Scenic Rivers by the National Park Service in partnership with the locally-appointed Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee and other local and state stakeholders.

The Upper Missisquoi and Trout Rivers Wild and Scenic Study is a partnership of organizations and official appointees from the Study towns who have volunteered their time since 2009 to represent their communities. The Upper Missisquoi and Trout Rivers

## Chapter 1. Background



**Figure 2.** Wild and Scenic Study Process Flow Chart.



**Figure 3.** Vermont geology expert Barry Doolan discusses the geology of the upper Missisquoi and Trout Rivers with the Study Committee at a monthly meeting. *Photo by Shana Stewart Deeds.*

Wild and Scenic Study Committee recognizes the importance of continuing local control of river management on rivers such as the Missisquoi and Trout that flow predominantly through private lands. During the Study it brought community members together in identifying, protecting, managing and potentially enhancing local river resources. The membership of the Study Committee is listed in the introduction of this Report.

#### *Study Committee Meetings*

In addition to writing the Management Plan, the long-term goal of the Study Committee is to encourage, through education and outreach, planning at the local, regional and state levels which utilizes the information and voluntary recommendations outlined in the Management Plan regardless of the outcome of designation.

The Study Committee rotated its regular meetings, on the third Thursday of each month, among the ten towns and villages in the Study area. All meetings were run by consensus and were advertised, and open to the public. Votes, when required, were approved by a majority of the officially-appointed representatives present.

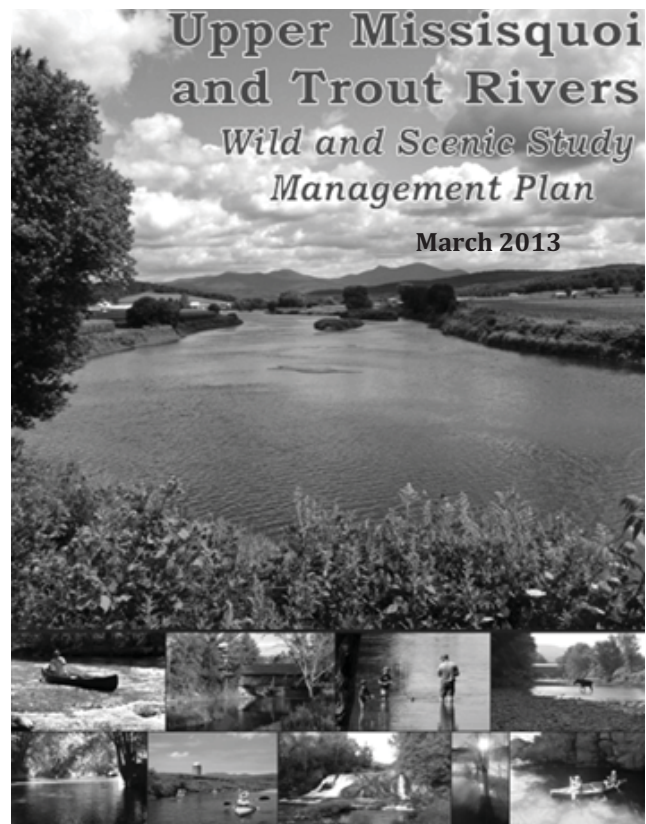
#### *Management Plan Development*

The Management Plan was developed over a period of four years, beginning with the formation of the Study Committee and the hiring of the Study Coordinator in late 2009, with the technical and financial assistance of the National Park Service. First the Committee, along with input from local, state, and federal experts, identified recreation, natural and cultural values important to the local communities that would become the focus of Management Plan development and Wild and Scenic River eligibility determinations.

The NPS agrees with the Study Committee's findings regarding potential ORVs which, along with free-flowing character and water quality, formed the backbone of the Study's investigations. The Study Committee worked to capture the local knowledge

about the resources of the upper Missisquoi and Trout Rivers. The Study Committee sought knowledge from consultants, academic institutions, local experts, and State agencies to identify potential ORVs. The results of the research helped to produce a clear picture of the status of the potential ORVs, as well as identifying existing protections for the potential ORVs and the management outcomes resulting from these protections. Major research was undertaken during the Wild and Scenic Study to identify ORVs, develop management schemes, and help determine eligibility and suitability of the upper Missisquoi and Trout Rivers for designation.

Potential ORVs were identified in each of the following categories (though some resources belong in more than one category): **Scenic and Recreational, Natural Resource and Historic and Cultural.** Each ORV was described by addressing the following:



**Figure 4.** Please see the Upper Missisquoi and Trout Rivers Wild and Scenic Study Management Plan for more detailed information.

## Chapter 1. Background

- ≈ individual resources and their unique, outstanding or remarkable attributes
- ≈ protection goals for these resources
- ≈ existing protections for these resources (local, state and federal protections)
- ≈ potential threats to these resources
- ≈ gaps in protections based on these threats
- ≈ opportunities for action or management recommendations identified for each resource

The identification of potential ORVs, management and protection research, and public engagement that ultimately culminated in the Management Plan were all conducted with the active participation and technical assistance of National Park Service Wild and Scenic River staff to ensure that needs and requirements of the Wild and Scenic River Study, and potential future Wild and Scenic River designation, were being met.

The Management Plan provides a roadmap for the residents, and local, regional and state stakeholders to enhance existing measures. The ways stakeholders can build on, augment, fill gaps or otherwise improve the existing management tools to better protect the Wild and Scenic River values of the Missisquoi and Trout Rivers were identified by the local community through the Study process and discussed in the Management Plan.

### *Study Committee Outreach and Education*

The Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee has posted a yearly summary of accomplishments on the webpage ([www.vtwsr.org](http://www.vtwsr.org)) listing the types of education and outreach activities completed by the Committee. The following is an abbreviated list of projects completed by the Study Committee:

- ≈ Monthly Study Committee meetings advertised and open to the public
- ≈ Rotating displays with Wild and Scenic information available in town clerk offices, town libraries and schools, farmer's markets, local festivals and fairs
- ≈ Information distributed at town meetings and through landowner mailings
- ≈ Summer newsletters created and distributed at events, local venues, and through river-front landowner mailings
- ≈ Newspaper articles and ads presented information on the Wild and Scenic Study
- ≈ A traveling Power Point presentation developed and presented at meetings of various local and State organizations
- ≈ Paddles held on all easily navigable sections of the upper Missisquoi
- ≈ Informational potlucks held
- ≈ A film series occurred in each county
- ≈ Online outreach occurred on Facebook, the Study website and blog, and through SurveyMonkey
- ≈ Committee meetings taped and played on public access television
- ≈ Resource review at meetings invited knowledgeable speakers such as:
  - Staci Pomeroy, from the VT ANR's Department of Environmental Conservation - Watershed Management Division, River Program, set up the river demonstration known as a flume, and Dori Barton from Arrowwood Environmental discussed the geomorphology of the Study rivers
  - Walter Opuszynski from the Northern Forest Canoe Trail discussed the trail and specifically the section along the Missisquoi River



- John Little, Keith Sampietro and Ken Secor presented photos and details of paddling adventures
- Mike Manahan and Parma Jewett shared their fishing experience
- Janice Geraw from the Enosburgh Historical Society, Sam Thurston from the Lowell Historical Society, and Scott Perry from the Montgomery Historical Society discussed local history at Committee meetings
- Barry Doolan and Stephen Wright from UVM discussed local bedrock and glacial geology
- Rich Langdon from VT ANR's Department of Environmental Conservation - Watershed Management Division and Bernie Peintka from VT's Fish and Wildlife Department discussed Vermont's fish populations
- Ben Gabos, Laurie DiPietro and Sylvia Jensen from the Vermont Agency of Agriculture discussed local water quality protections and projects on farms
- Bobby Farlice-Rubio from the Fairbanks Museum discussed Abenaki history along the rivers
- NPS representatives discussed designation and its effects on hydropower at a Committee meeting in Lowell with many local community members present

≈ Leading up to Town Meetings numerous newspaper articles appeared in local papers, WCAX TV aired an interview about the designation, VPR's Vermont Edition interviewed the Study Coordinator, & informational postcards were sent to all residents in the Study area

≈ A short video produced by the Study Committee was viewed at most Town Meetings and included a flyover of the area proposed for designation and interviews of Study Committee members and the NPS

A major outreach and education effort was conducted throughout the ten municipalities in the Study area including active events such as river festivals, tree planting, river cleanups, school education on macroinvertebrates and paddling as well as information disseminated through print media, radio and television. The Outreach subcommittee worked to make the outreach broad enough to engage and inform the maximum number of local residents, and gather input about the river resources they value. Meetings, presentations, workshops, booths at events, newsletters, posters, newspaper articles, outreach through local organizations, mailings, and the Study website were all venues for outreach. Some examples of outreach are included in the appendices at the end of this Report.

### *Study Committee Recommends Designation*

On October 18, 2012, the Study Committee unanimously voted in favor of recommending the designation of the Missisquoi and Trout Rivers into the National Wild and Scenic Rivers System. The Study Committee supported the decision that designation as Partnership Wild and Scenic Rivers, based on implementation of the Management Plan, through a locally-based Wild and Scenic Committee (like the Study Committee), can be an important contributor to the rivers and adjacent communities. This Partnership approach has proven successful in the neighboring New England states and there is no evidence of an unwanted or heavy federal presence. With the support of the National Park Service, these findings became part of the presentation of Study outcomes that preceded and formed the basis of Town Meeting votes in participating Study communities, and determined the proposed upper Missisquoi and Trout River segments listed as eligible and suitable for designation.

### *Town Meeting Vote*

The Study Committee's recommendation for designation and supporting the Management Plan was presented in an article at Town Meetings in March

## Chapter 1. Background

2013 following a public comment period. This article read as follows:

*To see if the voters of the Town of \_\_\_\_\_ will petition the Congress of the United States of America that the upper Missisquoi and Trout Rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.*

Favorable votes demonstrated local support for designation by Congress with the intention that designation would not bring additional federal acquisition or management of lands. Berkshire, Enosburgh/Enosburg Falls, Montgomery, Richford, Troy/North Troy, and Westfield all voted in favor of petitioning Congress to include the Missisquoi and Trout Rivers as components of the National Wild and Scenic River System. The voters of Lowell did not support designation at this time. The Selectboard of the Town of Jay, which participated as a part of the Study, decided not to bring the vote to their Town Meeting despite the fact that Jay Branch (a tributary to the Missisquoi River) is eligible for designation because the Study Committee decided not to include tributaries in their recommendation for designation at this time.

## Chapter 2. Description of the Study Area

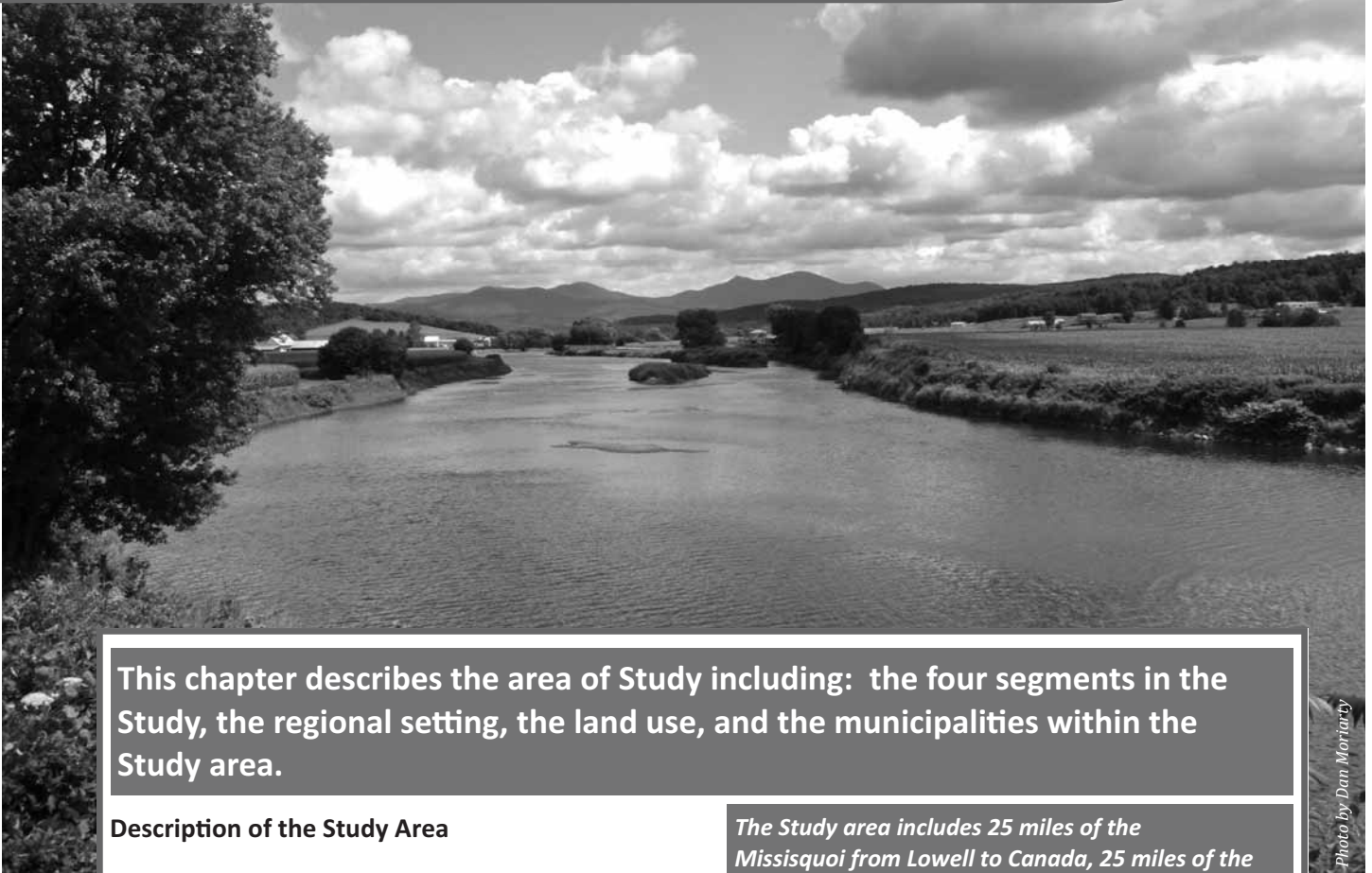


Photo by Dan Mortarty

This chapter describes the area of Study including: the four segments in the Study, the regional setting, the land use, and the municipalities within the Study area.

### Description of the Study Area

The Missisquoi and Trout Rivers flow through mixed forests, working landscapes and small villages in northern Vermont. The Study rivers border the northern Green Mountains, some of Vermont's highest peaks.

The land use in the Missisquoi River watershed is 66% forested, 25% agricultural, and 6% urban. The Trout River watershed is 84% forested, 7% agricultural and 3% urbanized. Land use information retrieved from Vermont Center for Geographic Information (VCGI) land use layers.

The Missisquoi and Trout Rivers and their tributaries provide many resources to the communities through which they flow including cultural, scenic, recreational, and water resource values. For example, these rivers support a diverse fishery, with a mix of high elevation cold-water streams as well as slower-flowing warm water

*The Study area includes 25 miles of the Missisquoi from Lowell to Canada, 25 miles of the Missisquoi from Richford to Enosburg Falls, and 20 miles of the Trout River from Montgomery to East Berkshire.*

reaches. The varied fish habitat and relative ease of access to many sections of rivers and streams create significant opportunities for recreational fishing in the Missisquoi watershed. The Missisquoi River and its many tributaries are also popular for boating, swimming and wildlife viewing, and provide an important water resource for human use including drinking water and agricultural needs.

PUBLIC LAW 111-11 (MAR. 30, 2009) required the study of the following river segments:

**[Segment 1]** The approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy (including the East Branch of the Missisquoi River tributary).

**[Segment 2]** The approximately 25-mile

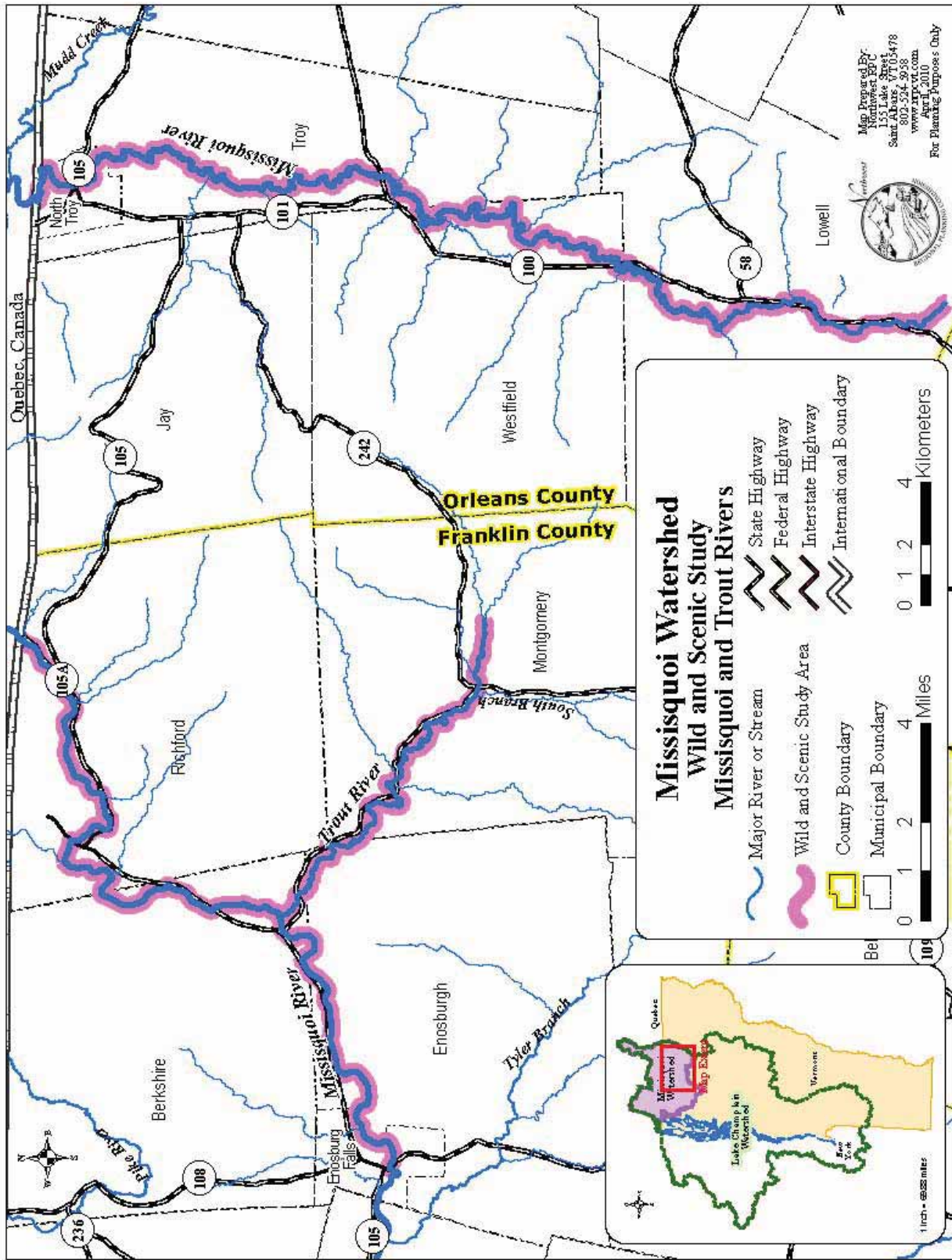


Figure 5. The Upper Missisquoi and Trout Rivers Wild and Scenic Study Area.

segment from the Canadian border in East Richford to Enosburg Falls (to the dam in Enosburg Falls).

**[Segment 3]** The 20-mile segment of the Trout River from its headwaters to its confluence with the Missisquoi River (including the South Branch of the Trout River tributary).

In addition, based on local interest of the Study Committee, local communities, and stakeholders, major tributaries (typically 3rd order and larger) were assessed for their water quality, contribution to potential ORVs, and management significance. Collectively, these tributaries of the upper Missisquoi and Trout Rivers, as detailed later in this Report, are referred to as Segment 4.

**[Segment 4]** The tributaries of the upper Missisquoi and Trout Rivers.

*Segment by Segment Study Area Description*

**[Segment 1: Headwaters in Lowell to North Troy/ Canadian Border]** The Study area begins in Lowell, VT, on the northern side of Hazen’s Notch Road. The Missisquoi River flows north from Lowell through the municipalities of Westfield, Troy and North Troy, VT. This section of the river meanders through agricultural fields and forests, and includes rare Serpentine bedrock outcroppings and silver maple floodplain



forests. There are several riffles and water features in this section, most notably Big Falls in North Troy. Big Falls is the largest undammed waterfall in Vermont and is part of Big Falls State Park. Once the river flows over Big Falls and through its gorge, it passes into Canada and eventually reenters the United States in Richford, VT. There are many points of access along the river in this stretch for recreation including boating, fishing and swimming.

**[Segment 2: Border/Richford to Enosburg Falls]** The Study area also includes the Missisquoi River after

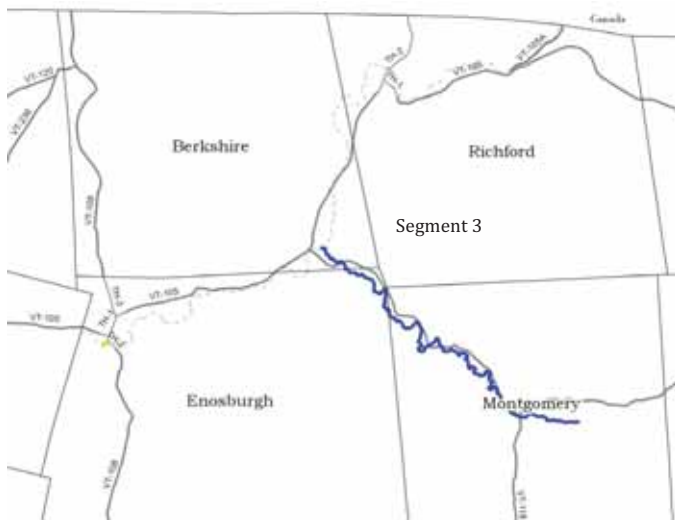
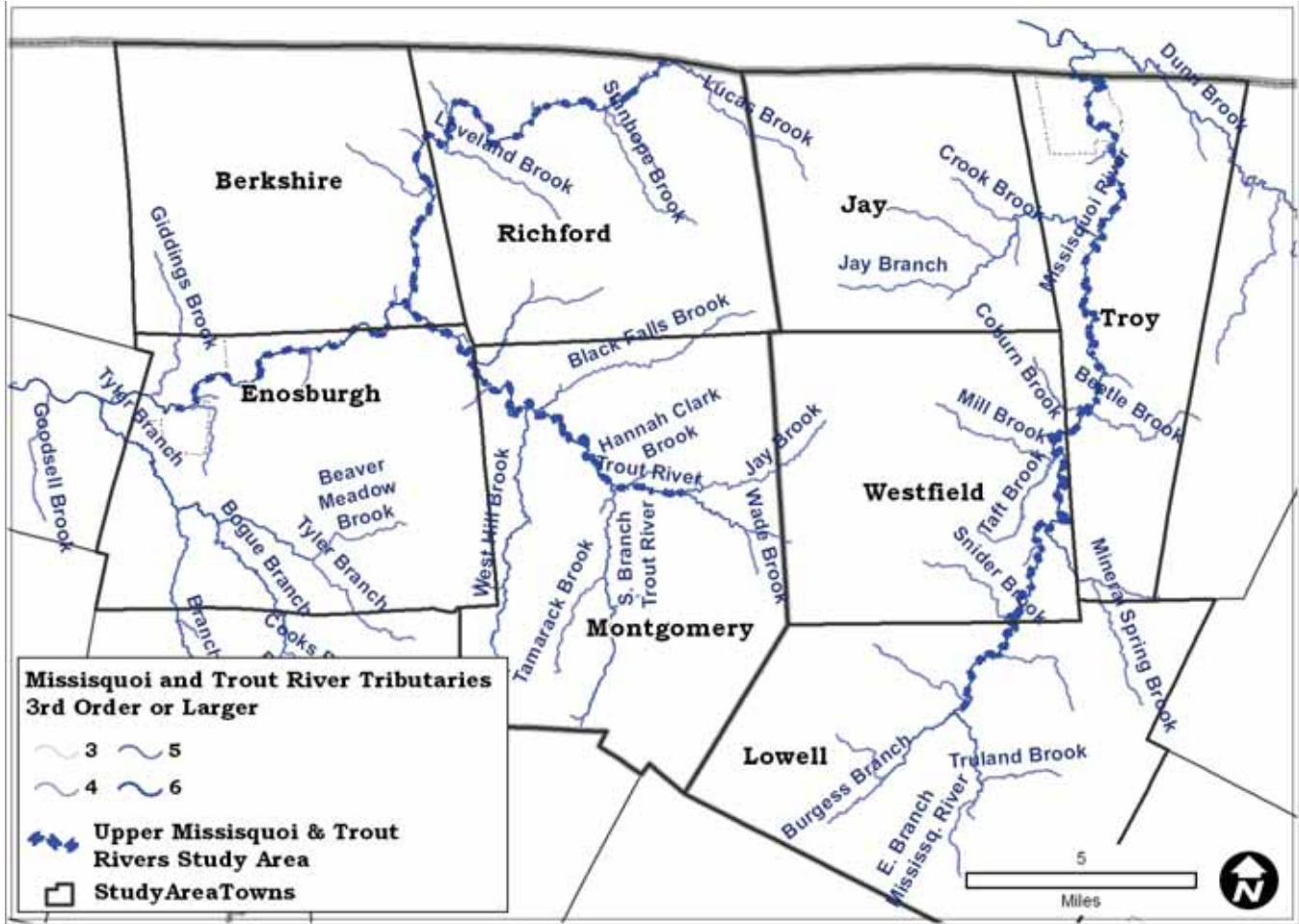


reentry into the U.S. from Canada in Richford, VT. The river is larger in this section, and predominantly flows through a working agricultural landscape and two downtown historic districts in Richford and Enosburg Falls. This segment also borders the Green Mountains as well as local farmlands. This stretch of the Missisquoi is also part of the Northern Forest Canoe Trail and has five official Trail access points. This section ends in Enosburg Falls.

**[Segment 3: Trout River]** The Trout River’s headwaters begin in the Town of Montgomery. It flows through Enosburg before it joins the Missisquoi River in East Berkshire.

Agriculture is the dominant land use along the main stem of the Trout River, but the reaches upstream of Montgomery Center are mainly forested. This segment has a high density of waterfalls, swimming holes, and covered bridges.

## Chapter 2. Description of the Study Area



**[Segment 4: Tributaries]** Many portions of the Study rivers and their tributaries have been noted as

exhibiting high water quality by the Vermont Agency of Natural Resources. Because of their importance in maintaining the water quality in and providing valuable resources for the Missisquoi and Trout Rivers, the tributaries were included in the Study. In addition to maintaining the water quality of the region, they also include notable recreational, scenic and cultural features, including swimming holes, waterfalls, and covered bridges, which are potential Outstandingly Remarkable Values.

The Study Committee looked at the following tributaries in detail (listed by municipality):

- ≈ Berkshire: Berry Brook and Trout Brook
- ≈ Enosburgh/Enosburg Falls: Beaver Meadow Brook
- ≈ Jay: Jay Branch
- ≈ Lowell: Burgess Branch and East Branch of the Missisquoi River

- ≈ Montgomery: Black Falls Brook, Hannah Clark Brook, Jay Brook, South Branch of the Trout River, Tamarack Brook, Wade Brook and West Hill Brook
- ≈ Richford: Berry Brook, Black Falls Brook, Loveland Brook and Stanhope Brook
- ≈ Troy/North Troy: Beetle Brook and Cook Brook
- ≈ Westfield: Coburn Brook, Mill Brook, Mineral Spring Brook and Taft Brook.

The map on page 14 shows the tributaries to the Missisquoi and Trout Rivers which are 3rd order streams or larger.

### **Regional Setting - Relation to the Missisquoi River Basin; Linkage to Lake Champlain and the Missisquoi National Wildlife Refuge**

The Missisquoi River is the primary tributary of Missisquoi Bay in Lake Champlain. Missisquoi Bay contains the Missisquoi National Wildlife Refuge, a 6,729 acre area on the Missisquoi River delta that provides important wetland and forest habitat for waterfowl, migrating songbirds, many species of mammals and other wildlife. Although this lower section of the Missisquoi is downstream of the Study area, the quality of water passing through tributaries and the upstream reaches of the Missisquoi River is critical for maintaining habitat supportive of these species not to mention human use.

### **Water Quality Characteristics - Missisquoi Basin Watershed Water Quality Management Plan**

Watershed management is under the purview of the Vermont Agency of Natural Resources,(ANR) Department of Environmental Conservation's Watershed Management Division. The Division representatives worked in partnership with the Committee to provide the most up to date information on the watershed and water quality issues.

During the Wild and Scenic Study, the Watershed Management Division completed the *Missisquoi Basin Watershed Water Quality Management Plan*, which describes the current state of the Missisquoi River Basin, addresses water quality issues in the watershed

and outlines plans to improving both water quality and aquatic habitat. The Study Committee and Watershed Management Division coordinated efforts with the common goals of protecting water quality. More information may be found in Chapter 4 of this Report.

### **Study Area Municipalities**

#### *Franklin County*

- Berkshire - The Missisquoi River flows through the Town of Berkshire that has a population of around 1,400 people (according to the 2000 Census). The current Town Plan was adopted in 2010 and describes Berkshire as located in the northeast corner of Franklin County, which is in turn situated in northwestern Vermont, and is bounded by the Province of Quebec to the north, the Town of Franklin to the west, the Town of Richford to the east, and the Town of Enosburgh and the incorporated Village of Enosburg Falls to the south. The Town of Berkshire covers more than forty-three square miles of land. Berkshire is predominantly a rural town lying within the eastern sub-region of the Northwest Region of Vermont. It is recognized within the Regional Plan as one of the most important agricultural towns in Franklin County.
- Enosburgh/Enosburg Falls - The Missisquoi River flows through the Town of Enosburgh (population around 2,800) and the Village of Enosburg Falls (population around 1,500). Enosburgh's current Town Plan was approved in 2008 and describes Enosburgh as located in the northwestern part of the State of Vermont in Franklin County and is bordered by seven towns: Montgomery to the east; Richford to the northeast; Berkshire to the north; Franklin to the northwest; Sheldon to the west; Fairfield to the southwest; and Bakersfield to the south. Enosburgh covers a total of 30,925 acres or approximately forty-eight square miles. The Village of Enosburg Falls is part of the Town for purposes of the Town Plan and vote at Town Meeting day regarding Wild and Scenic designation. The Enosburgh Town Plan states "The Village...is the primary social and commercial center for the Town. Enosburg Falls has its own Municipal Plan and

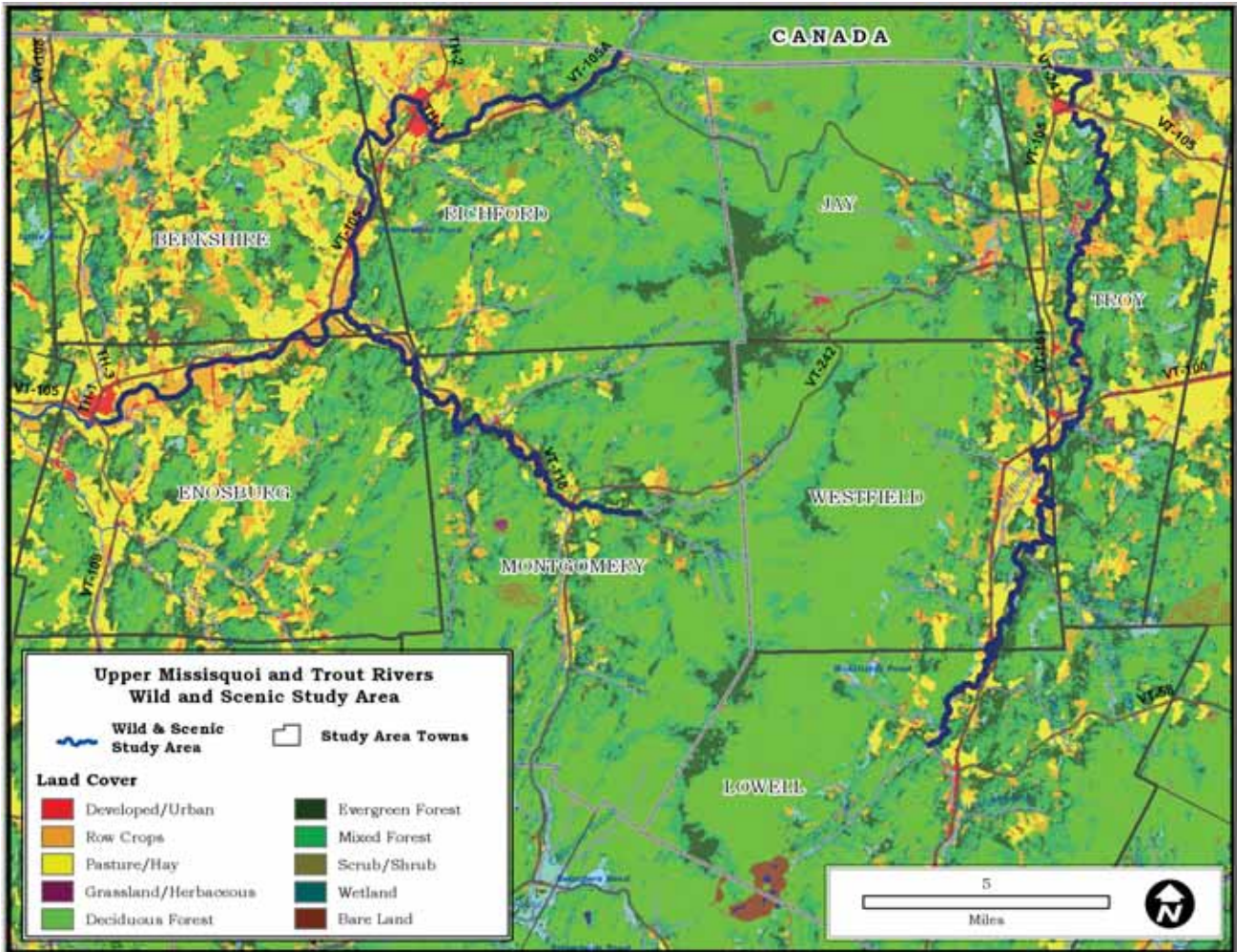


Figure 6. Land use in the Study area. 2006 data, available from NOAA: [www.csc.noaa.gov/crs/lca/northeast.html](http://www.csc.noaa.gov/crs/lca/northeast.html)

Planning Commission and conducts all its own business separate from the Town. Although a separate governmental entity, the Village is included as part of the Town for the purposes of the Town Plan.” The current Village Plan was also adopted in 2008 and describes Enosburg Falls as located in the northwestern corner of the Town of Enosburgh in central Franklin County. The Village is bounded by the Towns of Berkshire, Franklin, Sheldon, and Enosburgh. The Village occupies 3.6 square miles of land area.

- Montgomery- The Trout Rivers flows through the Town of Montgomery (population around 1,000). Montgomery’s current Town Plan was approved and adopted in 2010 and describes Montgomery as located in the northwestern part of the State of

Vermont in Franklin County. It is bordered by the following eight towns: Richford, Enosburg, and Bakersfield in Franklin County, Belvidere and Eden to the south, and Lowell, Westfield, and Jay to the east. Montgomery covers a total of 57 square miles.

- Richford- The Missisquoi River flows through the Town of Richford (population around 2,300). The current 2007 Town Plan describes Richford as around 43 square miles and located in the northwestern part of the State of Vermont in Franklin County and is bordered by five towns: Jay to the east; Westfield to the southeast; Montgomery to the south; Enosburgh to the southwest; and Berkshire to the west.



### *Orleans County*

- Jay– Jay Branch, a major tributary to the Missisquoi River flows through the Town of Jay. Jay was included in the Study due to the significance of Jay Branch, and the Town’s location between all other Study area municipalities. Jay has a population of around 521 people (according to the 2000 Census). The current Town Plan was adopted in 2010 and describes Jay as a rural community of 34 square miles. The Town of Jay is bordered by Canada to the north and the town of Troy to the East, Westfield to the South and Richford to the West.
- Lowell- The headwaters of the Missisquoi River flow through the Town of Lowell that has a population of around 879 people and an area of 56 square miles. The current Town Plan was adopted in 2009 and describes Lowell a rural community where forestry is the predominate land use. The Town of Lowell is bordered by seven towns: Albany, Eden, Irasburg, Montgomery, Newport Center, Troy, and Westfield.
- Troy/North Troy - The Missisquoi River flows through the Town of Troy (population around 1,700) and the Village of North Troy (population around 620). Troy and North Troy have a combined Town Plan. This current Town Plan was approved in 2008 and describes these municipalities as located on the Canadian Border in North Central Vermont in the Northwestern part of Orleans County. The Green Mountains lay to the west and the Vermont Piedmont lies to the east. The Towns of Jay and Westfield border Troy on the west; the Town of Newport borders Troy to the East, and the Town of Lowell borders Troy to the south. Troy covers a total of approximately 36 square miles. The Village of North Troy is part of the Town for the purpose of Town Planning and voting on Wild and Scenic designation. The Troy Town Plan states “Today, the Village of North Troy and the Hamlet of Troy are the main activity centers within Troy. Both areas include a compact mixture of housing options, commercial enterprises, public facilities, and local services. The Town Plan serves as a guidance document for the Select Board and Planning Commission, and as a resource for anyone interested in the future of the Town of Troy and the Village of North Troy.” The Town Plan describes North Troy as around 2 square miles.
- Westfield- The Missisquoi River flows through the Town of Westfield that has a population of around 536 people (according to the 2000 Census). Their current Town Plan was adopted in 2009 and describes Westfield as approximately 40 square miles bordered by five towns: Montgomery, Lowell, Troy, Jay, and Richford.



## Chapter 3. Eligibility and Classification



Photo by Jeff Parsons

The purpose of this Chapter is to document National Park Service findings relative to: 1) the “outstandingly remarkable” natural and cultural resource values associated with the upper Missisquoi and Trout Rivers Study Area; 2) the “free-flowing character” of the study segments; and 3) the preliminary “classifications” which would be appropriate if the segments are included in the National Wild and Scenic Rivers System.

### **Eligibility Criteria**

The subsections below describe the relevant eligibility (free-flowing and ORVs) and classification criteria as set forth in the Wild and Scenic Rivers Act, in the USDA/USDI Interagency Guidelines for Eligibility, Classification, and Management of River Areas as published in the Federal Register on September 7, 1982, and in the Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council on the Wild & Scenic Rivers Study Process, IWSRCC, December 1999.

### *Free-flowing Character*

The National Wild and Scenic Rivers System is designed to protect eligible “free-flowing” rivers and sections of rivers that support significant resource values from the adverse impacts of federally-assisted water resource projects, such as construction of new dams. The Act’s definition of “free-flowing” is outlined in Section 16:

(b) “Free-flowing”, as applied to any river or section of a river, means existing or flowing in natural condition without

impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: Provided, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.

A river or river segment can be considered for designation if it is above or below a dam or is dependent on releases from a dam. Any section of river with flowing water, even if impounded upstream meets the definition of free-flowing, as long as existing flows are sufficient to support flow-dependent ORVs and water quality.

### *Outstandingly Remarkable Values*

To be considered eligible for inclusion in the National Wild and Scenic Rivers System a river segment, together with its adjacent lands, must support one or more “outstandingly remarkable” natural, cultural, or recreational resource values. Such resource values must be directly related to, or dependent upon, the river and its adjacent lands. In order to demonstrate that a resource is river related, they are generally within ¼ mile of the river, or within another geographic area as defined by the Study Committee. Though there is no specific terrestrial boundary (buffer) recommended for the designation of the upper Missisquoi and Trout Rivers, the NPS is committed to protecting Wild and Scenic River values wherever they are located. The NPS concluded that specific boundaries are not necessary as they have been traditionally delineated to indicate federal acquisition limits that are not relevant in this instance as there is no federal acquisition of land proposed. These boundaries (buffers) have also been used for permitted land uses along WSRs such as limits for

mining and mineral leasing on public lands; however, this is also not relevant as there are not public, federal lands in the proposed designation. The “outstandingly remarkable” threshold within the Act is designed to be interpreted through the professional judgment of the study team during the Wild and Scenic Study process.

The descriptions below provide examples to help interpret this “outstandingly remarkable” eligibility requirement.

- **Nationally Significant Values:** Resource values which are nationally significant clearly meet the “outstandingly remarkable” threshold. A nationally significant resource would be rare, unique, or exemplary at a national scale. For example, a recreational boating experience that draws visitors from all over the nation would qualify as a nationally significant recreational resource.
- **Regionally Significant Values:** Based upon the desirability of protecting a regional diversity of rivers through the national system, a river segment may qualify based on regionally rare, unique or exemplary resource values. The area, region, or scale of comparison is not fixed, and should be defined as that which serves as a basis for meaningful comparative analysis; it may vary depending on the value being considered. For example, physiographic regions are appropriate for geologic and biologic resources, while the region occupied by a particular culture is appropriate for archaeological resources.
- **Values Significant in Aggregate:** A river may qualify for a given resource value based upon an aggregate of important values, no one of which would confer eligibility standing alone. For example, a series of unusual and distinctive river-related geologic features may together qualify a segment as exhibiting an “outstandingly remarkable geologic value” even though no one element meets the criteria alone.

The Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC) has characterized the determination as to whether a given resource value is river-related as based on three criteria. To be river-related a resource

value should:

- 1) Be located in the river or in its immediate shorelands (generally within ¼ mile on either side of the river)
- 2) Contribute substantially to the functioning of the river ecosystem
- 3) Owe their location or existence to the presence of the river

For the purposes of the Upper Missisquoi and Trout Rivers Wild and Scenic Study, the Study Committee and NPS explored all the locally recognized river values and used the above criteria to determine which would qualify as Outstandingly Remarkable Values within the ten municipalities: Berkshire, Enosburgh/Enosburg Falls, Jay, Lowell, Montgomery, Richford, Troy/North Troy, and Westfield. The legislatively authorized study segments as well as the major tributaries in these municipalities were established as the geographic range of consideration for the Missisquoi and Trout ORVs.

### *Classification*

The Wild and Scenic Rivers Act requires that all eligible or designated river segments be classified as **wild, scenic, or recreational**.

These classifications are based on the amount of human impact (degree of human influence and access to these rivers) and dependent on the water quality present at the time of classification. The WSR Act defines these classifications as follows.

- Rivers classified as **wild** have pristine water quality. They are those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
- Rivers classified as **scenic** are those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

- Rivers classified as **recreational** are those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past

### **Upper Missisquoi and Trout Rivers Study Findings**

#### *Eligibility*

**[Segment 1: Headwaters in Lowell to North Troy/Canadian Border]** Of the approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy, 24.3 miles of the upper Missisquoi River are found eligible for designation. The hydroelectric facilities in Troy (0.3 miles) and North Troy (0.1 miles) make these portions of the river ineligible due to their lack of free-flowing character.

**[Segment 2: Canadian Border/Richford to Enosburg Falls]** Of the approximately 25-mile segment from the Canadian border in East Richford to Enosburg Falls, 19.3 miles of the upper Missisquoi River are found eligible for designation. Eligibility stops at the Route 108 crossing in Enosburg Falls just upstream of the property boundary of the hydroelectric facility.

**[Segment 3: Trout River]** Of the 20-mile segment of the Trout River from its headwaters to its confluence with the Missisquoi River, the entire 11.0 miles of the mainstem of Trout River from the confluence of Jay Brook and Wade Brook are eligible for designation.

**[Segment 4: Tributaries]** The specific tributaries listed below were studied in more detail, are free-flowing and contain ORVs which make them eligible for designation. Additional unlisted tributaries are expected to be similarly free-flowing and to have ORVs which would make them eligible for designation, but were not evaluated as a part of the Study.

Tributaries listed by municipality:

- ≈ Berkshire: Berry Brook and Trout Brook
- ≈ Enosburgh/Enosburg Falls: Beaver Meadow Brook
- ≈ Jay: Jay Branch

## Chapter 3. Eligibility and Classification

- ≈ Lowell: Burgess Branch and East Branch of the Missisquoi River
- ≈ Montgomery: Hannah Clark Brook, Jay Brook, South Branch of the Trout River, Wade Brook and West Brook
- ≈ Richford: Black Falls Brook, Loveland Brook and Stanhope Brook
- ≈ Troy/North Troy: Beetle Brook, Cook Brook and Tamarack Brook
- ≈ Westfield: Coburn Brook, Mill Brook, Mineral Spring Brook and Taft Brook.

### *Free-flowing Character*

The Study area reaches of the Missisquoi and Trout Rivers are essentially natural from a free-flowing perspective. There is no flood control, and dams are run-of-river with no major dams that control flow through storage and release. Existing dams maintain

general river-like characteristics rather than creating large, lake-like impoundments.

Current river flows are adequate to support the in-stream values for which the rivers are being considered for designation. River flows are typically unaltered on the sections under consideration for designation, and areas where flow is altered, such as dams, are excluded from the section proposed for designation. More information on flow alterations may be found on the Vermont Agency of Natural Resources website or in the most recent version of the Missisquoi Basin Watershed Water Quality Management Plan.

The Study assessed the existing dams on the rivers with the help of the Agency of Natural Resource's Department of Environmental Conservation's Streamflow Protection Coordinator to see if they are

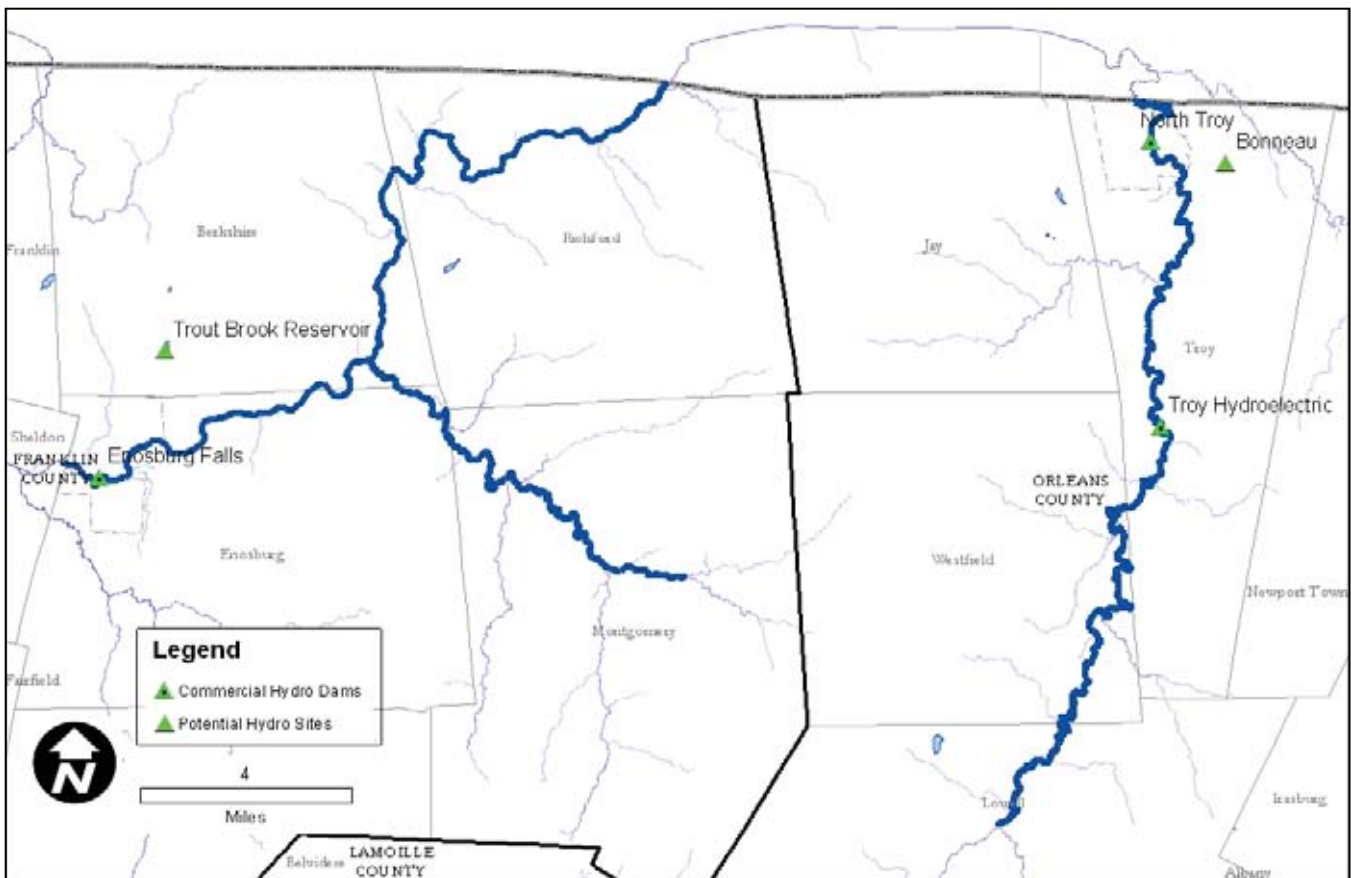


Figure 7. Dams and hydroelectric power facilities within the Upper Missisquoi and Trout Rivers Study Area.

compatible with the free-flowing river condition necessary for designation (Figure 7).

The free-flowing analysis by segment below includes assessment of non-dam infrastructure as well. These data on non-dam infrastructure are for the reaches of the Missisquoi and Trout River proposed for Wild and Scenic River designation where the Vermont Agency of Natural Resources (ANR), or its consultants, have completed fluvial geomorphic assessments, which is most of the proposed area. There are still some reaches in Berkshire and Enosburgh for which Phase 2 assessments have not been completed. Fluvial geomorphic assessments are widely used in Vermont and considered the best, most up-to-date, science-based approach to river management.

On the mainstem of the upper Missisquoi River there are approximately 2.7 miles with a history of previous bank stabilization, a limited number of bridges (14) and no culverts. On the Trout River mainstem there are approximately 1.7 miles with a history of previous bank stabilization, a limited number of bridges (10) and no culverts. Documented alterations have a minor effect on natural, free-flowing conditions. The Vermont Agency of Natural Resources (ANR) provided a table to the Study Committee listing the infrastructure along the upper Missisquoi and Trout Rivers on September 6, 2013. This alteration constitutes the “protect and enhance” baseline against which future proposals would be evaluated if the rivers are designated. Despite these projects, the rivers remain mostly in their natural condition. This list, and the geomorphic assessments, detail the man-made infrastructure and channel alterations on record at the Vermont of Natural Resources (ANR) (no digital information from Enosburg to Berkshire was available for bank armoring, but likely is present at some level), and establish a baseline condition for these projects in the upper Missisquoi and Trout Rivers. The assessments provide a scientific basis for analysis of any future stabilization work, if deemed necessary. As in the Trout River example on page 24, if human alterations must be made to stream channels in Vermont, a Stream Alteration Permit is required and

projects are designed to help maintain river values and habitat and recreational function.

### ***Free-flowing condition by segment:***

**Segment 1: Headwaters in Lowell to North Troy/Canadian Border** the 24.7 miles of the Missisquoi River between Lowell and Canada are generally free-flowing with the exception of two short segments in the immediate vicinity of two dams (24.3 miles of the Missisquoi River in Orleans County are found eligible based on the free-flowing character). The following short sections of the Missisquoi are ineligible for designation due to their lack of free-flowing character.

- The Troy Hydroelectric project in Troy on the Missisquoi River makes 0.27 miles (1,408 feet) of the Missisquoi River ineligible due to lack of free-flowing character. This facility has not operated since 1998. The project received from the Federal Energy Regulatory Commission (FERC) an exemption (FERC Project Number P-13381). As of October 2012, work is underway on the civil works to restart the project. The NPS and Study Committee have already indicated to FERC in writing that this project (including the project lands owned by the Chase family) would be excluded from the designated area, and that its proposed operation as a run-of-river facility will not have an adverse impact to potential Wild and Scenic River areas upstream or down. A letter to this effect is included in the Appendix 5 of this Report.
- The North Troy Project (formerly Missisquoi River Technologies) on the Missisquoi River in the Village of North Troy makes 0.11 miles (585 feet) of the Missisquoi River ineligible due to lack of free-flowing character. This facility is not-operating and has a FERC exemption (FERC P-10172) issued in 1989. The project was acquired by Missisquoi River Hydro, LLC, and the new owners are actively seeking to renew operations at the time of this Report. Designation would have no effect on the existing FERC exemption for this facility.

### The Trout River Project

The Trout River Project is a one mile reach of the Trout River immediately downstream of Montgomery Center that was restored using natural channel design techniques to protect and preserve agricultural lands, stabilize property values, protect a state highway, and restore the river's ecological and recreational values. This project was completed by the Vermont Agency of Natural Resource's River Management Section and other partners using the science of fluvial geomorphology, rather than traditional dredging and armoring, to stabilize the channel.

The project consisted of a number of elements which are listed below:

- Rock vanes were built to slow velocities along the bank, collect sediments, and narrow channel width.
- A vortex rock weir was constructed across the channel, and keyed into rip-rap on the right bank along VT Route 118 above the bankfull elevation. It was built to maintain and deepen the pool at a natural ledge located just downstream to enhance swimming and fish habitat.
- Bulk toe rock revetment was installed along a 510 foot section of the right bank to repair existing rip-rap along VT Route 118.
- Fish lunger boxes were placed under a 120 foot section of traditional rip-rap along the right bank to provide cover for fish along the VT Route 118 highway where revegetation options were minimal.
- Eight root wad structures were added and repairs were made to existing root wads along the left bank to protect against further erosion and create scour pockets as fish habitat.
- A new channel was constructed to create a stable meander geometry with a radius of curvature of 337 feet.
- Earth berms were constructed to close off old channels and help redirect flow into new channel.
- A two-tier tree revetment was created to stabilize banks until revegetation took hold.
- Three earth filled rock covered structures were constructed to block high flows from entering old channels and flood chutes and significantly slow water velocities to allow for sediment deposition.
- Three log vanes were installed along the left bank to slow water velocities and enhance sediment deposition in the tree revetments.
- Participating landowners entered into WHIP (Wildlife Habitat Incentives Program) contracts with the Natural Resource Conservation Service (NRCS) to maintain a 35 foot wooded buffers along the Trout River for a period of 15 years.

This "Morphological Approach" to river management represented a major advancement in thinking in contrast to traditional river management approaches used in Vermont and elsewhere, which were typically short-term, expensive treatment of erosion-related symptoms rather than a system-wide approach. This demonstration project continues to be used as an educational opportunity. The Vermont Agency of Natural Resources' (ANR) Watershed Management Division, River Management Section, in cooperation with the USFWS Partners for Fish and Wildlife Program, the NRCS, and the Missisquoi River Basin Association have produced and made available educational materials, detailing that "...no other river restoration project in Vermont has been more visited, written about, or televised than the Trout River...state and federal agencies in Vermont are revamping their river programs to incorporate the techniques and lessons learned on the Trout River...[and landowners] have enthusiastically supported new river stabilization techniques that include protection of both property values and the natural resource values of river corridors." An online pdf with a full project description, with a map of the river reaches restored, may be found at <http://www.vtwaterquality.org/rivers/docs/report.pdf>.



In 2010, Arrowwood Environmental completed Phase 2 Geomorphic Assessment and a River Corridor Plan for the Missisquoi River in Orleans County (Lowell, Westfield, Troy and North Troy) and tributaries in Jay. On Segment 1 of the upper Missisquoi River there is approximately  $\frac{1}{4}$  mile of known reaches with a history of previous bank stabilization (0.28 mile), a limited number of bridges (8) and no culverts. This level of alteration does not render the river ineligible for Wild and Scenic River designation, but does constitute the “protect and enhance” baseline against which future proposals would be evaluated if the rivers are designated.

**Segment 2: Canadian Border/Richford to Enosburg Falls** 19.3 miles of the Missisquoi River from the Canadian Border downstream to the Route 108 bridge are found eligible based on the free-flowing character. Eligibility stops at the Route 108 crossing in Enosburg Falls just upstream of the property boundary of the hydroelectric facility.

The free-flowing character of the lowermost 4.7 miles of this segment of Missisquoi River remains despite the inclusion this section in the FERC project boundary of the Enosburg Falls hydroelectric project.

- The Enosburg Falls Hydroelectric Facility (also known as the Kendall Plant) on the Missisquoi River is operating and licensed by FERC (FERC P-2905, license expires 2023). The river segment in the immediate vicinity of this project is found ineligible for designation due to the lack of free-flowing character. A 4.7 mile segment, though contained within the FERC project boundary of this hydroelectric facility (from Sampsonville to the Route 108 bridge crossing), is found eligible for designation based on the free-flowing character. Suitability findings on this segment are discussed in Chapter 4 of this Report.

In 2008, Phase 2 Geomorphic Assessment was completed for the Missisquoi main stem in Berkshire in Richford, the Jay Branch (Troy/Jay), and Mud Creek (Troy/Newport). On Segment 2 of the upper Missisquoi River there are approximately  $2\frac{1}{4}$  miles of

reaches with a history of previous bank stabilization (2.38 miles), a limited number of bridges (6) and no culverts. This level of alteration does not render the river ineligible for Wild and Scenic River designation, but does constitute the “protect and enhance” baseline against which future proposals would be evaluated if the rivers are designated.

**Segment 3: the Trout River** from its headwaters to its confluence with the Missisquoi River is free-flowing and has no dams. The entire 11.0 miles of the mainstem of the Trout River from the confluence of Jay Brook and Wade Brook are free-flowing and eligible for designation.

In 2007, the Johnson Company completed a Phase 2 Geomorphic Assessment and River Corridor Plan of the Trout River; this included 20 reaches in the Trout watershed (Montgomery, Berkshire, Enosburgh and Richford) with bridge and culvert assessments within these reaches. On the Trout River there are three known reaches with a history of previous bank stabilization (1.7 miles), a limited number of bridges (ten), and no culverts. Of these ten bridges, eight are in the digital database provided by VTrans and the Vermont ANR for bridges and culverts. The two additional bridges crossing the river are 1) a snowmobile bridge in Montgomery Center, and 2) a temporary steel bypass bridge located beside the currently closed Longley [Covered] Bridge that is awaiting repairs. It is of note that there are three additional bridges associated with, but not on, the Trout River that are important, both historically and culturally. The South Branch of the Trout River had the Hectorville [Covered] Bridge that used to cross Gibou Road over a tributary, which has been replaced with a concrete bridge and removed to offsite storage. The Hutchins [Covered] Bridge is on the South Branch of the Trout River (a tributary). West Hill Brook (another tributary) has the West Hill [Covered] Bridge as well.

Additionally, there is a one mile reach of the Trout River downstream of Montgomery Center that contains a number of structures including tree revetments, rock weirs, earthen berms, and log vanes

that were installed in 1999-2000 by the Vermont Agency of Natural Resources' (ANR) Watershed Management Division, River Management Section as part of a natural channel design restoration project that applied the methods of fluvial geomorphology to stabilize the channel rather than traditional dredging and armoring (see the Text Box on the page 24 for a detailed description). This level of alteration does not render the river ineligible for Wild and Scenic River designation, but does constitute the "protect and enhance" baseline against which future proposals would be evaluated if the rivers are designated.

**Segment 4: the Tributaries** of the upper Missisquoi and Trout Rivers are generally free-flowing in nature and eligible for designation. There are no major dams on these tributaries, the other small dams in the Study area located on tributaries are outside of the area currently under consideration for designation. Those dams that exist on tributaries are very small, without impoundment, and do no impact the free-flowing nature of the tributaries.

### *Outstandingly Remarkable Values*

The following describes the resources supported by the upper Missisquoi and Trout Rivers that are deemed to meet the "Outstandingly Remarkable" threshold for Wild and Scenic designation. More detailed information on these resource values may be found in the Upper Missisquoi and Trout Rivers Wild and Scenic Management Plan and on the Study website at [www.vtwsr.org](http://www.vtwsr.org). All of the resources cited contribute to the overall eligibility of the upper Missisquoi and Trout Rivers for designation. Not all river reaches in the study area support all noted outstanding values, but there is no stretch of river which does not contribute to the viability of the whole. In fact, it is worth noting that the water quality in the watershed has a direct impact on these Outstandingly Remarkable Values (ORVs) for which the rivers are eligible for designation, and should be protected as such. Also, some ORVs overlap into multiple categories; they are listed here under the heading currently considered most appropriate.

The Wild and Scenic Study Committee was tasked with identifying and researching potential ORVs associated with the waterways as required by the Wild and Scenic Rivers Act. Not just one, but several potential ORVs were identified on the Missisquoi and Trout Rivers. The examination of these resources (as described in detail in the Management Plan and briefly below) was accomplished through substantial research that was conducted prior to and during the Study, and included evaluation of the significance of the resources within a state-wide and regional context by means of consultations with experts and professionals. The National Park Service participated in this process and provided technical assistance to ensure that the identification and characterization of potential ORVs would form an adequate basis to establish defined ORVs for the purpose of this Report and potential future Wild and Scenic River designation.

The resources fall within the following categories: **Scenic and Recreational, Natural Resource and Historic and Cultural.**

The ORVs which make the upper Missisquoi and Trout River segments eligible for inclusion in the National Wild and Scenic Rivers System are described in the following pages of this Report. More specific information about individual examples of ORVs, as well as an analysis of resources at the watershed scale and a list by municipality, may be found in the companion document: Upper Missisquoi and Trout Rivers Management Plan.

### ***Scenic and Recreational ORVs***

Scenic and recreational opportunities, which abound on the Missisquoi and Trout Rivers, consistently rise to the top of the list of outstanding resources identified by the communities in the Study area. Community members are tied to these rivers through their enjoyment of recreational activities, especially canoeing and kayaking, fishing and hunting, swimming, hiking and wildlife viewing. According to the Missisquoi Valley Rail Trail website the scenic views of the Missisquoi are a draw for those using the trail, artists are inspired to create landscape paintings

here and wildflowers and wildlife may be seen from the trail.

#### *Swimming Holes*

The numerous swimming holes in the Study area are a popular destination for locals and visitors alike.

Yankee magazine featured the Three Holes swimming area (on the Trout River in Montgomery) as the Best Local Secret and swimming hole in New England in their May/June 2010 Issue: “As the Trout River sluices down from the hills, it fills three natural basins deep in the woods, creating the swimming-hole trifecta: diamond-clear water, flat rocks for sunbathing, and freedom from raucous crowds.” The countless pools and falls of the Trout River in Montgomery have created many swimming areas in the Town. There are also popular swimming holes in the towns of Lowell, Westfield and Troy. Not only are many swimming holes in existence because of the unique geology (Natural Resource ORV) in the Study area, but are also important scenic areas and often provide great fishing. Collectively they are certainly an important ORV of regional significance.

#### **Swimming Holes**

- Black Falls Brook Swimming Holes, Black Falls Brook, Montgomery
- Gibou Bridge Swimming Holes, S. Branch Trout River, above and below Gibou Rd., Montgomery
- Gray Rocks Swimming Hole, Trout River, Montgomery
- Hippie Hole or Crystal Falls, West Hill Brook, near Creamery Covered Bridge, Montgomery
- Hutchins and Hectorville Bridges Swimming Hole, S. Branch Trout River, Montgomery
- Longley Bridge Swimming Hole, Trout River, near Longley Bridge, Montgomery
- Montgomery School House Swimming Hole, Trout River, north of Montgomery Center, Montgomery
- Three Holes Swimming Area, Trout River, Montgomery
- Tillotson Mill, Lockwood Brook, Lowell
- Twin Falls Swimming Hole, East Branch Missisquoi River, Lowell
- Bakers Falls, Missisquoi River, Troy
- Big Falls, Missisquoi River, Troy

- Troy Four Corners Swimming Hole, Jay Branch, east of Route 101, Troy
- Snider Brook Swimming Holes, Snider Brook, Westfield
- Taft Brook Falls Swimming Holes, Taft Brook, Westfield

#### *Fishing*

Fishing and hunting were historically important along the Missisquoi and Trout Rivers with the Abenaki peoples and remain important to the area residents on the upper Missisquoi and Trout Rivers. The rivers hold quality fish habitat throughout the Study area, supporting both warm- and cold-water fisheries (especially native fish populations of Brook trout). The upper reaches of the Missisquoi and the entirety of the Trout River offer excellent trout fishing, and serve as a destination for anglers across the region. The Trout River and many of its tributaries support especially healthy cold water fisheries. Many well-known trout fishing spots overlap with other features noted in the Management Plan. The Hopkins and West Hill Brook covered bridges and swimming holes are destinations for trout anglers. Black Falls Brook and Alder Brook are also good fishing spots in the Study area. Jay Branch, Hanna Clark and Wade Brooks all offer trout fishing in addition to whitewater paddling opportunities. Fisheries depend on the water quality of the Missisquoi River.

#### *Paddling*

Canoeing and kayaking opportunities abound along the Missisquoi and Trout Rivers. The rivers offer unique experiences for all levels of paddling, from gentle meandering float trips to technical whitewater runs. The Study rivers wind their way through rolling forested hills, towering floodplain forests, and picturesque working farm fields. With approximately 25 distinct access sites along the 70 miles of the Study rivers, there are ample opportunities for nearly everyone to enjoy a day on the river.

The Missisquoi River is part of the Northern Forest Canoe Trail (NFCT), which is a 740-mile, long-distance paddling trail that connects waterbodies from the Adirondack mountains of New York to the unspoiled

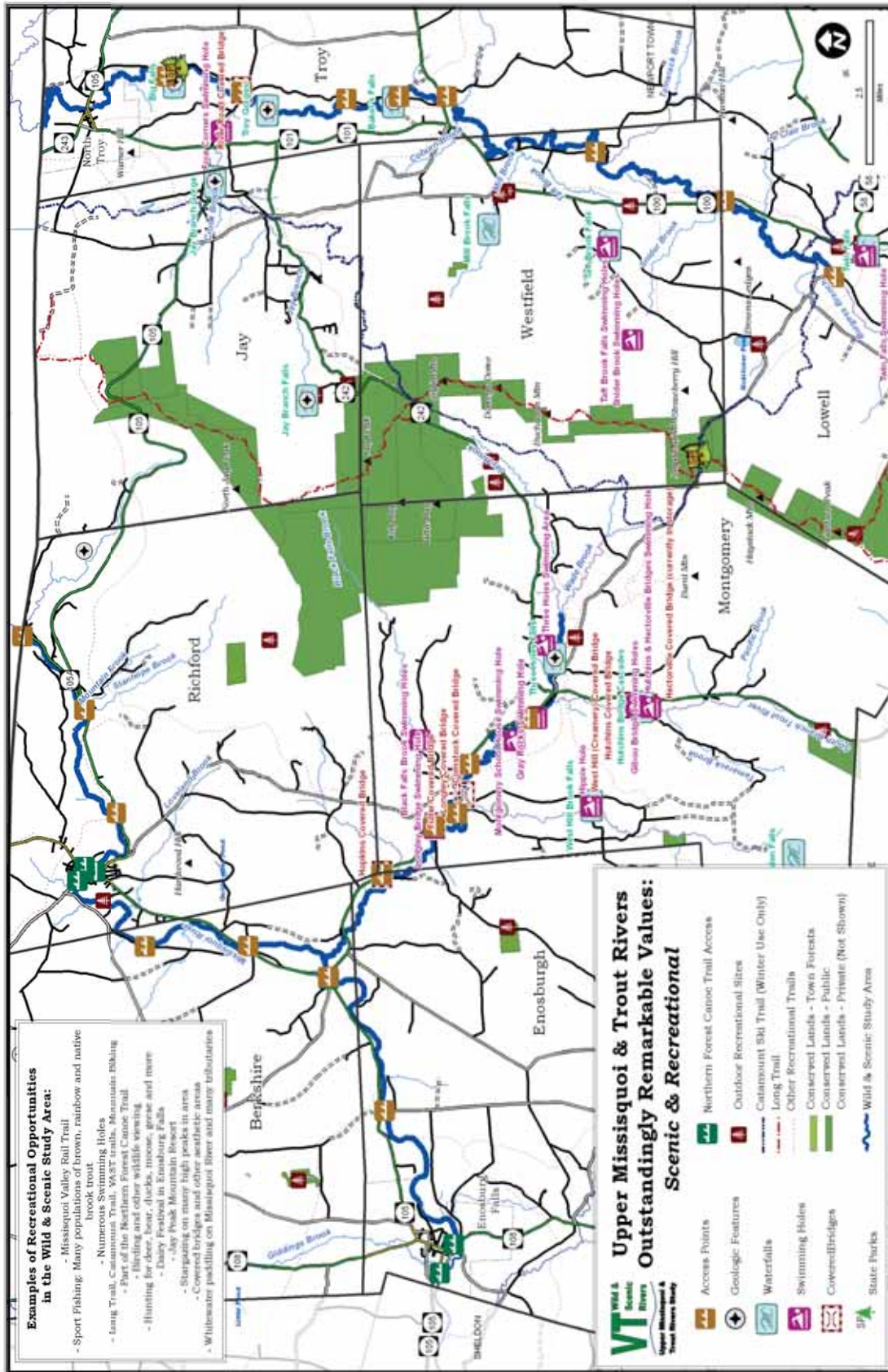
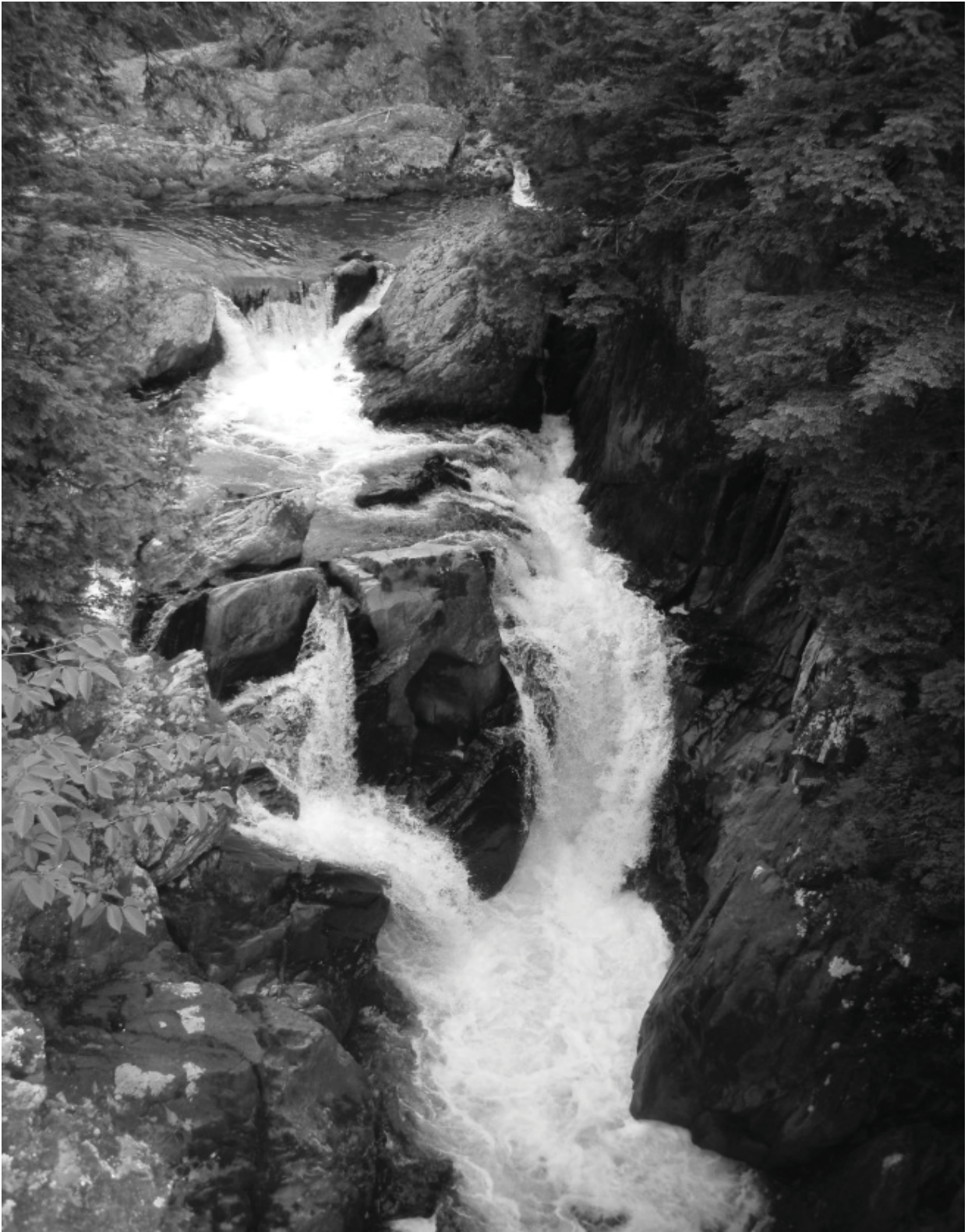


Figure 8. A map of Scenic and Recreational ORVs within the Study area municipalities.



**Figure 9.** Featured ORV – The top of Big Falls, the largest undammed falls in Vermont. *Photo by Shana Stewart Deeds.*

wilderness of northern Maine. The portion of the Study area that joins this nationally significant trail is the Missisquoi River from the Canadian Border in Richford to the downstream end of the Study area in Enosburgh Falls (Section 5). Walter Opuszynski, NFCT's Trail Director, states that paddlers within the Study area work their way from Canada downstream through a break in the Green Mountains and a unique NFCT landscape of verdant farmland. The NFCT has found great support from these communities, and an obvious desire to respect these waters for their natural beauty, history, and ecological importance. NFCT's paddlers rely on the opportunity to follow the historic travel corridors used by generations of inhabitants from the Abenaki to early settlers to present-day paddlers. The Missisquoi lies in the heartland of the Northern Forest Canoe Trail, and Walter Opuszynski feels it creates a unique connection of people and land including a significant international connection to Canada.

The NFCT has stewardship and work trips along the trail. NFCT's business partners in Canada working for scenic and recreational resource protection include: Camping Carrefour des Campeurs, Canoe & Co., and Vert le Mont.

According to Vermont Department of Environmental Conservation (DEC) staff, the localities in Canada have strong regulations on riverine and lakeshore buffer activities. Much enforcement comes down to the local level but some of the zoning regulations are set at the regional level. For example, there is a requirement that all municipalities have a five meter buffer requirement around Lake Memphremagog, which is part of the Northern Forest Canoe Trail. The local municipalities can then make this requirement more stringent by increasing the buffer to ten meters or more.

The Lake Champlain Basin Program's plan, Opportunities for Action, discusses Québec's commitments to the Missisquoi watershed, as does Québec's Missisquoi Bay Inter-Agency Advisory Committee's Action Plan (2010-2016). The Missisquoi Bay Inter-Agency Advisory Committee is made up of

several agencies and organizations that are involved in the Missisquoi Bay Watershed in Canada, i.e., the Ministère des Affaires municipales, des régions et de l'Occupation Territoire (MAMROT); the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation (MAPAQ); the Ministère des Ressources naturelles et de la Faune (MNR); the Ministère de la Santé et des Services sociaux; the Ministère des Transports (MTQ) and the Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP). These organizations, along with the Organisme de bassin versant baie Missisquoi (OBVBM) have agreed to cooperate with the community by:

- continuing educational opportunities
- supporting watershed groups
- implementing the Québec-Vermont agreement on Phosphorus reduction in the Missisquoi Bay
- implementing the MOU between Vermont, New York, and Québec concerning the cleanup of Lake Champlain.

For more detailed information on Canada's commitment to water quality and scenic/recreational protections, please see the existing protections section in the Suitability Chapter (Chapter 4).

The NFCT organization has five designated access areas along this reach of the river, as well as a number of campsites and informational kiosks. American Rivers, a national organization dedicated to protecting rivers and streams, recently partnered with the National Park Service to create River Stories, a collection of information and photographs highlighting water trails around the nation. According to their website, River Stories highlight ten U.S. rivers, including the Missisquoi section of the NFCT, in the U.S. which "offer outstanding recreational opportunities." Keith Sampietro, a local business owner of Montgomery Adventures, has worked with the Northern Forest Explorers Youth Program for youth to get them paddling on the upper Missisquoi. Business such as Keith Sampietro's are great examples of how healthy rivers, such as the Missisquoi and Trout, afford opportunities for rural economic development. NFCT was recently named "2011 Best Canoe Trail" by Outside Magazine, and is clearly one of

the Outstanding Remarkable Recreational and Scenic Values along the upper Missisquoi River.

### **Established Trail Systems in the Study Area**

- Missisquoi Valley Rail Trail (a multi-use trail constructed along the Missisquoi River): a river-related trail that owes its location to the gentle gradient created by the floodplain of the Missisquoi River and where users may appreciate the aesthetics of the Missisquoi River valley
- Northern Forest Canoe Trail (paddling along the Missisquoi River and other rivers): five established access points, six campsites and two informational kiosks in the Study area

### **Whitewater Paddling Opportunities**

- Missisquoi River – Troy to North Troy
- Trout River – upstream of VT Route 118
- West Hill Creek – from bridge near cemetery to VT Route 118
- South Branch Trout River – from Hutchins Bridge to Trout River
- Jay Branch – from golf course at Jay Peak to Missisquoi River
- Black Falls Brook – last 2 miles into Montgomery village to Fuller Bridge
- Wade Brook – near Westfield/Montgomery Line

### **Natural Resource ORVs**

#### *Geology*

The State of Vermont has a diverse geological history which is represented in the varied landscape seen today. The land that now constitutes Vermont has been at the edge of a continental plate throughout much of its history, which has subjected the area to the dynamic forces of colliding, pushing, thrusting, folding and wrinkling that happen through time at the edge of a great land mass. Much of Vermont was also historically underwater resulting in bedrock that mostly originated as sea sediments. Many hill farms and small homesteads existed in the region, and the geology directly impacted their success by giving rise to the topography, soils and waterways of their farmsteads.

The geology of the upper Missisquoi and Trout Rivers is especially unique on the Orleans side of the proposed designation. Margorie Gale, Geologist with the Vermont Geological Survey describes this geology as follows. The outcrops at Tillotson Peak and Tillotson Camp in Lowell, VT are metamorphosed mafic volcanic rocks and schist metamorphosed mafic volcanic rocks (**blueschists**). Blueschist and eclogite (very high pressure metamorphic rocks) are exposed in metamorphic belts throughout the world (China, California, Australia, Canada/Yukon, etc.); however, they are not generally preserved or exposed in the Appalachians which makes this geology in Orleans County unique nationally and regionally. They are evidence that the rocks were subducted to a great depth and then quickly exhumed (brought back up). In conjunction with metamorphic age dates, this data helped define the timing for subduction in the State of Vermont. It was not that long ago that the theory of plate tectonics became common in textbooks, so the discovery by Jo Laird of blueschist in Vermont was really important for future explanations of geologic history. According to Barry Doolan, Professor of Geology at the University of Vermont, the blueschists found within the Study area, such as those found at in the Tillotson Peak area, are “unique geologically and provide habitat for unique flora associated with this rock.” Several rare, threatened or endangered plant species exist in these areas thriving on the soils formed by the unique chemical compositions of the mafic and ultramafic rocks found along this thrust fault. These rocks in the Tillotson Peak area, are described in field guides, and “geologists from all over the world visit this site because it is so unique.”

The blueschist and eclogite at Tillotson Peak and Tillotson Camp are part of a thrust fault slice which includes serpentinite. The ultramafic serpentinite rock may be found near the Tillotson outcrops, roughly ½ mile from the Camp or Peak. Along the river serpentinite is found in Lowell, Westfield and Troy. The blueschist in Vermont only occurs in the Tillotson area, whereas serpentinite/ultramafic rock occurs sporadically within a belt or zone on the east flanks of the Green Mountains throughout the State. According to VanDiver’s Roadside Geology of VT and NH, the

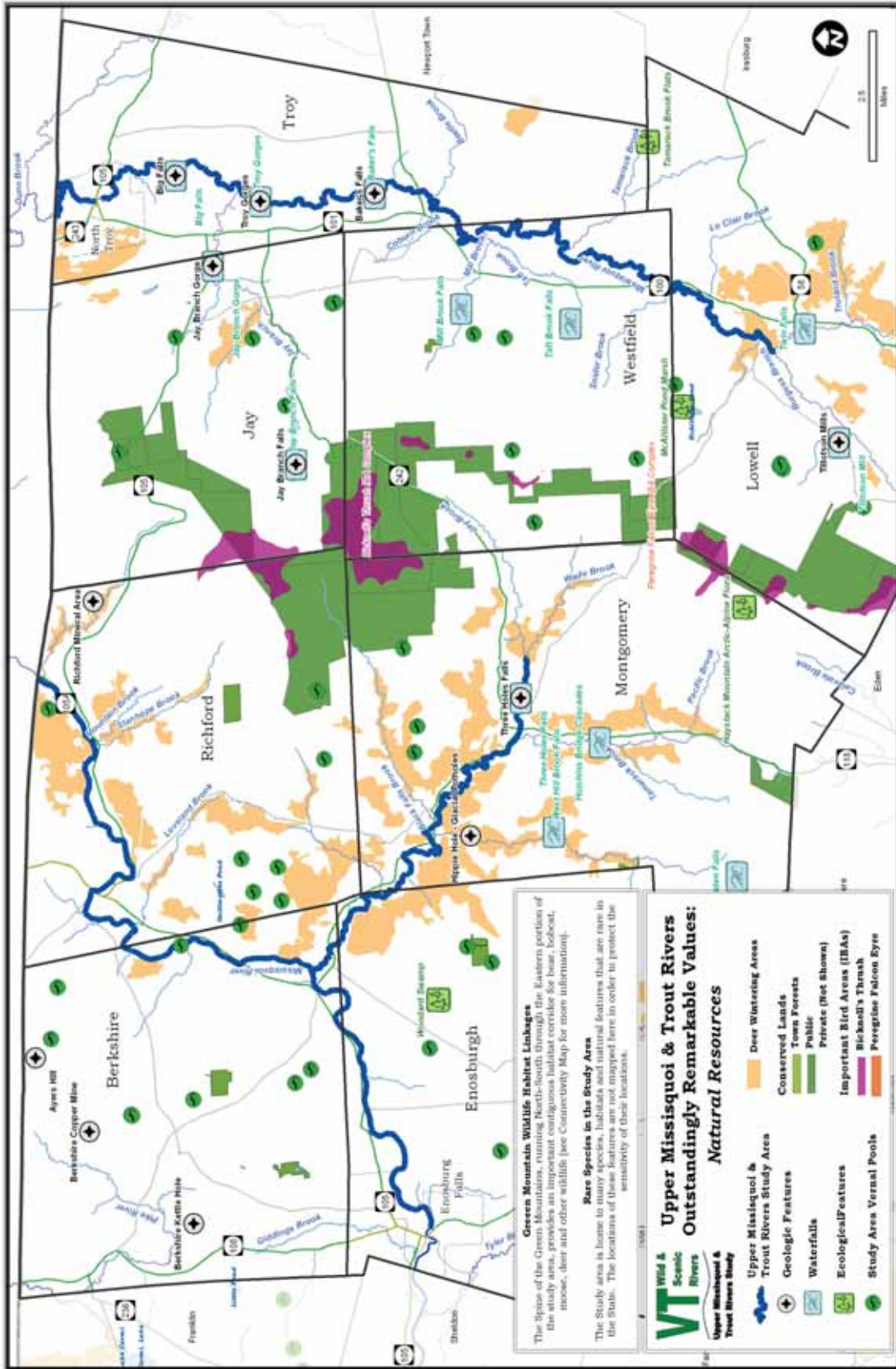


Figure 10. A map of Natural Resource ORVs within the Study area municipalities.



**Serpentine Outcrops** along the Missisquoi River in Lowell, Troy and Westfield represent a high concentration of these rocks in Vermont. These outcroppings are part of one of the largest ultramafic serpentine zones in the country. These serpentine rocks are tied to the Missisquoi drainage basin, and the bedrock origin and rock types affect the path and movement of the Missisquoi River. Serpentine outcrops appear in at least 10 locations along the Study corridor, and are associated with species of rare ferns. Serpentine outcrops are areas where serpentine bedrock is exposed. This ultramafic rock is unique because it is found more commonly deep in the Earth's mantle. Serpentine rocks are chemically distinct from other Vermont rocks; they are deficient in calcium, and rich in magnesium, iron, nickel and chromium which are often toxic to certain plant species. Occurrences of these outcroppings are tracked as rare occurrences by the Vermont Natural Heritage Information Project and are classified as S1 and G2, which means they are "very rare" and "rare" on State and global levels, respectively. The rarity of these types of rock attracts geologists from all over the world to this section of Vermont. According to Sorenson and Thompson's book *Wetland, Woodland, Wildland*, plant communities on these rare ledges and outcrops are also specialized, and low in diversity due to the challenges of living on this rock type. This is the only habitat in which several rare plant species can live in the state. "The Green Mountain maidenhair fern (*Adiantum viridimontanum*; S2, VT Threatened) grows only on serpentine soils, and its overall distribution is limited to northern Vermont and southern Quebec." Serpentine maidenhair fern (*Adiantum aleuticum*; S1), Large-leaved sandwort (*Arenaria macrophylla*; S2), and Marcescent sandwort (*Arenaria marcescens*) are additional rare and uncommon plants which are characteristic of serpentine outcrops.

#### *Waterfalls, Cascades and Gorges*

The geology in Franklin and Orleans Counties also contributes to numerous unique waterfalls, cascades and gorges along the Missisquoi and Trout Rivers. The most well-known of these is **Big Falls** on the Missisquoi River in Troy, VT. Big Falls is a good example of the geologic history of the Study area

because there one may see the many folds and deformities in the rocks. The Burgess Branch Fault is visible through the topography of the area, and has been studied by geologists at the Vermont Geologic Survey and the University of Vermont. Big Falls is unique at the national and regional level as it is the largest undammed falls in Vermont that has been made into a State Park/Natural Area. Below the falls is a gorge over 200 feet long with 60-foot high walls. Jerry Jenkins describes Big Falls in his report for the State, *The Waterfalls, Cascades and Gorges of Vermont*: "The Site is about one-half mile long. Above the falls are rapids, braiding channels, low cliffs ten to 35 feet high, and many small islands. Immediately before the falls is a large pool about 100 feet wide. The falls themselves (actually steep cascades) consist of three channels and drop about 25 feet. The middle channel is beautiful and spectacular and very noisy. Below the falls there is a gorge about 75 yards long with walls about 60 feet high. The east walls are vertical, the west walls sloping. At the bottom of the gorge there is deeper water which makes good swimming, and several sandy beaches." The gorge also contains a number of rare vascular plants. Dorothy Allard, Virtual Herbarium Coordinator for UVM's Pringle Herbarium, led a 2005 inventory of bryophytes at Big Falls State Park and states that it was an "interesting place from a bryological standpoint." Both S2 and S1 species of bryophytes were found during this inventory. The site was ranked as "high importance" in the Waterfall Study due to its heavy recreational use, significant botanical character and its distinction of being the largest natural waterfall in the State. It has also been noted as a 'significant feature' of the Missisquoi basin in previous versions of the Agency of Natural Resources' Watershed Management (Basin) Plan. *Waterfalls, Cascades and Gorges of Vermont* states that with the "...alteration and destruction of waterfalls and gorges...combined with the number of people who use and appreciate the ones that remain, seems to us to argue for the defense of every important site we have left."

Other important waterfalls, cascades and gorges along the Missisquoi include:

- **Baker's Falls (Pierce Mill, Troy) – Missisquoi River:**

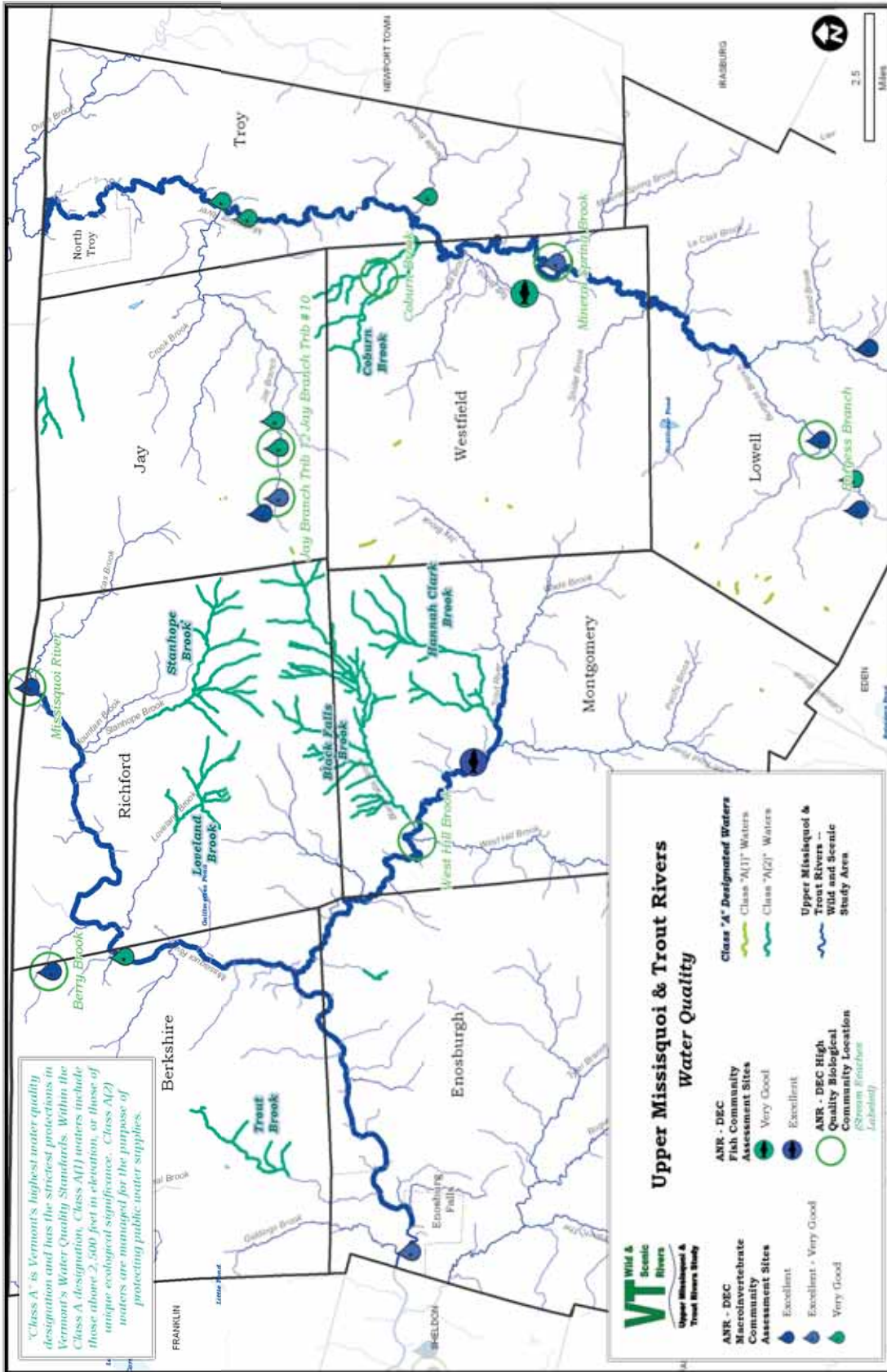


Figure 11. A map demonstrating the highest water quality within the Study area municipalities.

Cascades below an old dam, the first cascade is approximately 25 feet high, followed by two ten-foot cascades. Declared to be a significant site in the Missisquoi Basin Watershed Plan and described in *The Waterfalls, Cascades and Gorges of Vermont*.

- **Troy Gorges – Missisquoi River:** A series of four bedrock gorges located about a mile downstream of the River Road Bridge in Troy. Deep pools separate the gorges which range in length from about 400' to 1,500' along this 1-mile segment of the upper Missisquoi River. This reach also contains the foundation ruins of an old iron smelter.
- **Jay Branch Gorge (Four Corners Swimming Hole) – Jay Branch, Missisquoi River Tributary:** Listed by [newenglandwaterfalls.com](http://newenglandwaterfalls.com) as a premier swimming hole in Vermont, this hole has beautiful waterfalls cut into the bedrock (Ottawaquechee Formation of black phyllite or schist with quartz). This swimming area is a series of drops on the Jay Branch called "Four Corners." They are a beautiful set of swimming holes just downhill of the junction of Route 105, Route 101 and the Veilleux Road. There are large potholes present, and it even used to be a destination for gold panning. Please see the potholes in the scenic and recreational ORV chapter of the Management Plan for more information.
- **Tillotson Mills, Lockwood Brook, Missisquoi River Tributary, Lowell:** This small woodland cascade is below a historic mill, and described in the *Waterfalls, Cascades and Gorges of Vermont*. This site is a waterfall and swimming hole, and also noted as a 'significant feature' of the Missisquoi basin in previous versions of the Agency of Natural Resources' Watershed Management Plan (Basin 6 - Missisquoi River Watershed Water Quality and Aquatic Habitat Assessment Report).
- **Twin Falls, East Branch of the Missisquoi River, Lowell:** These falls are located in Lowell Village on the East Branch. Cascading falls are made by a large waterfall split in two by a bedrock outcrop. There is a deep pool below the falls which is good for swimming. This place was described in the 1991 swimming hole survey.

- **Three Holes Area, Trout River, Montgomery:** This series of kettle holes along the Trout River in Montgomery is a popular swimming area voted by *Yankee* magazine as the Best Swimming Hole in New England in their May/June 2010 Issue. There is more information about this privately owned swimming hole in the Scenic/Recreational ORVs section.

### *Rare, Threatened and Endangered (RTE) Species and Communities*

According to the Vermont Wildlife Diversity Program (formerly the Vermont Nongame and Natural Heritage Program) there are many rare species of aquatic insects, amphibians, reptiles, plants and natural communities associated with the upper Missisquoi and Trout Rivers. These rare, threatened and endangered species and communities are given global and state rankings. For example, a RTE listed as G2 means that they are considered imperiled with very few populations (often 20 or fewer) in existence globally. State ranks are assigned similarly, with those with a State rank S3 or lower considered RTEs. These ranks are based on a species' vulnerability to extirpation (ceasing to exist in VT) or extinction (ceasing to exist on Earth). S3 ranking means species are vulnerable to extirpation, often due to declines to 80 or fewer occurrences in the State due to habitat restrictions or other reasons for decline. S2 ranking means species are imperiled and at high risk for extirpation, often due to declines to 20 or fewer occurrences in the State due to habitat restrictions or other reasons for decline. S1 ranking means species are critically imperiled and at very high risk for extirpation from the State, often due to declines to 5 or fewer occurrences in the State due to habitat restrictions or steep declines in numbers.

One such rare natural community, the **Serpentine Outcrops**, was discussed in the geology section above. The serpentine outcrop natural community is listed as G2, meaning that serpentine outcrops are considered imperiled with very few populations (often 20 or fewer) in existence globally. Another such community is the **Riverside Outcrop** (S3), an upland shore natural

community found along streams and rivers where there is exposed bedrock. Common near waterfalls, cascades and gorges, this community is found along large rivers in the State like the Missisquoi. Wetland, Woodland, Wildland lists the red-spotted ground beetle as a rare insect that may be found within this natural community. Some species of plants such as wild chives, shining ladies-tresses and several species of bryophytes (group of non-vascular plants which includes mosses, hornworts and liverworts) live in and on these harsh, riverside outcrops. **Silver Maple-Ostrich Fern Riverine Floodplain Forest (S3)** is dominated by silver maple and ostrich ferns which are able to survive in the typical, annual flooding. Many migratory birds are known to use this riparian habitat along with otter, mink, muskrat, beaver, and several amphibian species. **Troy Colony of Great Laurels** is listed by the Vermont Rivers Study as a “relic colony of laurel shrubs” in its list of natural areas that are “recognized as excellent examples of Vermont’s natural heritage.” The **Great Laurel** is a State Threatened plant (*Rhododendron maximum*; S2). The Audubon Society Field Guide to the Northeast provides the following description: “The great laurel is a large and spectacular rhododendron usually found only in warmer climates than that of northern Vermont near the Canadian border. It is believed that this species was more common in northern Vermont about 6,000 years ago, when the region possessed a somewhat warmer climate. This period of time is known as the *climatic optimum*.... This relic colony of great laurels is one of only two that are found in northern New England.” This colony of laurels was listed in the Vermont Rivers Study.

Several species of rare dragonflies and damselflies are found in the Study area, and are directly linked to the quality of the Missisquoi and Trout Rivers and their surrounding wetlands. Their ranks are listed in the table below. According to Vermont Natural Heritage Data, there are 19 species of **dragonflies and damselflies** in Franklin and Orleans Counties which are ranked as S3 or lower (vulnerable to extirpation to critically imperiled). The dragonhunter dragonfly (*Hagenius brevistylus*) is the only species in this genus in North America. This amazing aerialist typically lives

near forested streams and rivers, but also near slower moving lakes or bays, where it hunts for other dragonflies which it catches on the wing. The zebra clubtail dragonfly (*Stylurus scudderi*) is named for the swelled, club-like end to its abdomen and the alternating black and yellow (or pale green) stripes along its body. This rare dragonfly lives in clear, clean, forested streams and small rivers including trout streams. You may see the males patrolling over the river guarding foraging and breeding territory.

The following are RTE reptiles and amphibians dependent on the Missisquoi and Trout Rivers and their surrounding wetlands. **Mink frogs (S3)** are green-faced frogs that, according to Jim Andrews, Coordinator of the Vermont Reptile and Amphibian Atlas, are reported to smell like garlic or onion. They prefer shallow bays and inlets and outlets of rivers, lakes and ponds. Conservation of undeveloped bays and marshlands, and education and monitoring of roads along waterways for mortality during summer breeding season would help protect this vulnerable amphibian species. **Wood turtles (S3, VT Species of Special Concern)** have red/orange flesh, black heads, and layered scutes (shell scales) which can look like the rings in a tree. Their plastron, the bottom of their shell, is yellow with black markings. Wood turtle habitat includes streams where they overwinter, and nearby uplands and fields where they feed. They need connectivity between their streams and neighboring woodlands. Protecting these habitats along with eliminating their collection as pets and reducing road mortality will help protect this species. **Four-toed Salamander (S2, VT Species of Special Concern)** – This salamander is small, and approximately the size and color of the common red-backed salamander often found in woodlands. This salamander is distinguishable by its creamy, almost opal, stomach which also has a smattering of black spots. They also only have four toes on their back feet whereas most salamanders have five hind toes. Preserving their preferred habitat of vernal pool edges and small, wooded swamps, such as red maple swamps will help protect this high priority species of concern in the state. The Vermont State Natural Heritage Information Project has mapped 64 distinct **vernal**

**Table 1.** Study area records for rare Dragonflies & Damselflies (Odonata) from the VT Natural Heritage Program.

Common Name	Genus species	SR	GR	Franklin	Orleans
Spotted Spreadwing	<i>Lestes congener</i>	S3	G5	Yes	Yes
Elegant Spreadwing	<i>Lestes inaequalis</i>	S3	G5		Yes
Vesper Bluet	<i>Enallagma vesperum</i>	S3	G5	Yes	Yes
Black-tipped Darner	<i>Aeshna tuberculifera</i>	S2	G4	Yes	Yes
Harlequin Darner	<i>Gomphaeschna furcillata</i>	S2	G5		Yes
Lilypad Clubtail	<i>Arigomphus furcifer</i>	S2	G5	Yes	
Black-shouldered Spinyleg	<i>Dromogomphus spinosus</i>	S3	G5	Yes	Yes
Beaverpond Clubtail	<i>Gomphus borealis</i>	S2	G4	Yes	Yes
Dragonhunter	<i>Hagenius brevistylus</i>	S3	G5		Yes
Southern Pygmy Clubtail	<i>Lanthus vernalis</i>	S2	G4		Yes
Maine Snaketail	<i>Ophiogomphus mainensis</i>	S2	G4		Yes
Eastern Least Clubtail	<i>Stylogomphus albistylus</i>	S3	G5	Yes	Yes
Zebra Clubtail	<i>Stylurus scudderi</i>	S2	G4	Yes	Yes
Arrow Clubtail	<i>Stylurus spiniceps</i>	S2	G5	Yes	
Williamson's Emerald	<i>Somatochlora williamsoni</i>	S3	G5		Yes
Calico Pennant	<i>Celithemis elisa</i>	S3	G5	Yes	
Belted Whiteface	<i>Leucorrhinia proxima</i>	S3	G5	Yes	Yes
Twelve-spotted Skimmer	<i>Libellula pulchella</i>	S3	G5	Yes	Yes
Band-winged Meadowhawk	<i>Sympetrum semicinctum</i>	S3	G5	Yes	Yes

**Table 2:** Important Sites of High Water Quality Supporting ORVs

<b>Macroinvertebrate Community Assessment Rankings</b>
<i>Excellent:</i>
● Missisquoi River (Richford)
<i>Excellent - Very Good:</i>
● Missisquoi River (Enosburgh)
<i>Very Good:</i>
● Missisquoi River (Richford)
<b>High Quality Aquatic Insect Community/"High Quality Biota" Site Rankings</b>
● Missisquoi River (Richford)
<b>Fish Community Assessment Rankings</b>
<i>Excellent:</i>
● Trout River (Berkshire)

**pools** in the Study area watershed, see the Vermont Vernal Pool Mapping Project, with two very close to the Missisquoi: 1) an old oxbow in Berkshire, and 2) another in Richford. Vernal pools, often forested, swamp natural communities present throughout the Study area, are seasonally temporary wetlands important to biological diversity, forest function and watershed processes. These pools are formed from spring rains and snow meltwater in small woodland depressions. Because these vernal pools are ephemeral (temporary) they are not able to maintain populations of fish species. This makes them important as breeding areas for amphibians, especially those sensitive to predation by fish such as wood frogs, and to the biological diversity and watershed functions of an area. Many species of aquatic insects, salamanders, frogs and turtles depend on vernal pools as critical habitat. Fairy shrimp are small crustaceans which only live in vernal pools. Vernal pools are considered uncommon in the State and nationally, and are significant ecological areas protected under Vermont's wetland laws. Under Vermont's Wetland Rules, vernal pools are considered significant wetlands under wildlife habitat, Section 5.4. Typically considered Class II wetlands, they are required to have a 50 foot buffer though many may be better protected with a larger one.

Water quality is particularly important to the rare fish species found in the Missisquoi and Trout Rivers. **Fantail Darter** (S3) is described by the book, *Fishes of Vermont*, as living in shallow areas of streams and rivers where they hunt for aquatic macroinvertebrates between rocks. This fish species is at the northeastern edge of its distribution, and is only found in Vermont in the Missisquoi River and some of its tributaries. The **Brassy Minnow** (S1, *VT Species of Special Concern*) is on the "extreme eastern edge of its distribution," being found in few areas in Vermont including two Missisquoi River tributaries. This minnow predominately eats algae, making it one of two true herbivore fish species in the State. For this reason, they prefer waterway reaches with muddy substrate rich in organic matter. The **Brook trout**, though not rare, threatened or endangered in the State, are the only char species native to Vermont. This salmonid

species has seen decline in numbers in recent years due to impacts by stocked trout species which are competitors for food and habitat, along with habitat alterations. These fish are coldwater species, and require temperatures typically below 65-72°F. With loss of riparian trees, and increased runoff to streams water temperatures are often above levels which stress this species sometimes leading to relocation or mortality. The Wild and Scenic Study Committee promotes water quality initiatives that protect these important aquatic species, and recognizes the need to maintain high water quality in the region. The tributaries of the Missisquoi including the Trout River, include headwater streams and river sections of high quality waters. Please see Figure 11 for a map of streams within the Study area with high water quality.

Sites where the Vermont Agency of Natural Resources' (ANR) Watershed Management Division has determined aquatic communities (macroinvertebrates and/or fish) to be "Very Good" or "Excellent" are also identified as supporting the Missisquoi and Trout ORVs. The occurrences of communities of this quality are indicative of the best water quality and outstanding aquatic habitats in the state of Vermont. Additionally, ANR biologists have further classified a subset of river and stream reaches as "High Quality Biota," indicating that these habitats support naturally functioning, exceptionally healthy biological communities. These High Quality Biota sites are identified as supporting the Natural Resource and other ORVs as well.

Overall, the combination of important geology; waterfalls, cascades and gorges; and rare, threatened and endangered species and natural communities make up the Natural Resource ORVs which are rare and important at both the national and regional scale.

### **Historic and Cultural ORVs**

#### *Archeological Sites*

Lowell, Westfield, Troy, North Troy, Richford, Enosburgh, and Enosburg Falls have known archeological sites documented in the Vermont Division of Historical Preservation archives or have

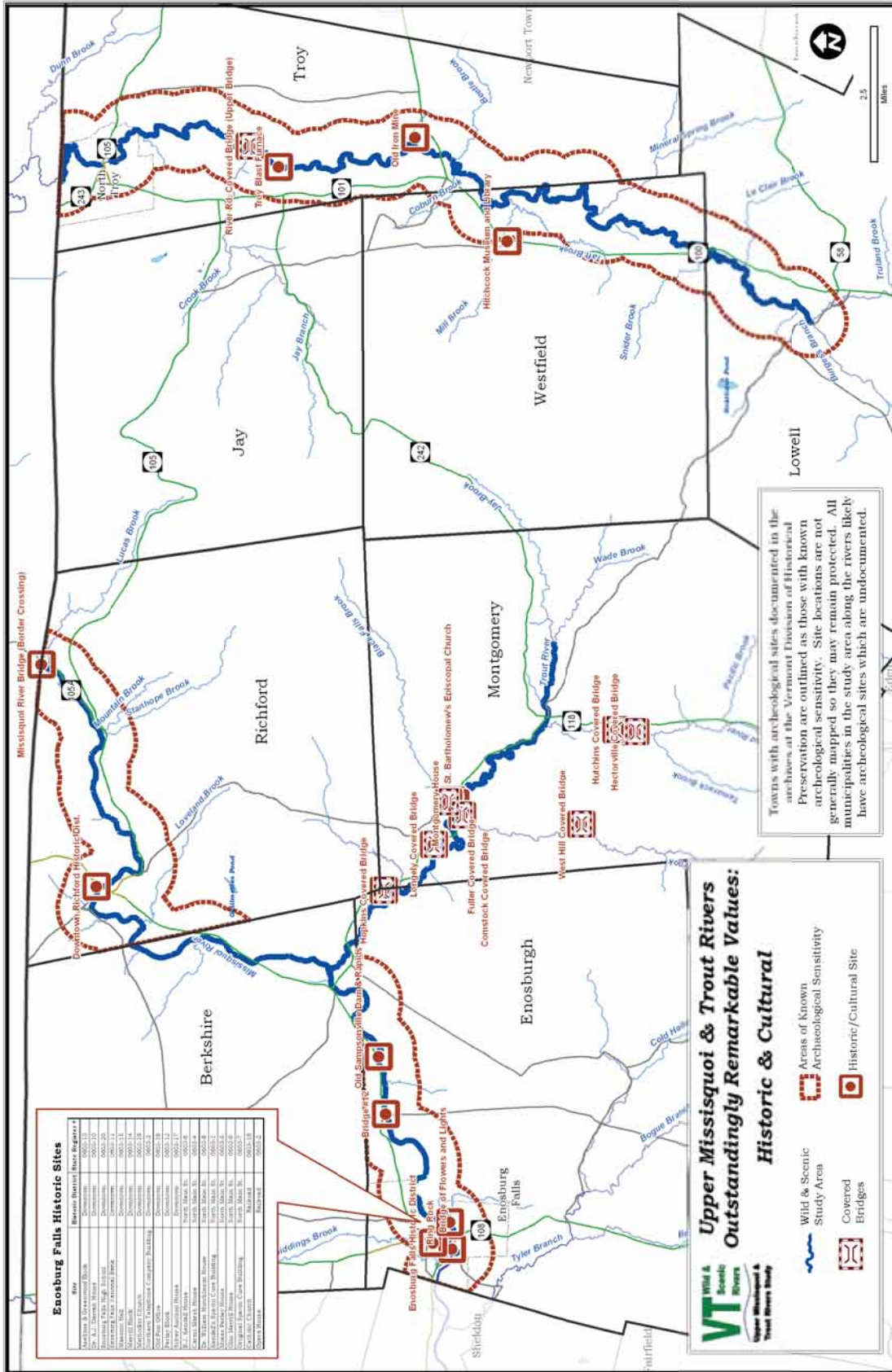


Figure 12. A map of Historic and Cultural ORVs within the Study area municipalities.

known archeological sensitivity. All municipalities in the Study area along the Missisquoi and Trout Rivers likely have archeological sites which are undocumented. Of the documented sites, Native American Site, VT-FR-162 is in Enosburg Falls. There is evidence here of a large camp or village based on the low density of prehistoric artifacts (early to middle Woodland Period) over a large area. Chert and quartz flakes, fire-cracked rock, charcoal, and hearth features were found. According to the Division of Historic Preservation VT-FR-162 “is important in that it is at present the largest known site on the Missisquoi [River] above Enosburg Falls. It is probably a Woodland Period camp/village site which was not intensely used. This suggests it could be...a sensitive temporal marker if dated...” This settlement was on the banks of the Missisquoi River, and likely owed its location to the falls in present-day Enosburg Falls. The settlement was river dependent with the changing riverine environment a probable explanation for the temporal use of the camp/village. Users of the site surely took advantage of the broad floodplain and easy canoe routes available at that site. Additionally, combined, Native American Sites VT-FR-331– VT-FR-333 are one of the few known archeological sites on the upper Missisquoi River. Artifacts at this site are few, and likely indicate a small, short-term hunting camp. Artifacts are likely from Paleoindians (9000-7000 B.C.E.) or middle Woodland peoples (1-1000). This site is currently protected by the 100’ Vermont wetland buffer, and may be eligible for inclusion on the National Register of Historic Places (NRHP). In phase two assessment, protection from river erosion by geotextile fiber was recommended along with seeking inclusion on the NRHP. Because of their importance in understanding the Native American culture of the area, and their uniqueness in the State on the upper Missisquoi River, these archeological sites are considered Historic and Cultural ORVs.

### *Bridges with Historic and Cultural Significance*

**Covered bridges** are a sought-after recreational attraction for people interested in cultural heritage and scenic beauty. Early settlers in the Study area were fortunate to have ample forest and farm land, as well as plentiful running water, to power mills and

transport forest products. The waterways created a separate challenge for overland travel; a growing economy and an abundance of rivers and streams in the area created the need for many bridges. The bridges were built with roofs to shield them from the elements – rain, ice, and lots of snow. Twelve covered bridges were built in the Town of Montgomery alone, all by the same builders – the Jewett brothers. These bridges are so important that Montgomery’s 2010 Town Plan stated a vision for the future of Montgomery was to “maintain and preserve Montgomery’s six covered bridges, for they represent our community’s history and an appreciation of Vermont’s cultural heritage.” By 1940, there were 13 covered bridges in Montgomery. The president of the Montgomery Historical Society, Scott Perry, states that these bridges were often built to provide access to more trees for harvest. Six of these covered bridges are still in use today and one (Hectorville Bridge, from Gibou Road) is currently in off-site storage awaiting repair. These are ORVs of national and regional significance as they represent the most covered bridges within one town in the country. The six Montgomery bridges, as well as the one in Enosburgh and another in Troy, are popular destinations for



**Figure 13.** Comstock Bridge, Montgomery, VT. Photo by Ken Secor

sightseers and bring many tourists to the area. The Hopkins and West Hill Brook covered bridges and swimming holes are important recreational destinations for trout anglers and swimmers. The Hopkins Bridge, Hopkins Bridge Rd., Enosburgh (also a Jewett brothers’ bridge added to the NRHP 1974), is



near the Enosburgh/Montgomery town line. According to Scott Perry from the Montgomery Historical Society the fact that it was also built by Montgomery's Jewett brothers and its closer proximity to downtown Montgomery Village than Enosburgh often lead them to "claim" it for Montgomery. These bridges add to the unique local character and quaint New England Charm of the Study towns. All of these covered bridges were listed on the National Register of Historic Places between November 1974 and December 1974. As such, these bridges are recognized as significant at the community, state, and national level.

### Covered Bridges, Trout River

- Comstock Bridge, Comstock Bridge Rd., Montgomery
- Fuller Bridge, Fuller Bridge Rd., Montgomery
- Hectorville Bridge, Gibou Rd., Montgomery (currently in off-site storage awaiting repair)
- Hopkins Bridge, Hopkins Bridge Rd., Enosburgh (near border with Montgomery)
- Hutchins Bridge, Hutchins Bridge Rd., Montgomery (Crosses the South Branch of the Trout River, a tributary)
- Longley Bridge, Longley Bridge Rd., Montgomery (has been closed temporarily and is bypassed by an additional steel bridge that also crosses the Trout River)
- West Hill (Creamery) Bridge, Creamery Bridge Rd., Montgomery (crosses West Hill Brook, a Trout River tributary)

### Bridges, Missisquoi River

- River Road Covered Bridge (Upper Bridge), River Rd., Troy was added to the NRHP 1974.
- Town Highway Bridge #12 (Boston Post Road, Enosburgh, VT) is an iron bridge over the Missisquoi River that was added in 2007 to the National Register of Historic Places.
- Missisquoi River Bridge at the Canada/VT border crossing on Route 105 between Richford, Vermont and Abercorn, Quebec is on the National Register of Historic Places. It was the first of ten truss bridges spanning the Missisquoi River.

The border crossing bridge on Route 105 is owned jointly by the U.S. and Canada. The communities have cooperated across the international boundary to maintain the bridge. In fact, VTTrans has a project under development with Canada to rehabilitate the old steel truss. They are hoping to begin construction in calendar year 2016.

VTTrans and Regional Planning staff indicate that the covered bridges are municipally owned and



**Figure 14.** Study Committee members identifying ORVs at a monthly meeting. *Photo by Shana Stewart Deeds*

MONTGOMERY'S COVERED BRIDGES

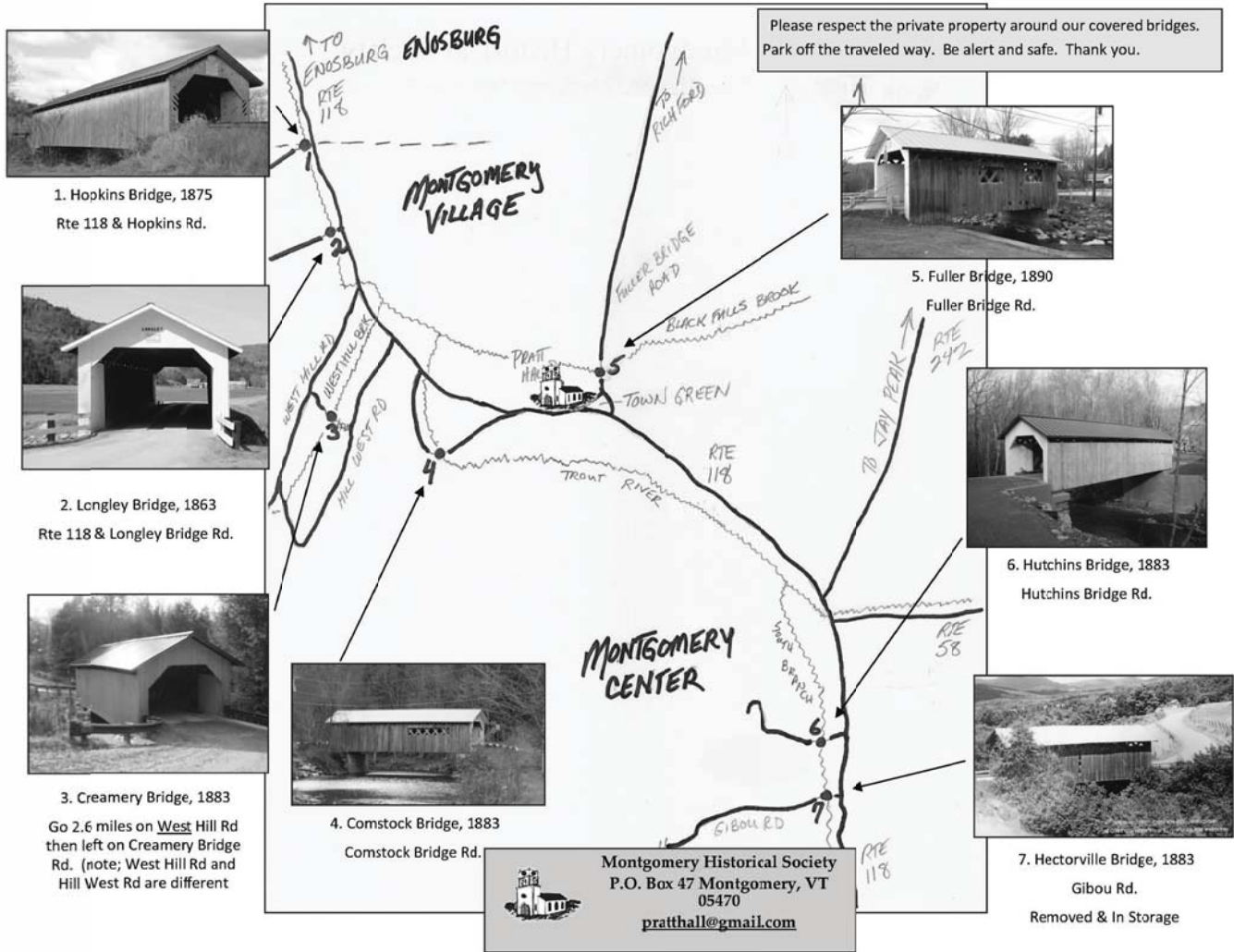


Figure 15. Graphic by the Montgomery Historical Society of the seven Jewett brothers' covered bridges in Montgomery.

maintained. Funding for maintenance or rehabilitation needs traditionally comes from local, state and sometimes federal transportation programs. If damage is related to a presidentially declared disaster, the town owning the public infrastructure may apply for help from the Federal Emergency Management Agency's (FEMA) Public Assistance Program. In addition to local maintenance budgets, many (if not all) of the bridges have received some state and federal funding for repairs or rehabilitation. Potential funding sources can include: VTrans Structures Grant, Town Highway Bridge Program, Transportation Alternatives Program (formerly

Transportation Enhancement Program) and the National Historic Covered Bridge Preservation Program. Though the National Historic Covered Bridge Preservation Program was not funded in the last federal transportation bill, Vermont did receive \$850,000 for the Longley Bridge rehabilitation in the previous cycle.

**Classification**

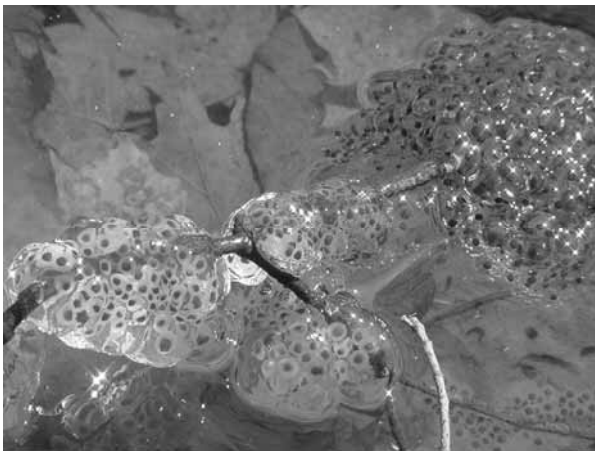
Based on applicable criteria, the National Park Service (NPS) has assigned a preliminary classification of **recreational** to the segments of the upper Missisquoi

and Trout Rivers that are eligible for designation. The NPS and Study Committee, though recognizing that some smaller reaches with possible **scenic** classification exist, concluded that the overall classification that best fits **Segments 1, 2 and 3** is

**recreational**. Should further action to designate tributaries (**Segment 4**) take place, an evaluation of the classification of these segments would occur at that time.



**Figure 16.** Students identifying macroinvertebrates during a Bugworks workshop cosponsored with the Study Committee by the Missisquoi River Basin Association. *Photo by Shana Stewart Deeds*



**Figure 17.** Spotted salamander and wood frog eggs in a vernal pool (left). Adult wood frog (right). *Photos by Shana Stewart Deeds.*

## Chapter 3. Eligibility and Classification

*The free-flowing segments of the upper Missisquoi and Trout Rivers are found eligible for designation based on the presence of multiple Outstandingly Remarkable Values. These segments meet the classification definition of a recreational river area due to the level of human access and alteration.*



**Figure 18.** Cyclists enjoying the Missisquoi Valley Rail Trail. *Photo by David Juare.*

### ***Additional Resources***

Determining Acceptable Minimal Stream Flows: [www.anr.state.vt.us/dec/waterq/rivers/docs/rv\\_flowprocedure.pdf](http://www.anr.state.vt.us/dec/waterq/rivers/docs/rv_flowprocedure.pdf)  
Missisquoi Bay Watershed Planning in the VT Watershed Management Division:  
[www.anr.state.vt.us/dec/waterq/planning/htm/pl\\_missisquoi.htm](http://www.anr.state.vt.us/dec/waterq/planning/htm/pl_missisquoi.htm)  
User's Guide to Dam Removal in VT: [www.anr.state.vt.us/dec/waterq/rivers/docs/drw\\_usersguide.pdf](http://www.anr.state.vt.us/dec/waterq/rivers/docs/drw_usersguide.pdf)

## Chapter 4. Suitability



Photo by Maddie McGarvey

This Chapter presents the Study findings related to Section 4(a) of the Wild and Scenic Act “...on the suitability or non-suitability for addition to the national wild and scenic rivers system.” The suitability of the upper Missisquoi and Trout Rivers for designation is directly related to the existing and future management of the rivers.

### Suitability Criteria

In 1995, members of the Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service and U.S. Forest Service established an interagency council to address administration of National Wild and Scenic Rivers. The Interagency Wild and Scenic Rivers Coordinating Council developed criteria for suitability of rivers considered for inclusion in the Wild and Scenic Rivers system. These criteria are similar to, but distinct from the eligibility requirements for inclusion in the National WSR System. The following questions are asked to ascertain whether any river is suitable for designation.

- 1) Should the river’s free-flowing character, water quality, and Outstandingly Remarkable Values (ORVs) be protected, or are one or more other uses [e.g., issuance of a hydro license] important enough to warrant doing otherwise?
- 2) Will the river’s free-flowing character, water quality, and ORVs be protected through designation? Is designation the best method for protecting the river corridor?
- 3) Is there a demonstrated commitment to protect the river by any nonfederal entities that may be partially responsible for implementing protective management?

In answering these questions, the benefits and impacts of Wild and Scenic Rivers designation may

## Chapter 4. Suitability

be evaluated and alternative protection methods considered.

Additionally, the upper Missisquoi and Trout Rivers predominantly flow through private lands and best fit within the Partnership Wild and Scenic Rivers model. The National Park Service created additional questions to ascertain the suitability of these Partnership Rivers.

- 1) Are existing protection measures adequate to conserve the river's outstanding resources without the need for federal land acquisition or federal land management?
- 2) Is there an existing or proposed management framework that will bring the key river interests together to work toward the ongoing protection of the river?
- 3) What local support exists for river protection and national designation?
- 4) What would the effects of designation be on the land use, water base, and resources associated with the river, the neighboring communities, etc.?

### Existing Protections

Protections for free-flowing character, water quality and each of the identified ORVs were assessed by the NPS in conjunction with the Study Committee and the complete findings are available in the Management Plan and its Appendices. The Protections Appendices available on the Study Committee's website ([www.vtwsr.org](http://www.vtwsr.org)) specifically list the protections provided through federal, regional, state, and local mechanisms that already protect the ORVs.

These protections include strong local, state, and federal programs, statutes, regulations and ordinances that directly protect the watercourses and adjacent lands. Federal legislation such as the Clean Water Act, and Federal agencies such as the Army Corps of Engineers are to provide substantial protection for water quality. The free-flowing condition of the upper Missisquoi and Trout Rivers is protected through the Vermont Agency of Natural Resources' stringent review and permitting for projects which propose limiting the free-flowing nature of Vermont's waterways. In addition, there are established local



**Figure 19.** Study Committee members learning about river dynamics through the use of a flume courtesy of Staci Pomeroy of the VT Agency of Natural Resources. *Photo by Shana Stewart Deeds.*

watershed associations, conservation commissions, land trusts, and other non-governmental supporting organizations that have strong interests in protecting the outstanding resources identified by the local community during the Study process. There is also strong local and regional citizen recognition, evident in town and regional plans, of the importance of these rivers and the resources they support. The Management Plan demonstrates that these existing protections, along with implementation of the recommendations in the Management Plan, meet the suitability criteria for the segments that are recommended for Wild and Scenic Rivers designation.

Municipalities in the Study area demonstrate their support for Wild and Scenic Rivers in various ways including: regulations at times above and beyond State regulations and requirements, support for projects in the watershed that demonstrate best agricultural practices, zoning regulations that mirror WSR values, and contributions to local organizations, such as the Missisquoi River Basin Association, that

work for healthy rivers. By far the most significant issue related to riverfront and river-corridor lands has been agricultural preservation and promotion of agricultural BMPs to protect water quality. This is not surprising given that agriculture dominates river-corridor lands, and is recognized at the state and local level as a critical economic and cultural quality of life issue. At the same time, development pressure has been generally low (See Table 3 below). Table 5 on page 54 and accompanying narrative description of agriculture-related programs demonstrate the degree to which this issue has dominated the river-related management agenda.

It is important to note, however, that several communities have begun to recognize the need and benefit of more diverse and sophisticated local approaches such as Enosburgh’s buffer requirement, Enosburg Falls’ setbacks and zoning districts, or Berkshire and Enosburg Falls’ employment of stormwater management standards. Enosburgh has a Natural Resources Overlay District (§570 of Zoning Bylaws), which includes “significant geologic features,

unusual or important plant and animal qualities of scientific, ecological, or educational interest make lands in this district unsuitable for intensive development because of their local, statewide, national and global significance. Included are steep slopes, rare and endangered species, waterways... and significant wildlife habitat. Designation of this district is intended to protect ... scenic and natural resource values.”

Additionally, the Management Plan development and local endorsement process demonstrated that all of the communities are interested in and supportive of developing such approaches, and acting proactively in relation to the river and its protection, as appropriate. In many instances, though, the focus will appropriately remain on agricultural issues, as they dominate the river landscape and areas not suitable for agriculture are often remote, bordered by steep terrain, and general viewed as not threatened.

A major factor in the evolution of local and state river management focus is the recently passed Act 110 (2012), which, for the first time, has provided State

**Table 3.** Census data for Franklin and Orleans County Study area municipalities.

Franklin County NRPC								
Census Info 1790-2000				Population change from:				
YEAR	1790	1900	1950	1990	2000	1990-2000	1950-2000	
Berkshire	0	1,326	1,063	1,190	1,388	~+16%	~+30%	
Enosburgh	0	2,054	2,101	2,535	2,788	~+10%	~+32%	
Enosburg Falls	0		1,289	1,350	1,473	~+9%	~+14%	
Montgomery	0	1,876	1,091	823	992	~+20%	~-9%	
Richford	0	2,421	2,643	2,178	2,321	~+6%	~-12%	

Orleans County NVDA				
2010 Census Info		2000	2010	Population change from:
				2000-2010
	Jay	426	521	~+22%
	Lowell	738	879	~+19%
	North Troy	593	620	~+4%
	Troy	1,564	1,662	~+6%
	Westfield	503	536	~+6%

level enabling legislation that encourages local communities to adopt river corridor zoning strategies, including vegetative buffer requirements. This Act, in combination with the recent State adoption of scientific, geomorphic approaches to river management, and local community support of the Wild and Scenic River designation and associated Management Plan form a very solid basis and foundation from which local approaches may evolve in coming years. The Trout River Project highlighted on page 24 is another example of a science-based project that reflects the forward thinking of the State and local municipalities with respect to river management. Current regulations in these municipalities reflect existing levels of land use. Should population density greatly increase, strengthened land use regulations may be necessary. Support from the Northwest Regional Planning Commission and Northeastern Vermont Development Association ensure mindful planning in the region that stays ahead of demands on lands in the watershed.

In total, the current combination of local, state, and federal regulations, protected lands, and physical constraints to development provide a protection scheme for the Wild and Scenic River Values that is adequate and makes federal ownership, condemnation and management of lands unnecessary for the upper Missisquoi and Trout Rivers. In support of this conclusion, important local, state, and federal protections were identified. Highlights for each Wild and Scenic River value category are as follows.

### *Scenic and Recreational Protections*

#### **Federal (Canada)**

The Missisquoi Bay Inter-Agency Advisory Committee's Missisquoi Bay Action Plan 2010-2016 is an important document demonstrating Canada's commitment to phosphorus reduction in the Missisquoi watershed. This is particularly important for Scenic and Recreational Resources in the Missisquoi River and Lake Champlain due to the reduction in swimming and boating recreation along with scenic character associated with algal blooms that often accompany

high nutrient conditions in the waterways. An objective of this plan is to enforce and comply with Canada's Agricultural Operations Regulation (REA) in the North Missisquoi River Basin. Actions taken by the Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) and Direction régionale du Centre de contrôle environnemental de l'Estrie et de la Montérégie (CCEQ) include the maintenance and inspection of all farms in the Lake Champlain Basin and ensure compliance to regulation. Over 800 farms have been visited since 2003. Not only do these Canadian federal regulations protect the scenic and recreational resources of the Missisquoi River, they also protect the water quality. More information on Canadian laws protecting water quality may be found in the *Water Quality* resource protections to follow.

#### **State**

As the State of Vermont acknowledges the importance of recreation to its citizens, legislation has been passed that encourages town, planning commissions and State agencies to engage in planning processes to maintain and enhance recreation opportunities in the State. **Vermont's Land Use Planning Law**, Title 24, Chapter 117 of the Vermont Statutes, states that "Growth should not significantly diminish the value and availability of outdoor recreational activities", and "Public access to noncommercial outdoor recreational opportunities, such as lakes and hiking trails, should be identified, provided, and protected wherever appropriate" (24 V.S.A. § 4302).

**Act 250** is Vermont's development control law. The law provides a public, quasi-judicial process for reviewing and managing the environmental, social and fiscal consequences of major subdivisions and development in Vermont through the issuance of land use permits. There are ten separate environmental criteria (with sub-criteria) that may cause a construction project to require issuance of an Act 250 permit, consequently making the project susceptible to both State and public review. The permitting process includes review of land use permit applications for conformance with the Act's ten



environmental criteria, issuance of opinions concerning the applicability of Act 250 to developments and subdivisions of property, monitoring for compliance with the Act and with land use permit conditions, and public education. Criterion 8 and 10 of Act 250 are of particular note to the Wild and Scenic Study towns and ORVs.

A statewide comprehensive plan for outdoor recreation is a requirement for receiving federal support from the Land and Water Conservation Fund (LWCF). On a federal level, these State plans are known as Statewide Comprehensive Outdoor Recreation Plan, or SCORP. In Vermont, the Plan is called the Vermont Outdoor Recreation Plan. Though non-regulatory, the **Vermont Outdoor Recreation Plan** intends to provide the following resources to planning groups:

- A vision, along with goals and actions, in support of outdoor recreation endeavors throughout the State in five-year increments;
- Reference materials for towns, organizations, and recreationists to use when coordinating their activities with statewide priorities, per requirements of some programs such as the LWCF; Vermont Trails and Greenways Plan; and Vermont Wetlands Conservation Strategy.

### **Local**

#### *Richford*

The Richford **Town Plan** (2007) includes a discussion about the Missisquoi River as an important resource for recreation in the Town. The Plan cites Missisquoi, Memorial and Davis Parks, which provide boat access to the Missisquoi River, as vital resources to the Town. The Missisquoi Valley Rail Trail passes through the Town and is also an important recreational resource.

Richford has two **Zoning Districts** that contain recreational purposes in their bylaws. The Recreation/Conservation District is to provide areas with recreational opportunities and to protect environmentally fragile areas in the village district. Residential development is prohibited within the Recreation/Conservation District. The Forest/

Conservation District was created to protect the scenic and natural resource values of sections of the Town for forestry, wildlife habitat, wetlands, and outdoor recreation. The Forest/Conservation District is reserved for land with limited suitability for community growth and development because of remote location, extreme topography and/or shallow soils. Only limited low density development is encouraged in this district.

#### *Troy and North Troy, Village of*

The Town of Troy and the Village of North Troy have a combined **Town Plan** (adopted 3/20/08) and Zoning Bylaws. Recreation is included in the central objectives of the Troy Town Plan. Specifically, it is indicated in the Plan that the Town will promote outdoor recreational opportunities and explore opportunities to protect existing natural and scenic areas. The Missisquoi River and its floodways were identified by local residents as an environmentally sensitive area that should be addressed in any development permitting processes. An objective in the Town Plan regarding this and other environmentally sensitive areas states that these areas should not be fragmented, but rather maintained in a continuous corridor that “complement the local landscape... and provide significant recreational opportunities.” The Town Plan also includes a number of specific goals for the conservation of natural resources, many of which relate to the continuance of outdoor recreation in the Town. Among these goals is a statement regarding planning for and protecting the quality of water resources. The **Zoning Bylaws** of Troy include a provision in Section 321, regarding **Planned Unit Developments**. This ordinance encourages “a more efficient use of land... to preserve open space, natural resources and recreational areas.”

#### *Natural Resource Protections*

#### **Federal**

1973’s Federal **Endangered Species Act** (P.L. 93-205) protects endangered species of fish, wildlife and plants, and authorizes the federal government to maintain a list of those species which are endangered or threatened. No one is permitted to possess, sell or

## Chapter 4. Suitability

transport these listed species, and any person who violates the law may face legal penalties. Land and conservation funds may be used to conserve these species. Section 7 of the Endangered Species Act requires the federal government not to jeopardize the species, or modify their critical habitat. Recovery plans must be in place for listed species, and these plans must be reviewed every two years. If a species is delisted, it must be monitored for five years.

### *State*

**Act 250** continues to play an important role in Natural Resource ORV protections. Criterion 8 of Act 250 is likely the most rigorous protection for geologic resources unless there are rare, threatened and endangered species present.

The Vermont Wildlife Diversity Program, formerly the Vermont Natural Heritage Program, is tasked with the protection of rare species and natural communities through **Vermont's Endangered Species Law**. In some cases, rare species and communities are dependent upon unique geological features (such as serpentine outcrops), which, in turn, become protected by their association with the rare species or community. Species with a State status of Threatened or Endangered are protected by Vermont's Endangered Species Law (10 V.S.A. Chapter 123). The law states that it is unlawful for anyone to "take, possess or transport wildlife or plants that are members of an endangered or threatened species" and allows the Secretary of Vermont's Agency of Natural Resources (ANR) to adopt rules for the conservation and protection of listed species, which includes protection of their habitat (10 V.S.A. § 5403).

### *Local*

#### *Westfield*

Westfield's **Town Plan** mentions several natural areas with rare species located in Town. In the Westfield Town Plan, the floodplain forest at the confluence of the Missisquoi River and Mineral Spring is noted for having several rare plants. Additional RTE habitats in Town include Jay State Forest, which has Bicknell's

thrush nesting sites (S2B, G4) and the Hazen's Natural Area and State Park, which contains a boreal calcareous cliff natural community (S2), peregrine falcon nests (S3B, G4), and many rare plants. The Town of Westfield intends to use these locations identified by the Vermont Wildlife Diversity Program as "red flags" to indicate the need to involve State biologists if development is proposed within these sites. These areas will also help the Town to identify areas of significant local value for the Town, and places to consider acquisitions of conservation easements, right-of-ways, or cooperative agreements with landowners to secure long-term access. Westfield's Zoning Bylaws (Section 324.06) have requirements that wireless telecommunication towers greater than 20 feet high may not be placed in RTE species habitat.

### *Water Quality Protections*

#### *Federal*

The federal **Clean Water Act** (CWA) provides substantial protection for the upper Missisquoi and Trout Rivers' water quality by restricting all discharges into the rivers. The CWA was created to restore and maintain the chemical, physical, and biological integrity of the nation's surface water. It requires states to adopt surface Water Quality Standards and an Anti-degradation Policy and establishes the National Pollution Discharge Elimination System, administered by the State of VT, which requires all entities to obtain a discharge permit from the appropriate authority. In addition, the Section 404 Permit requires approval from the U.S. Army Corps of Engineers for any project that would discharge dredged or fill material into waters of the U.S.

The **National Flood Insurance Act** established the National Flood Insurance Program (NFIP) to protect against flood losses. States can require more stringent measures. In addition, NFIP encourages communities to engage in better floodplain management and also allows municipalities to adopt more restrictive ordinances than the federal government.

Additionally, the **National Environmental Policy Act (NEPA)** and the **Rivers and Harbors Act** provide some protection to rivers and streams.

The **Wild and Scenic Rivers Act** provides the strongest protection available for the watercourses by protecting designated rivers from any federally assisted or licensed water resource development project that would have a direct and adverse impact on the river's resources.

**Canadian** federal water quality policies are also strong. To provide lakeshores, riverbanks, littoral zones and floodplains adequate protection, Québec's government adopted the *Politique de protection des rives, du littoral et des plaines inondables* on December 22, 1987. This protection policy was revised in 1991 and 1996 with the most recent update in August 2012. This is a minimum protection framework, but does not prevent governmental and municipal authorities from adopting more stringent protection measures. This policy is meant to prevent degradation, preserve and maintain the quality and biodiversity of the environment, ensure safety, and protect plants and wildlife in the lakeshores, riverbanks, littoral zones and floodplains of Canada. All structures, undertakings and works are in principle prohibited on lakeshores and riverbanks. Should they be proposed, all structures, undertakings and works that are liable to destroy or alter the vegetation cover of a lakeshore or riverbank, expose the soil or affect the stability of the lakeshore or riverbank or encroach on the littoral zone are subject to prior authorization. Such projects are not permitted on lots located in a high-risk of erosion, and a buffer strip of a minimum of 5 meters must be maintained (preferably in a natural state; 3 meters for agricultural lands). Municipal management plans and recreational use are encouraged.

Furthermore, water quality standards have been adopted for Lake Champlain in the November 2009 Surface Water Quality Criteria. The Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) is responsible for establishing requirements for the protection of human health and

biological resources with a view toward preserving, maintaining and recovering the use of water and aquatic biological resources. To do this, the Ministère must provide environmental discharge objectives (EDOs) for sources of water pollution. These standards provide a method for calculating environmental discharge objectives (EDOs; presumably congruent to TMDLs in the U.S.). Many of Canada's water quality criteria originated from the Canadian Council of Ministers of the Environment (CCME), the United States Environmental Protection Agency (U.S. EPA) and the World Health Organization (WHO) indicating criteria compatible with United States' standards. The quality criteria for protecting recreational activities are aimed primarily at preventing health hazards due to primary or secondary contact with water, while also covering the aesthetic aspects of the resource. The aesthetic criterion is aimed at protecting riparian developments such as parks, rest areas, vacation spots and campgrounds from negative visual effects. Criteria for recreational activities have primarily been determined for microbiological parameters and those that could alter the aesthetic quality of water. Water whose quality is inferior to that defined by the quality criteria must not be degraded further, and every measure must be taken to improve its quality to at least the level of the quality criteria. All waters must be free of substances or materials that derive from human activities and that, whether alone or in combination with other factors, may cause; a color, smell, taste, turbidity or any other condition to a degree that could detract from the use of watercourses; materials in sufficient quantity to become unaesthetic or detrimental; excessive production of rooted, attached or floating aquatic plants, fungi or bacteria; or increased presence of substances in concentrations or combinations such that they are harmful, toxic or produce an adverse physiological effect or behavioral problems among humans or in aquatic, semi-aquatic or terrestrial forms of life. These criteria provide a basis for evaluating water quality or defining when treatment intervention is required.

**State**

The Agency of Natural Resources’ **Basin 6 [Missisquoi Basin Watershed] Water Quality Management Plan** (November, 2012) is the most recent Missisquoi Basin Plan. The basin planning process serves to integrate topics of special local concern with water quality issues of State importance, and make management recommendations on these topics. Basin planning falls under the Statewide Surface Water Management Strategy which focuses management, planning, regulatory and funding efforts on basin-specific stressors, which are identified and prioritized in a collaborative effort among all stakeholders – state and local governments, landowners, watershed associations and regional planning commissions.

The Agency of Natural Resources exercises the authority for the management and protection of Vermont’s water resources, including promulgation of **Water Quality Standards (VWQS)** and **Rules for the**

**Use of Public Waters.** The VWQS provide a framework for the protection and management of Vermont’s surface waters per the federal Clean Water Act. The VWQS are a set of regulations that classify each water body, establish designated uses (such as swimming and fishing) that must be protected, and set criteria for chemical, physical and biological attributes of State waters that must be attained in order to protect the designated uses.

The following water quality policy for Vermont is set forth in 10 V.S.A. § 1250 of the Vermont Statutes, and addresses the directive of the Clean Water Act that requires states to maintain and restore the “chemical, physical, and biological integrity of the Nation’s waters” (33 U.S.C. § 1250).

It is the policy of the State of Vermont to:

- 1) Protect and enhance the quality, character and usefulness of its surface waters and to assure the public health;

**Table 4.** Water quality protection in local planning and zoning in Upper Missisquoi and Trout River Wild and Scenic Study area towns.

Municipalities	TOWN PLAN	LAND USE REGULATIONS (ZONING & SUBDIVISION)				
	Water Quality Goals?	Require Preservation of Natural Resources?	Include Stormwater Mgmt Standards?	Reference ANR Stormwater Manual?	Include Flood Hazard Area Regulations?	Require Setback/ Buffer?
Berkshire	Yes	Yes	Yes	Yes	Yes	Yes (100')
Enosburg Falls	Yes	Yes	Yes	Yes	Yes	Yes (50-100')
Enosburgh	Yes	Yes	No	No	Yes	Yes (25-110')
Montgomery	Yes	No	No	No	Yes	No
Richford	Yes	No	No	No	Yes	No
Jay	Yes	No	No	No	Yes	Yes (50')
Lowell	Yes	No	No	No	No	No
North Troy	Yes	Yes	No	No	No	No
Troy	Yes	Yes	No	No	No	No
Westfield	Yes	No	No	No	Yes	Yes (50')

- 2) maintain the purity of drinking water;
- 3) control the discharge of wastes to the waters of the State, prevent degradation of high quality waters and prevent, abate or control all activities harmful to water quality;
- 4) assure the maintenance of water quality necessary to sustain existing aquatic communities;
- 5) provide clear, consistent and enforceable standards for the permitting and management of discharges;
- 6) protect from risk and preserve in their natural state certain high quality waters, including fragile high-altitude waters, and the ecosystems they sustain;
- 7) manage the waters of the State to promote a healthy and prosperous agricultural community, to increase the opportunities for use of the State's forest, park and recreational facilities, and to allow beneficial and environmentally sound development.

It is further the policy of the State to seek over the long term to upgrade the quality of waters and to reduce existing risks to water quality.

As the Management Plan was being prepared, the Watershed Management Division completed the **Missisquoi Basin Watershed Water Quality Management Plan**, which describes the current state of the Missisquoi River Basin, addresses water quality issues in the watershed and outlines plans to improving both water quality and aquatic habitat. The Study Committee and Watershed Management Division coordinated efforts with the common goal of protecting water quality. The Vermont Agency of Natural Resources (ANR) Watershed Management Division's Basin Plan presents the recommendations of a cross section of stakeholders, including residents of the basin, the VT ANR, and professionals from other State and federal agencies meant to guide efforts in the Basin over the next five years. Please see this Basin Plan available on the VT ANR website ([http://www.anr.state.vt.us/dec/waterq/planning/htm/pl\\_missisquoi.htm](http://www.anr.state.vt.us/dec/waterq/planning/htm/pl_missisquoi.htm)). This Basin Plan discusses the greatest impairments and threats to water quality in the Basin, which include sedimentation, siltation, turbidity, habitat alterations, nutrients, thermal modifications, flow alterations and metals, as well as physical instability and river corridor encroachment.

Though non-regulatory in nature, this Basin Plan seeks to illustrate strategies, and specific actions for improvement of the water quality and aquatic habitat in the Missisquoi Basin. Please see the Missisquoi Basin Watershed Water Quality Management Plan for a discussion of these organizations and ongoing projects.

There are a large number of organizations currently working in the Missisquoi Watershed to reduce water quality issues in the basin. These organizations have many programs working to improve water quality on the Missisquoi and Trout Rivers such as employing agricultural **Best Management Practices**. The Study Committee supports the existing programs occurring in the Missisquoi and Trout Rivers watersheds to maintain or improve riparian buffers and the current efforts to support agricultural best management practices. Federal funds and permits are currently utilized in many of the agriculture best management practice programs and water quality initiatives currently employed along the Missisquoi and Trout Rivers.

**Act 110** was enacted by the Vermont State Legislature in 2011 (10 V.S.A. Chapter 49 and 24 V.S.A. Chapter 11) in order to place protections on river corridors and buffers. There were several reasons for this legislation, including maintaining the safety of waterways (such as mitigation of flood risk), protecting water quality, preserving habitat for fish and other aquatic life, regulating building sites to reduce flooding and property damage, and allowing for multiple uses of State waters for all Vermonters. The Act also promotes the protection of vegetated buffers along rivers, which help to prevent and control water pollution, aid in channel, bank and floodplain stability, reduce flooding, and preserve the habitat for both aquatic and terrestrial wildlife. Act 110 empowers municipalities to adopt bylaws to regulate zoning and development activity along river corridors, and adopt Best Management Practices (BMPs) for river corridor and buffer maintenance. Additionally, there are financial incentives available from the State of Vermont to municipalities that adopt and implement zoning regulations protecting river corridors and buffers.

## Chapter 4. Suitability

**Table 5.** Agricultural and Conservation Groups working within the Study area.

Program	Purpose
USDA NRCS (Federal)	United States Department of Agriculture's Natural Resource Conservation Service's goals are to reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. NRCS offers financial and technical assistance to farmers in the Missisquoi Basin (through a variety of programs). The Missisquoi Basin has been selected as a prioritized watershed in the Critical Source Areas (CSAs) computer model which identified phosphorus source areas to the Missisquoi Bay.
Vermont NRCS Offices	The Study area falls within both the Northeast and Northwest VT zones. The NRCS field office in each zone provides technical assistance and funding to protect soils, water, air, plants and animals.
VACD (Non-governmental)	VT Association of Conservation Districts is a non-profit organization formed to conduct educational, scientific, charitable work concerning conservation, maintenance, improvement and development and use of land, soil, water, trees, vegetation, fish and wildlife and other natural resources in Vermont, and is made up of members from VT's Natural Resource Conservation Districts. These Conservation Districts were established to allow NRCS to be situated in local and regional offices, and to give federal employees the ability to work locally.
LCBP (Inter-governmental)	The Lake Champlain Basin Program works to coordinate and fund efforts which benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation, and cultural resources (including programs on private lands to reduce sediment and nutrient inputs in the Lake).
LCC (Non-governmental)	Lake Champlain Committee is dedicated to protecting Lake Champlain's environmental integrity and recreational resources for this and future generations through science-based advocacy, education and collaborative action. They support Best Management Practices for farms and the adoption of nutrient management plans to reduce phosphorus loading from agriculture, and helped establish numeric water quality standards for phosphorus levels in the lake.
MRBA (Non-governmental)	Missisquoi River Basin Association is a volunteer organization which mobilizes community members to conduct projects which improve water quality. On work days volunteers plant trees to create streamside buffers, line culvert outflows and ditches with rock, fence off livestock, and seed areas of bare soil. MRBA has recently begun the process of administering the Trees for Streams program on the Missisquoi through funds available from the Ecosystem Restoration Program.
Friends of Northern Lake Champlain (Non-governmental)	Works with projects on ag lands to clean and protect the waters of Northern Lake Champlain, and to reduce polluted land-use runoff into Lake Champlain.
FWA (Non-governmental)	The Franklin and Grand Isle Farmer's Watershed Alliance's mission is to insure environmentally positive solutions and enable the dairy industry through education and funding to better the soil, air, and water of the Lake Champlain Watershed while remaining economically viable. Secondly, to promote and defend dairy farming to further its future as one of the largest contributors to the State's economy.
VAAF	The Vermont Agency of Agriculture, Food and Markets' Division of Agricultural Resource Management works to assist farmers in protecting water resources.

Vermont has a specific set of laws regarding the protections of wetlands, known as **Vermont Wetland Rules**. Wetlands in Vermont are placed into one of three Classes: I, II or III. Most mapped wetlands in Vermont (as part of the National Wetland Inventory) are Class II wetlands. Class I Wetland designation is reserved for those wetlands that are “exceptional or irreplaceable in their contribution to Vermont’s natural heritage and merit the highest level of protection.”

### Local

#### *Enosburgh/Enosburg Falls*

Enosburgh and Berkshire have **zoning provisions** regarding adequate treatment of stormwater runoff, which helps to mitigate the sediments and pollutants that wash off the land during storm events.

Most towns have bylaws regulating land use in designated **Flood Hazard Areas (FHA)**, which are generally defined as the 100-year floodplain or as determined by the National Flood Insurance Program. Commonly, these provisions limit or prohibit construction of buildings in floodways and FHAs unless granted a special exception. Most towns with FHA provisions have specific language prohibiting the placement of junkyards or storage of hazardous materials in the floodway.

A number of the Study area towns and villages have bylaws establishing a building setback distance from waterways – a minimum allowable buffer between development and any river, stream, lake or pond (wetlands have their own set of applicable State laws, as detailed above). Enosburgh and Enosburg Falls both have sliding scales of setback distances. In Enosburgh the setback distance depends on the slope of the land. The bylaws of Enosburgh and Enosburg Falls include requirements that the natural vegetation within the setback buffer be maintained. Enosburgh also includes stipulations that limit or prohibit destructive activities within the buffer, including the disruption of the natural vegetative buffer, storage of motor vehicles or other potential contaminating materials, presence of septic fields or tanks,

excavating or disturbing the soil or dumping waste, among other exclusions.

Enosburgh has specific **bylaws prohibiting a number of activities in the buffer around their waterways**.

This comprehensive list offers strong protections for maintaining water quality. The prohibitions include:

- a) No alteration of streambed or bank, except to reduce erosion, perform AAPs [Accepted Agricultural Practices] and maintenance of stream crossings for agricultural purposes;
- b) In general, disturbances to natural vegetation are prohibited. These include disturbances by tree removal, clearing, burning, and spraying. No pesticide use or storage;
- c) No septic fields in the buffer;
- d) No storage for motorized vehicles. No use of motorized vehicles except for approved maintenance and emergency use;
- e) No sewage disposal systems may be located within 300 feet of normal high water level of a water supply or within 200 feet of the banks of any stream that feeds into a water supply;
- f) No soil disturbance from grading, plowing, except with approved soil conservation and water quality plan;
- g) No mining or excavation, except existing uses, no dredging except as permitted by State law;
- h) No deposit or landfill or reuse, solid or liquid waste; fill allowed only as approved by the Army Corps of Engineers;
- i) No storage of materials;
- j) No dumping;
- k) No fill to expand development area.

Enosburgh and Enosburg Falls both have instituted progressive zoning districts that afford additional protections to natural resources in the towns. Of note, Enosburgh has a Natural Resources Overlay District (§570 of Zoning Bylaws), which includes *“significant geologic features, unusual or important plant and animal qualities of scientific, ecological, or educational interest make lands in this district unsuitable for intensive development because of their local, statewide, national and global significance. Included are steep slopes, rare and endangered*

*species, waterways... and significant wildlife habitat. Designation of this district is intended to protect... scenic and natural resource values."*

Enosburgh and Enosburg Falls both have **Conservation Districts**, which intend to add a layer of protection to areas found to be important for the value of their natural resources. The Enosburg Falls Conservation District (§2.3 of Enosburg Falls zoning bylaws) was established "...to protect the scenic and natural resource value of lands which lack direct access to public roads, are important for wildlife and wildlife habitat, and which are poorly suited for development." These districts place strict protections on allowable land uses in natural areas deemed to be of environmental or recreational significance.

See Table 4 for more information on local protections.

In Franklin County, 4,149.5 acres of land within a  $\frac{1}{4}$  mile of the Missisquoi River are agricultural lands. Of those about 73% are hay and croplands. Around 30 acres are in the Conservation Reserve Enhancement Program (CREP). There are also about 293 acres in agricultural easement. In Orleans County, 6,100.9 acres of land within a  $\frac{1}{4}$  mile of the Missisquoi River are agricultural lands. Of those about 37% are hay and croplands. Around 30 acres are in CREP, including two large projects along the Missisquoi River in Troy and Westfield in the CREP forested buffer initiative. There are also about 82 acres in agricultural easement. In Franklin County, 2,503.8 acres of land within a  $\frac{1}{4}$  mile of the Trout River are agricultural lands. Of those about 41% are hay and croplands. Around 2 acres are in the Conservation Reserve Enhancement Program (CREP). There are also about 87 acres (3.5%) in agricultural easement. These data provided by the Natural Resource Conservation Service are from 2008, and numbers of easement and CREP projects have increased since then. Vermont Agency of Agriculture, Food and Markets staff and Natural Resource Conservation Service (NRCS) staff, among others, are often working on new projects in the Study area municipalities. These often voluntary Best Management Practices and easements show the commitment of towns to protect working agricultural

lands, while also protecting the water quality of the Missisquoi and Trout Rivers.

All municipalities that would fall within designated river segments except for Richford, and Troy/North Troy have setbacks or buffers required by their zoning bylaws. Allowable activity within these buffers varies. Though Vermont does not have a state-wide buffer law, the Agency of Natural Resources is at the forefront of river management based on geomorphology and natural river processes. Recently, Act 110 was passed that empowers municipalities, through technical assistance and financial incentives, to adopt zoning bylaws to protect vegetated buffers along rivers, restrict development activity along river corridors to allow rivers to meander naturally, and adopt Best Management Practices (BMPs) for river corridors and buffer maintenance. It is very likely that upcoming zoning reviews and Town Plan updates within the area will take advantage of this new Act and strengthen their protections of river riparian areas.

The National Park Service has assessed these local protections, and believes they will protect and enhance the Wild and Scenic River values adequately. The communities regularly review and strengthen Town Plans, and are proactive in protecting resources. In areas such as Enosburgh and Enosburg Falls, where the population density is highest in the area proposed for designation, regulations are more stringent due to the increased pressure on land use. In the more rural areas, existing regulations adequately protect river values. The status of regulations reflects current land use, and many parcels of land are under easement.

### *Historic and Cultural Protections*

#### **Federal**

The **National Register of Historic Places** is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources. Historic sites may be entered in the National Historic Register after nominations are submitted by historians and/or archaeologists, usually employed by the



property owner. In Vermont, the nominations are generally cooperatively prepared with the State Division for Historic Preservation. In the towns where nominations are being prepared, planning commissions and property owners are given the opportunity to support or reject listing in the National Register. Nominations are reviewed by the Vermont Advisory Council on Historic Preservation before they are submitted to the National Park Service, which oversees the National Registry and makes the final determination regarding the site's inclusion in the National Register.

### **Regional**

The Northwest Regional Planning Commission's (NRPC) **Regional Plan** for 2007-2012 states that "Historic structures, community facilities, and other buildings should be preserved and adapted for re-use." They also suggest utilizing federal, state, and local programs for developing or preserving local cultural and historic assets.

The Northeastern Vermont Development Association's (NVDA) **Regional Plan** (2006) suggests a 200 foot buffer to protect archeologically significant areas found along the Missisquoi and Trout Rivers. Goals in this Plan include preserving important historical structures and mapping potential archeological sites.

### **State**

The State of Vermont intends that municipalities, regional planning commissions and State agencies continue to identify, protect and preserve important natural and historic features of the Vermont landscape, including important historic structures, sites, or districts, archaeological sites and **archaeologically sensitive areas** (24A V.S.A. § 4412). The **placement of wireless telecommunication towers** is also restricted when the facility may adversely impact an historic site (24 V.S.A. § 2291).

The Vermont Division for Historic Preservation reviews and comments on projects involving State funding, licenses or permits under The Vermont Historic Preservation Act (22 V.S.A. Chapter 14). This review

looks at possible negative impacts on historic resources including those sites listed on the Vermont **Register of Historic Places** and any potentially historically, architecturally, archeologically or culturally significant sites.

### **Local**

#### *Berkshire*

The following information is listed in Berkshire's Town **Zoning Bylaws**:

Section 8.6 **ROADS AND PEDESTRIAN ACCESS**: Roads shall, to the extent feasible, be designed and laid out to: avoid adverse impacts to natural, historic, cultural and scenic resources.

Section 9.5 **OPEN SPACE AND COMMON LAND**: A) Intent. Planned Unit Developments shall be designed to preserve open space and/or common land for parks, recreation, critical areas as identified in the Berkshire Comprehensive Town Plan, agricultural land, scenic views, and/or historic site protection.

The Berkshire **Town Plan** (adopted 4/26/10) also sets forth the goal to protect in good quality the abundant natural and historic resources in Berkshire.

#### *Montgomery*

The following information is listed in the Town of Montgomery's Town **Zoning Bylaws**:

With regard to **telecommunication tower placement**: 6.6.3 Additionally, freestanding telecommunications towers or antennas over 20 feet in elevation may not be located in any of the following locations: 6.6.3.3 Within 500 ft. horizontally from any Historic District or property eligible to be listed on the Federal Historic Register. 6.6.3.7 Within 1 ~ x height horizontally of any known archeological site.

#### **6.12 Tower and Antenna Design**

**Requirements**: Proposed facilities shall not unreasonably interfere with the view from any public park, natural scenic vista, historic building or district, or major view corridor.

The Montgomery **Town Plan** (amended and updated 8/2010) also sets forth the goal to recognize the role of Montgomery's archeological, historic, and scenic resources in shaping the Town's present quality of life and future opportunities.

### Local Support

The Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee began meeting regularly at the end of 2009 to fulfill its mission of supporting the Study process through facilitating public involvement, guiding research on potential ORVs, developing the Management Plan and assessing local support for the designation. A high level of volunteer commitment was displayed throughout the course of the Study. The Study Committee stated its intention to continue meeting until the river gains designation, at which time a transition to the post-designation Wild and Scenic Committee would occur. The Study Committee indicated substantial interest and commitment to initiating implementation of actions outlined in the Management Plan during the time prior to potential designation. In fact, the Committee already participated in some local projects to further the goals of the Management Plan. The Study Committee supports the preferred Alternative B for Full Designation. This alternative would designate the upper Missisquoi River from the Westfield/Lowell Town Line to Canada (excluding the property and project areas of the North Troy and Troy hydroelectric facilities) and from Canada 14.6 miles to the upstream border of the project boundary for the dam in Enosburg Falls; and the entire 11.0 miles of the Trout River.

Many local, state, regional and federal organizations and agencies work for the preservation and improvement of the Missisquoi and Trout Rivers. Selectboards and Planning Commissions were consulted and kept abreast of Study Committee progress, and all Selectboards wrote letters in favor of the Study. Enosburgh/Enosburg Falls, Montgomery and Richford have Conservation Commissions, many members of which are on the Study Committee as official appointees (Troy has a Natural Resource

Subcommittee). All towns in the Study area except Jay have Historical Societies where members presented Study Committee findings and requested input about historic and cultural resources as these societies are invested in protecting them. The Northern Forest Canoe Trail and the Missisquoi Valley Rail Trail have been supportive of the Study and are partners in the management of the recreational resources in the area proposed for designation. Troy has a Water Board, and Montgomery has a Covered Bridge and Garden Club which is important since the covered bridges in Town are collectively an ORV. Table 5 summarizes the major organizations in the Study area which support the management of these rivers regardless of designation, but which would be good partners should designation occur.

Favorable votes at the March 2013 Town demonstrated local support for the Management Plan and designation by Congress with the intention that designation would not bring additional federal acquisition or management of lands. Berkshire, Enosburgh/Enosburg Falls, Montgomery, Richford, Troy/North Troy, and Westfield all voted in favor of petitioning Congress to include the upper Missisquoi and Trout Rivers as components of the National Wild and Scenic Rivers System.

### Management Framework

The Upper Missisquoi and Trout Rivers Wild and Scenic Management Plan, together with the Upper Missisquoi and Trout Rivers Wild and Scenic Committee provide a framework to meet the purposes of the Wild and Scenic River Act. This type of management framework has proven to be a successful approach in providing management, coordination, and implementation on the twelve other Partnership Wild and Scenic Rivers.

Development of the Upper Missisquoi and Trout Rivers Wild and Scenic Management Plan (Management Plan) was one of the main goals of the Study Committee, and the final, completed Management Plan is available as a companion document to this Study Report. The Management Plan is a guidance

document for protection and enhancement of the upper Missisquoi and Trout Rivers. It details the management framework and protection strategies and standards for locally identified Outstandingly Remarkable Values (ORVs), free-flowing conditions, and water quality. Each of the eight municipalities included in the area proposed for designation formally endorsed the Management Plan through votes at their March 2013 Town Meetings. Endorsement of the Management Plan by the local municipalities substantiates suitability for designation by demonstrating local commitment to coordinated river management and preservation of local resources through the recommendations in the Plan.

Though existing protections are deemed adequate, it is important to ensure optimal protection of the ORVs, water quality, and free-flowing character of the Missisquoi and Trout Rivers due to threats and changing conditions.

In the Management Plan, the Study Committee identified a protection goal for each ORV, identified management issues and threats to ORVs, noted potential gaps between these threats and existing protections, and recommended actions for improving protection or enhancement of the ORVs and partners to work with to this end.

The Management Plan calls for the creation of the Upper Missisquoi and Trout Rivers Wild and Scenic Committee to coordinate and oversee implementation of the Plan. It is envisioned that this post-designation Committee would lead the Management Plan implementation process through education, outreach, and coordination with partner organizations should Wild and Scenic Rivers designation occur, and be comprised of key local and state stakeholders including appointed representatives from the municipalities that border the river. Local partners on the Study Committee are in support of such an organization continuing. It will be vital for the Upper Missisquoi and Trout Rivers Wild and Scenic Committee to develop and maintain local, state and regional partnerships to work toward the short and long-term Management Plan goals. It would also be

this Committee's responsibility to monitor the Outstandingly Remarkable Values, free-flowing character and water quality with respect to the degree they are protected or enhanced during implementation of the Plan, and to monitor proposed projects that may threaten them. The purpose of the Upper Missisquoi and Trout Rivers Wild and Scenic Committee is to lead and coordinate implementation of the Management Plan by:

- Bringing together various partners and stakeholders responsible for river management
- Facilitating agreements, cooperation and coordination among these partners
- Providing a forum and coordination for river interests to discuss and carry out recommendations for river management
- Assisting the National Park Service in implementation of the Wild and Scenic River designation and expenditure of potential federal funding for Management Plan implementation (subject to Wild and Scenic River designation and appropriation of funds)
- Assisting the National Park Service in the Section 7 review of potentially adverse federal water resource development projects
- Reviewing and updating the Management Plan
- Preparing periodic status reports for the river communities, and reporting these to member municipalities and stakeholders

#### **Designation Effects**

##### *General Effects of the Partnership Model*

Designation would make permanent most of the effects in place during the Study period. For example, rivers under study have the same, or sometimes even more stringent, protections afforded by the Wild and Scenic Rivers Act for designated rivers; Section 7(b) applies to study rivers, and Section 7(a) applies to designated rivers. As a result, the Study process allows communities to experience the effects of designation before they commit to moving forward with it. In addition, study rivers have Wild and Scenic

Committees and levels of National Park Service (NPS) involvement which are similar to those that would occur after designation. In essence, the Study period is a trial run for the river stakeholders and communities.

The NPS encouraged broad participation of local stakeholders in the Study process and spent substantial time and effort considering and explaining the effects of the designation. In a general sense, the Study partners became well acquainted with the effects of designation under the Wild and Scenic Rivers Act during the Study process. As stated in the Summary and Chapter 1 of this Report, the Partnership Wild and Scenic Rivers model was established for designation and management for those rivers predominantly in private, municipal or state, as opposed to federal, ownership. The Partnership Rivers in New England demonstrate the potential effects of designation under the Wild and Scenic Rivers Act, and thoroughly exploring the other nearby rivers designated under this model was part of the Study process. Partnership Wild and Scenic Rivers model features include:

- ≈ no reliance on federal land ownership or management
- ≈ reliance on local and state regulations and management as before designation
- ≈ administration and implementation of a locally led Management Plan facilitated by a locally appointed, broadly participatory Wild and Scenic Committee, convened for each river specifically for this purpose
- ≈ responsibility for management of river resources shared between the local, state, and federal partners on the Committee
- ≈ requires no establishment of a National Park or superintendent or law enforcement agent from the National Park Service
- ≈ does not require purchase or transfer of lands to the NPS
- ≈ succeeds through voluntary education, outreach, management efforts and local support

In addition to a general exploration of the effects and track record of the Partnership Wild and Scenic Rivers model, Chapter 5 analyzes the likely effects of the

designation on land and water resources, as well as socio-economic factors.

### *Effects on Dams*

Because of the moratorium on new hydroelectric projects or dams, the Study process included an in-depth examination of the effects of designation on the three dams in the Study area in Troy, North Troy and Enosburg Falls. The study assessed the existing dams on the rivers in conjunction with the help of the Agency of Natural Resource's Department of Environmental Conservation's Streamflow Protection Coordinator.

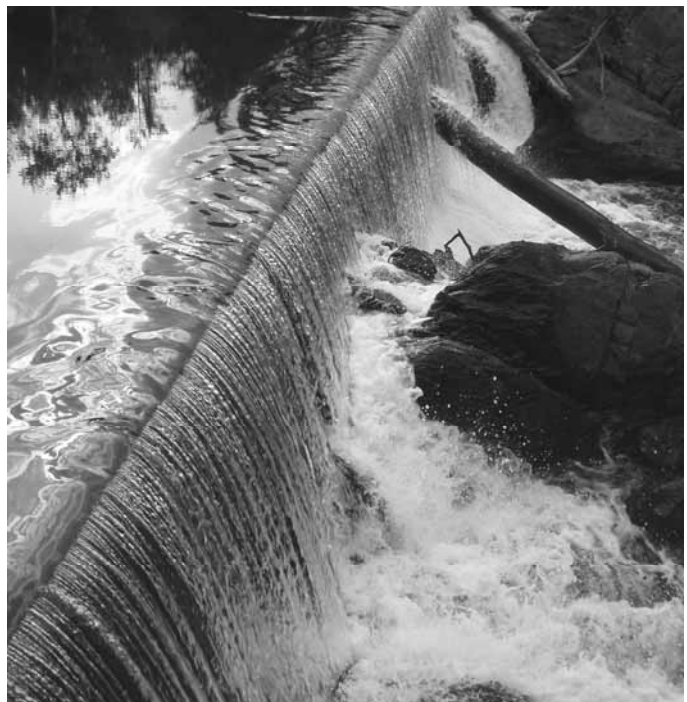
(Note: The upstream influence of the following dams was determined during the issuance of the State of Vermont Section 401s Water Quality Certificates. This qualitative determination by the Vermont ANR of where the river slows due to the dam under normal flow conditions is where the upstream point of influence of the impoundment is obvious at the time. Though each of these dams do have upstream influence, for the purposes of WSR the Missisquoi River remains riverine, and meets the criteria of a **recreational** classification.)

- The Troy Hydroelectric Project in Troy on the Missisquoi River has not operated since 1998. The project received from the Federal Energy Regulatory Commission (FERC) an exemption (FERC Project Number P-13381 in 2001). As of October 2012, work is underway on the civil works to restart the project. The NPS and Study Committee have already indicated to FERC in writing that this project (including the project lands owned by the Chase family) has been excluded from the proposed designation area, and that its proposed operation as a run-of-river facility will not have an adverse impact to potentially designated areas upstream or down. Because the Missisquoi River has two channels in this project area, based on FERC project boundary and project related lands, the exclusion area for this project was measured along the longer (eastern) channel (see Appendix 5 for more information on these dams). This gave an exclusion

of 0.27 miles (1,408 feet). Wild and Scenic Rivers designation will have no effect on this facility provided that any changes proposed for its operation are consistent with the purposes of the proposed designation. The upstream influence of this dam, according to the State of Vermont Section 401s Water Quality Certificate, is 2,100 feet. It was determined that this entire upstream influence need not be excluded from proposed designation because it does not impact the free-flowing character of this section of the river, nor does it inundate the land or create a reservoir. The riverine appearance and only slight rising of the stage of the river are acceptable under the **recreational** classification.

- The North Troy Project (formerly Missisquoi River Technologies) on the Missisquoi River in the Village of North Troy is not-operating and has a FERC exemption (FERC P-10172) issued in 1989. The project was acquired by Missisquoi River Hydro, LLC (MRH), and the new owners are actively seeking to renew operations. Designation would have no effect on the existing FERC exemption for this facility as it has been excluded from the proposed designation area. Wild and Scenic Rivers designation will have no effect on this facility provided that any changes proposed for its operation are consistent with the purposes of the proposed designation. The project boundary of this facility, which is between Route 105 and the Canadian Pacific Railroad, has been excluded from proposed designation, along with the adjacent property owned by MRH. This is 0.11miles (585 feet) of the Missisquoi River along the lands owned by MRH. The upstream influence of this dam, according to the State of Vermont Section 401s Water Quality Certificate, is 8,000 feet. It was determined that this entire upstream influence need not be excluded from proposed designation because it does not impact the free-flowing character of this section of the river, nor does it inundate the land or create a reservoir. The riverine appearance and only slight rising of the stage of the river are acceptable under the **recreational** classification.

- The Enosburg Falls Hydroelectric Facility (also known as the Kendall Plant) on the Missisquoi River is operating and licensed by FERC (FERC P-2905, license expires 2023). This facility will not be part of designation, since the designated area would end upstream of the project boundary. Wild and Scenic Rivers designation will have no effect on this facility provided that any changes proposed for its operation are consistent with the purposes of the proposed designation. All the property boundaries are below the right of way for Route 108; however, the project boundary is upstream of this bridge in Sampsonville. Proposed designation would end on the upstream side of the project boundary, 14.6 miles from the Canadian border. The upstream influence of this dam, according to the State of Vermont Section 401s Water Quality Certificate, is 4.3 miles.



**Figure 20.** Study Committee members toured the Troy Hydroelectric Facility which is excluded from proposed designation. *Photo by Shana Stewart Deeds.*

### Summary of General Findings on Suitability

Analysis of existing local, state, federal, and non-regulatory protections applicable to the upper Missisquoi and Trout Rivers are found to adequately protect the rivers and to be consistent with the purposes of the Wild and Scenic Rivers Act. These protections, combined with local support for river preservation, provide substantial protection to the rivers and their adjacent lands. When combined with the protections that would be provided through the Wild and Scenic Rivers designation, the upper Missisquoi and Trout Rivers' Outstandingly Remarkable Values, free-flowing character, and water quality would be adequately protected without the need for federal land acquisition or federal land ownership and management.

This finding is consistent with similar findings that have been made for each of the existing Partnership Wild and Scenic Rivers, whereby the designating legislation for each of those rivers has prohibited the federal condemnation of lands, as provided for by Section 6(c) of the Wild and Scenic Rivers Act. It is anticipated that any designating legislation for the upper Missisquoi and Trout Rivers will likewise include such provisions. The Management Plan has been developed with input from and to meet the needs of local, state, and federal stakeholders. It has been endorsed as the Management Plan for the upper Missisquoi and Trout Rivers by the voters in Berkshire, Town of Enosburgh, Village of Enosburg Falls, Montgomery, Village of North Troy, Richford, the Town of Troy, and Westfield.

The Management Plan would be utilized as the "Comprehensive Management Plan" called for by Section 3(d) of the Wild and Scenic Rivers Act should the upper Missisquoi and Trout Rivers be designated as components of the national system. The Upper Missisquoi and Trout Rivers Management Plan, as implemented by the future Upper Missisquoi and Trout Rivers Wild and Scenic Committee provides an appropriate and effective management framework for the long-term management and protection of the watercourses. It is concluded that there is sufficient

support to make the rivers suitable for designation under the Wild and Scenic Rivers Act based on the Partnership Wild and Scenic Rivers model.

### Segment-by-Segment Suitability Findings

*Please refer to Chapter 3 for a detailed discussion regarding eligibility of river segments.*

#### **Segment 1 Lowell/Westfield Town Line to North Troy/Canadian Border (Suitable):**

Of the approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy, 20.5 miles of the upper Missisquoi River in this Segment 1 are suitable for designation. This river segment is proposed as the beginning of the upper Missisquoi River Wild and Scenic area and therefore is determined to be administered as part of the designated upper Missisquoi River Wild and Scenic Rivers segment. The upper Missisquoi River in Orleans County from the Lowell/Westfield Town border is found to be suitable for designation with the exclusion of the Troy and North Troy Hydroelectric facilities. This Segment 1 would fall under the Upper Missisquoi and Trout River Wild and Scenic Committee which would include a Town of Lowell (should they choose to participate), Town of Westfield, Town of Troy and Village of North Troy representative should it be designated. This segment of the upper Missisquoi River is found to be suitable for designation based on the support from the voters of the Town of Westfield, Town of Troy and Village of North Troy at their March 2013 Town Meetings.

The hydroelectric facilities in Troy (0.27 miles) and North Troy (0.11 miles) make these portions of the Missisquoi River unsuitable due to their current FERC licenses.

- **The Troy Hydroelectric Project on the Missisquoi River in Troy (currently owned by the Chases – Not Currently Suitable).** This 0.27 mi or 1,408 foot segment extends along the Chase property and FERC project boundary for the Troy Hydroelectric project, and includes the Troy Hydroelectric Dam

(sometimes also referred to as the Bakers Falls dam or the old Citizens Utilities Company dam). This segment of the upper Missisquoi River is found to be unsuitable based on the FERC exemption and continued interest in hydropower re-development at this site. In the event that this project is dropped from consideration or otherwise abandoned, the suitability of this segment could be re-evaluated based on local, state and stakeholder interest.

- **The North Troy Hydroelectric Project on the Missisquoi River in North Troy (currently owned by Hilton Dier III, Missisquoi River Hydro [MRH] – Not Currently Suitable).** This 0.11 mile or 585 foot segment extends along the property and FERC project boundary of this facility, which is between Route 105 and the Canadian Pacific Railroad, and the adjacent property owned by MRH. This segment of the upper Missisquoi River is found to be unsuitable based on the FERC exemption and continued interest in hydropower re-development at this site. In the event that this project is dropped from consideration or otherwise abandoned, the suitability of this segment could be re-evaluated based on local, state and stakeholder interest.
- **The upper Missisquoi River in Lowell (Not Currently Suitable).** This 3.8 mile segment of the Missisquoi River flows from the confluence of Burgess Branch and the East Branch of the Missisquoi in Lowell, VT, Orleans County to the Lowell/Westfield Town border. This segment of the upper Missisquoi River is found to be unsuitable for designation at this time based on the lack of sufficient support from the voters of the Town of Lowell at their March 2013 Town Meeting. In the event the voters of Lowell express a preference for designation in a future vote, the suitability of this segment could be reevaluated. It is envisioned that in determining whether there is adequate local support for the designation of the additional segment, the Secretary would consider the preferences of the majority of the local voters expressed as an article at a duly warned Town

Meeting concerning its designation. Should designation be supported by the voters of Lowell, this 3.8 mile segment would be both eligible and suitable for designation.

#### **Segment 2 Canadian Border/Richford to Enosburgh**

**(Suitable):** Of the approximately 25-mile segment from the Canadian border in East Richford to Enosburg Falls, 14.6 miles of the upper Missisquoi River are found suitable for designation. This segment would fall under the Upper Missisquoi and Trout River Wild and Scenic Committee which would include a Town of Richford, Town of Berkshire, Town of Enosburgh and Village of Enosburg Falls representative should it be designated. This segment of the upper Missisquoi River is found to be suitable for designation based on the support from the voters of the Town of Richford, Town of Berkshire, Town of Enosburgh and Village of Enosburg Falls at their March 2013 Town Meetings.

Suitability stops at the project boundary of the Enosburg Falls hydroelectric facility due to the wishes of the Village of Enosburg Falls. The free-flowing character of an additional lowermost 4.7 miles of this segment of Missisquoi River remains despite the inclusion this section in the FERC project boundary of the Enosburg Falls hydroelectric project. Should the project boundary ever be reduced, the section of the Missisquoi up to the Route 108 bridge (19.3 miles total from the Canadian border) would be both eligible and suitable for designation. Though Enosburgh and Enosburg Falls will have few designated mainstem reaches should designation occur as proposed, they will be treated as full participants in the local, post-designation committee (as they have during the Study) and in the implementation of the Management Plan.

- **The Enosburg Falls Hydroelectric Project on the Missisquoi River in Enosburg Falls (currently owned by the Village of Enosburg Falls—Not Currently Suitable).** Designation ends upstream of the Enosburg Falls Hydroelectric facility (also known as the Kendall Plant – owned by the Village of Enosburg Falls and operated by Enosburg Falls

Water and Light) which is not suitable for designation based on the FERC exemption and continued interest in hydropower re-development at this site. In the event that this project is dropped from consideration, the project boundary is reduced, or the project is otherwise abandoned, the suitability of this segment could be re-evaluated based on local, state and stakeholder interest. All property boundaries are below the right of way for Route 108. Proposed designation ends at the upstream border of the project boundary in Sampsonville, but could be extended to the upstream side of the Route 108 bridge, 19.3 miles from the Canadian border, should it become suitable.

**Segment 3 Trout River (Suitable).** Of the approximately 20-mile segment of the Trout River (including the tributary called the South Branch of the Trout River) from its headwaters to its confluence with the Missisquoi River, the entire 11.0 miles of the mainstem of the Trout River in this Segment 3 in Franklin County (which runs from the confluence of Jay and Wade Brooks in Montgomery, through Enosburgh to where it joins the Missisquoi in East Berkshire) is found to be suitable for designation. This segment would fall under the Upper Missisquoi and Trout River Wild and Scenic Committee which would include a Town of Montgomery, Town of Enosburgh and Town of Berkshire representative should it be designated. The Trout River is found to be suitable for designation based on the support from the voters of the Town of Montgomery, Town of Enosburgh and Town of Berkshire at their March 2013 Town Meetings plus additional factors of suitability discussed in the chapter.

**Segment 4 Tributaries (Not Currently Suitable).** The tributaries of the upper Missisquoi and Trout Rivers (which are defined as 3rd order streams and above) are unsuitable for designation at this time. The specific tributaries listed below were studied in more detail and are free-flowing and contain ORVs. Additional unlisted tributaries are expected to be similarly free-flowing with ORVs. None of these additional tributaries were evaluated for suitability as

a part of the Study, and thus were not voted on by municipalities to be included in designation.

Tributaries listed by municipality:

- Berkshire: Berry Brook and Trout Brook
- Enosburgh/Enosburg Falls: Beaver Meadow Brook
- Jay: Jay Branch
- Lowell: Burgess Branch and East Branch of the Missisquoi River
- Montgomery: Hannah Clark Brook, Jay Brook, South Branch of the Trout River, Wade Brook and West Brook
- Richford: Black Falls Brook, Loveland Brook and Stanhope Brook
- Troy/North Troy: Beetle Brook, Cook Brook and Tamarack Brook
- Westfield: Coburn Brook, Mill Brook, Mineral Spring Brook and Taft Brook.

The Missisquoi and Trout River tributaries were not evaluated for suitability based on a desire to move forward with designation of the mainstem of the Rivers, and timing constraints on the Study. In the event that there is a vote by the Study area Towns and support is expressed in a vote by the legal voters of the towns, the tributaries of the Missisquoi River which are eligible for designation would then become suitable based on local interest and support. Should designation be supported by the voters of any Study area town, the tributaries within that town would be both eligible and suitable for designation.

### Summary

The Study concludes that approximately 35.1 miles of the upper Missisquoi and 11.0 miles of the Trout River are currently eligible and suitable for designation under the Wild and Scenic Rivers Act. The upper Missisquoi and Trout Rivers are both assigned a preliminary classification of **recreational**.

An additional 4.7 miles of the Missisquoi River impacted by the hydroelectric facility in Enosburg Falls is found unsuitable but eligible. A 3.8 mile segment in Lowell is also found eligible but not suitable. The hydroelectric facilities in Troy (0.27



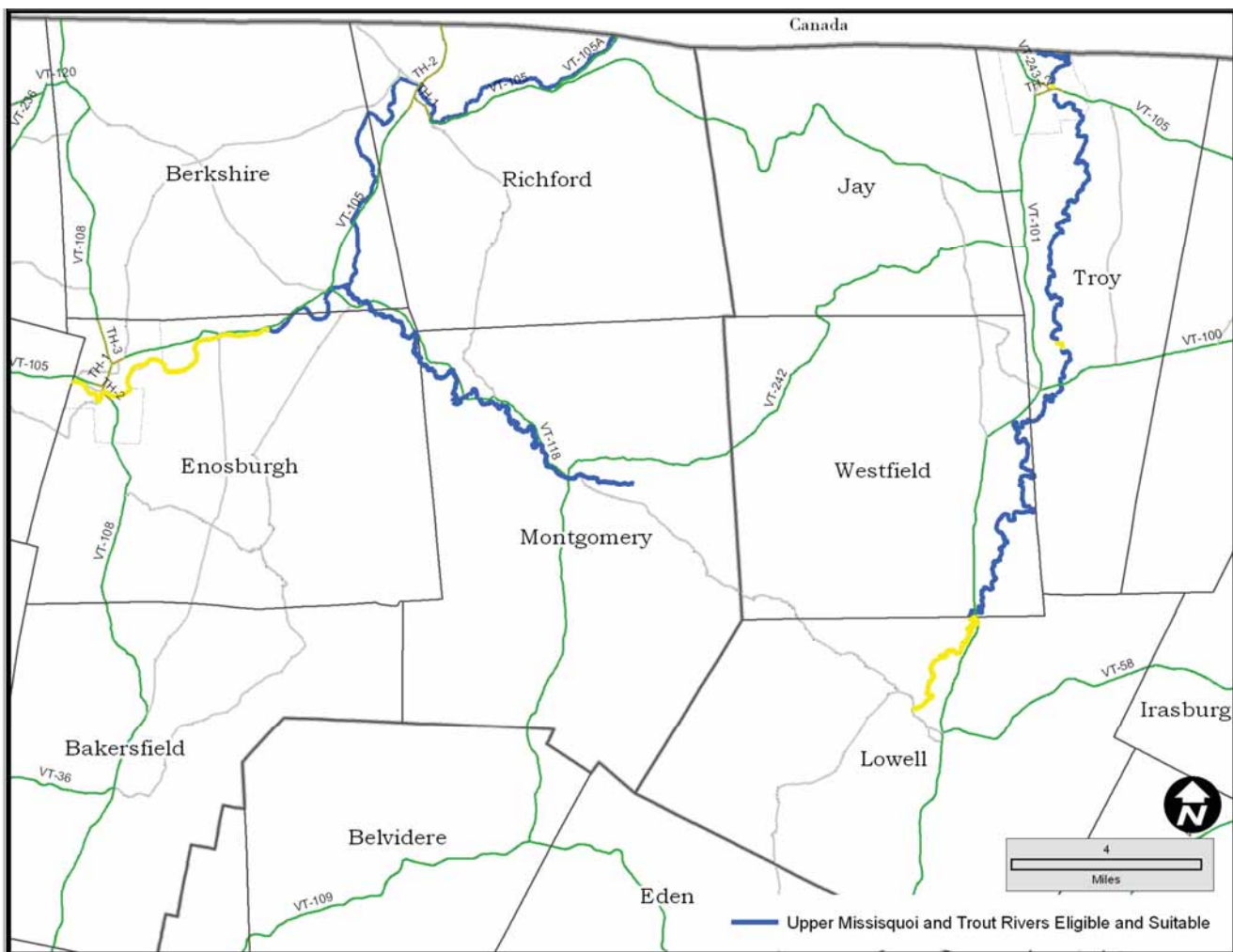
miles) and North Troy (0.11miles) make these portions of the Missisquoi River ineligible and unsuitable for designation. The Missisquoi and Trout River tributaries were not evaluated for suitability based on a desire to move forward with designation of the mainstem of the Rivers, and timing constraints on the Study. The tributaries which were explored were found eligible for designation due to their free-flowing character and ORVs; however, no suitability analysis was completed. Their inclusion was not explored further nor voted on at Town Meetings.

These findings of suitability are based on:

- Analysis of existing local, state, federal and non-regulatory protections applicable to the upper

Missisquoi and Trout Rivers are found to adequately protect the rivers consistent with the purposes of the Wild and Scenic Rivers Act. The Upper Missisquoi and Trout Rivers Wild and Scenic Management Plan developed as part of the Study provides an appropriate management framework for the long term management and protection of the waterways.

- The official record of endorsement from local citizens, local governing bodies, and local and regional organizations demonstrating substantial support for designation under the Wild and Scenic Rivers Act based on the Partnership Wild and Scenic Rivers model.



**Figure 21:** Map of the segments proposed for designation (in blue/dark). Yellow/light segments are not both eligible and suitable for designation at this time.



## Chapter 5. Environmental Assessment



Photo by Mike Manahan

The purpose of this Chapter is to present the Environment Assessment for designation of the Upper Missisquoi and Trout Rivers including the possible Alternatives for designation, and the preferred Alternative B.

### Introduction

The Wild and Scenic Rivers Act (Public Law 90-542, as amended), enacted in 1968, established a framework for protection of select rivers, for the benefit of present and future generations. Congress declared that “the established national policy of dam and other construction... needs to be complemented by a policy that would preserve other selected rivers, or sections thereof, in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.” These selected rivers collectively form the National Wild and Scenic Rivers System. Prior to a river’s addition to the National Wild and Scenic River System, it must be found both eligible and suitable.

To be eligible, the river must be free-flowing and possess at least one “outstandingly remarkable” resource value, such as exceptional recreational, geologic, fish and wildlife, or historic features. The resource values must be directly related to, or dependent upon the river. The determination of a resource’s significance is based on the professional judgment of the Study Team.

The suitability determination for a Wild and Scenic River designation is based upon several findings. First, there must be evidence of lasting protection for the river’s free-flowing character and outstanding resources, either through existing mechanisms, or through a combination of existing and new conservation measures resulting from the Wild and Scenic Study. Second, there must be

strong support for designation from existing entities including towns, the state, riverfront landowners, and conservation organizations that will provide long-term protection of the river. Third, a practical management framework must be devised that will allow these interests to work together as effective stewards of the river and its resources. Finally, Wild and Scenic River designation must fit as an appropriate and efficient river conservation tool.

As a result of the studies conducted by the Study Committee in partnership with the National Park Service (NPS), the upper Missisquoi and Trout Rivers have been determined to be both eligible and suitable for designation into the National Wild and Scenic Rivers System. In accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and NPS Directors order #12, an Environmental Assessment (EA) was conducted as part of the Upper Missisquoi and Trout Rivers Study Report. This EA addresses the proposed action of designation of the upper Missisquoi and Trout Rivers as components of the National Wild and Scenic Rivers System. The EA is comprised of sections that describe the Purpose and Need for Action, Alternatives, the River Environment, the Impacts of Alternatives, and the Public Involvement Process.

### **Project Description**

The proposed project provides for permanent protection from federally permitted or funded water resource projects through a Wild and Scenic River designation of the upper Missisquoi and Trout Rivers and their important river-related resources. No river construction projects or improvements that may impact the river environment are being considered as part of this project.

### **Purpose and Need for Action**

The purpose of designation under the Wild and Scenic Rivers Act is to protect and enhance the upper Missisquoi and Trout Rivers and their values, including their free-flowing character, water quality, and

Outstandingly Remarkable Values. Local leaders and voters in eight municipalities in the Study area and the State of Vermont have expressed a strong desire to protect the rivers and their resources and are seeking federal designation in order to gain national recognition for their waterways and implement the locally prepared, advisory Management Plan.

The purpose of this EA is to enable the National Park Service and its partners to:

- Determine if the upper Missisquoi and Trout Rivers should be proposed for addition to the National Wild and Scenic Rivers System; and
- Determine the best long-term conservation strategies for protecting and enhancing the Rivers and associated resources.

The upper Missisquoi River and Trout River corridors contain important “outstandingly remarkable” resource values related to the scenic and recreational opportunities; the natural resources including distinctive species and habitats, geology and water quality; and the historic and cultural landscape. Despite the fact that the existing framework of local and state resource protection was deemed adequate through the Wild and Scenic Study, it is important to ensure optimal protection of Outstandingly Remarkable Values (ORVs), water quality, and free-flowing character over time from threats and a changing environment. The proposed Partnership Wild and Scenic River approach to designation and the Management Plan (locally developed during the Study) is tailored to rivers like the upper Missisquoi and Trout Rivers that are characterized by extensive private land ownership along the river, and well-established traditions of local control of river management in a community based setting. This designation scenario is designed to support the development of river protection strategies that bring communities together in protecting, enhancing, and managing high value river resources. Implementation of the upper Missisquoi and Trout Rivers Management Plan is intended to be pursued in a coordinated approach between all levels of government as well as with residents and local and regional partners and organizations. The purpose of the designation, as

determined by the Wild and Scenic Study Committee in partnership with the National Park Service, is to protect the river resources through local implementation of the Management Plan's protection goals as follows:

- To protect, preserve and enhance the abundant scenic and recreational opportunities in the area that relate to the river and its enjoyment by the public. To support the maintenance of adequate access opportunities to the river that allow for appropriate river uses while protecting the water quality, integrity of the riparian areas, and the surrounding environment of the river
- Promote the protection of the significant geologic features in the Missisquoi and Trout watersheds for their importance as educational, historical, and recreational resources as well as significance as habitat including for rare, threatened and endangered species
- Promote the preservation and conservation of prime agricultural soils to support working farms in the Study area
- Support the survey and best management of rare, threatened and endangered species and their habitats and promote biological diversity in these watersheds
- Educate communities about the location and importance of significant ecological areas and critical wildlife habitat such as deer yards and vernal pools
- Prioritize the reduction of sediment and phosphorus inputs to the Missisquoi River. Assist towns and landowners in the implementation of programs to preserve and protect water quality in the study area, the lower Missisquoi River, and Lake Champlain
- Identify, understand, maintain, and as needed improve the chemical, physical, biological, and flow conditions in the waters of the upper Missisquoi and Trout Rivers so that they support the needs of native wildlife, aquatic life, and recreational users
- To preserve the historical and cultural heritage of the upper Missisquoi and Trout River valleys by

supporting efforts that maintain and restore prehistoric and historic sites and areas of cultural significance in the Study area towns, with a focus on those which are river related (including covered bridges)

Additionally, threats and management issues were identified that could degrade Outstandingly Remarkable Resource quality. The gaps between potential threats and existing protections were noted, and recommended tools or techniques provided for improving protection and enhancement of the resources at the local level.

### Alternatives

During the Wild and Scenic Study the Committee considered a variety of alternatives for the long-term protection of the upper Missisquoi and Trout Rivers and associated resources. In accordance with NEPA, CEQ regulations, the desires of the Study area towns, and established NPS policy for Wild and Scenic Studies of extensive private land ownership along rivers, alternatives for the conservation of river resources are described here. Alternatives were considered and evaluated in accordance with the interests and objectives of the riverfront communities as articulated through the Study Committee. In order for an alternative to meet the needs of the towns in protecting the river the following objectives must be met:

- Federal designation would only be recommended if strong support were expressed through passage of support resolutions by the affected towns
- No reliance on federal ownership of land in order to achieve the Wild and Scenic Rivers Act's goals of protecting and enhancing river values
- Land use management is regulated through existing local and state authorities, the same as before a designation
- Administration and implementation of a locally led Management Plan is accomplished through a broadly participatory management committee, convened for each river specifically for this purpose

- Responsibility for managing and protecting river resources is shared among the local, state, federal, and non-governmental partners on the committee
- A strong emphasis is placed on grassroots involvement and consensus building
- Reliance on volunteerism is a key to success
- No National Park is established, nor are National Park Service (NPS) Superintendent, law enforcement, or similar elements of traditional federally managed units of the National Park System established

In accordance with NPS Director's Order #12 and NEPA Section 102(2) (E), a range of proposed river protection alternatives were considered, including a "no action" alternative. Additionally and in accordance with the DO-12 Handbook, the NPS identifies the environmentally preferable alternative in its NEPA documents for public review and comment [Sect. 4.5 E(9)]. The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative (43 CFR 46.30).

### ***Alternative A. No Action***

The No Action alternative is evaluated and used as a baseline for comparison with the effects of the action alternatives. This alternative does not involve designation of the upper Missisquoi and Trout Rivers to the National Wild and Scenic Rivers System. This alternative would maintain existing state and local controls for resource protection on the upper Missisquoi and Trout Rivers without additional federal protection from federal water resource projects or federal support for local river protection efforts.

Under the No Action alternative, there would be no involvement or support in river management from the National Park Service through administration of the Wild and Scenic Rivers Act.

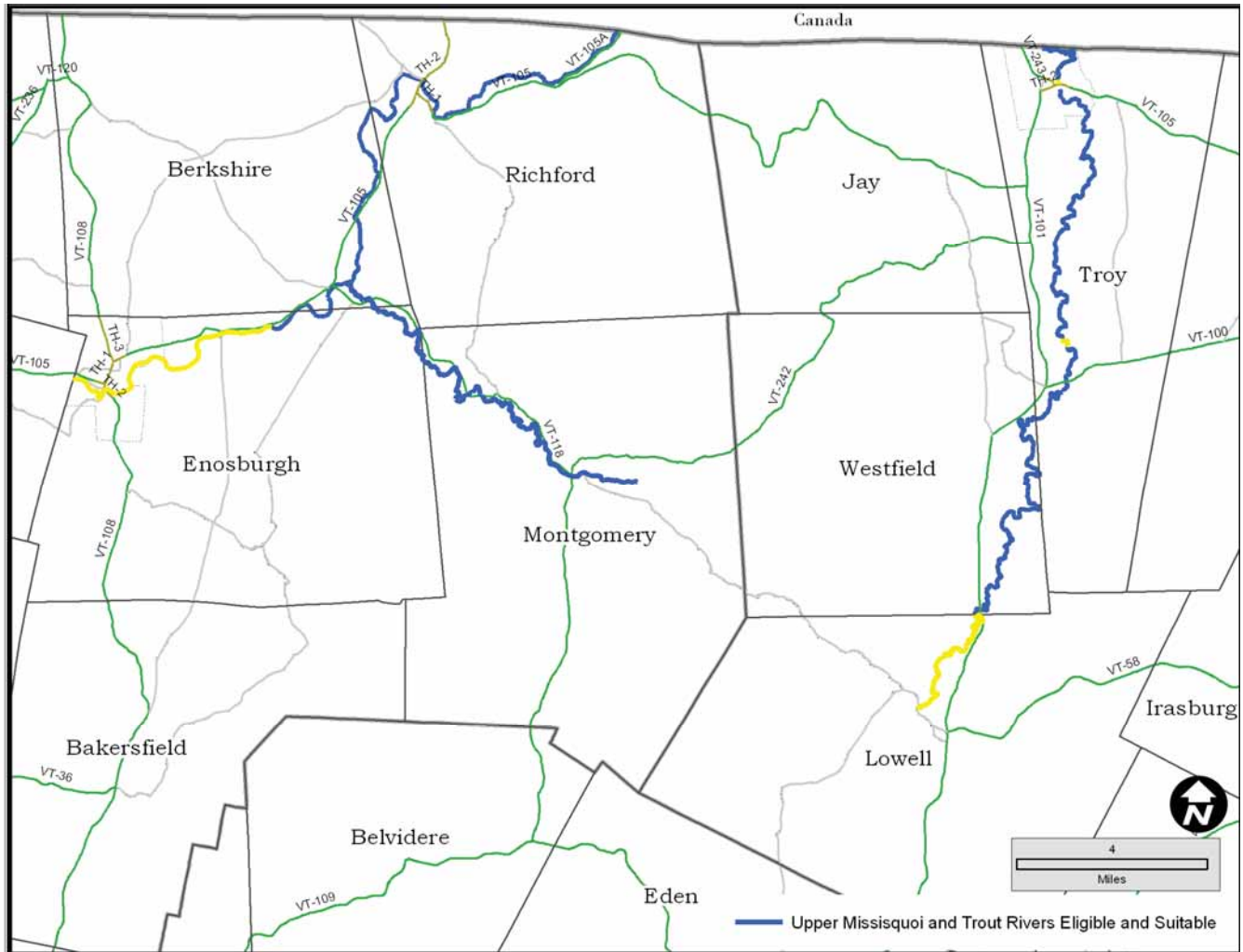
### ***Alternative B. Full Designation-NPS Preferred***

This alternative would designate all segments of the upper Missisquoi and Trout Rivers having been found to meet the criteria of eligibility and suitability into the National Wild and Scenic Rivers System. This alternative designates the 35.1 miles of the upper Missisquoi and 11.0 miles of the Trout River currently both eligible and suitable for designation as components of the National Wild and Scenic Rivers System. Alternative B best protects the resources of the rivers by designating the segments as described. Designation would include the upper Missisquoi River, from the Westfield/Lowell Town Line to the Canadian Border in North Troy, with the exception of two river segments in Troy and North Troy that include dams. It would include designation of the upper Missisquoi from the Canadian Border in Richford to the project boundary of the Enosburg Falls dam in Enosburgh. Designation would also include the entire Trout River from the confluence of Jay and Wade Brook in Montgomery to where it meets the Missisquoi River in East Berkshire. The future Upper Missisquoi and Trout Rivers Wild and Scenic Committee (Committee) would assume lead responsibility for coordination of the Management Plan implementation that was created during the Study. To undertake this responsibility, the Committee would coordinate and direct implementation of activities described in the Management Plan. The Management Plan as implemented by the Committee would provide an appropriate and effective management framework for the long-term management and protection of the watercourses.

The NPS would have a role on the Committee and could potentially provide financial and technical assistance to support Management Plan implementation. The NPS would provide Wild and Scenic Rivers Act Section 7 reviews of federally permitted or funded projects which might potentially

impact the waterways and associated resources. Additionally, the functions of the NPS could include, but not be limited to the following activities:

- Provide limited financial assistance to support the coordination of river conservation projects amongst towns and partners
- Respond to public inquiries
- Develop appropriate plans to protect resources and develop visitor and interpretive resources
- Fund additional research initiatives for resource protection and public use
- Provide technical and financial assistance, as appropriate, through use of cooperative agreements
- Assist in public education
- Develop interpretive media



**Figure 22.** Map showing Alternative B - NPS and Environmentally Preferred Alternative designating all currently eligible and suitable segments of the upper Missisquoi and Trout Rivers.

### *Features Common to the No Action and Full Designation Alternatives*

- 1. Continued implementation of existing local, state, and federal programs documented in the Upper Missisquoi and Trout Rivers Management Plan:** Wild and Scenic River designation would not replace or appreciably alter the existing implementation of the “baseline” local, state or federal programs as discussed in the Management Plan, and which comprise the basis of the “No Action” Alternative. Thus, continued implementation of these programs is assumed under all alternatives.
- 2. Upper Missisquoi and Trout Rivers Management Plan:** The Upper Missisquoi and Trout Rivers Management Plan has been developed during the Study to serve as the blueprint for management and protection of the rivers regardless of whether Wild and Scenic Rivers designation occurs. If designation occurs there is a greater likelihood that the Management Plan will be implemented to its full potential; without a designation there is no guarantee that a group of stakeholders will convene to oversee implementation of the Management Plan and the NPS will not be involved. The principal effect or impact of Wild and Scenic Rivers designation will be to add the specific protections of designation on top of existing programs, and to establish an authorization for direct federal funding and technical assistance to aid in implementation of the Management Plan.
- 3. Upper Missisquoi and Trout Rivers Wild and Scenic Study:** Since the watercourses are currently under a 5 (a) study, they are protected under Section 7(b) of the Wild and Scenic Rivers Act for three (3) full fiscal years after the study report is submitted to Congress.

### *Alternatives Considered and Rejected Prior to the Wild and Scenic Study*

- 1. National Park Service Management:** Under this type of management scheme, the upper Missisquoi and Trout Rivers would be added to the National Wild and Scenic River System as a unit of the National Park

Service (NPS) and would be managed directly by NPS staff. The Wild and Scenic Committee, as described above, would be created, but the NPS would take a more active role, using the Committee and Management Plan for guidance. With this type of management direction, the NPS would be responsible for assuring protection in a traditionally managed unit of the National Park System such as through potential NPS law enforcement or land management or acquisition. This method of management was eliminated from consideration prior to the authorization of the Wild and Scenic Study Bill. Several New England rivers hold a partnership Wild and Scenic River designation which serve as a successful model of the coordinated approach to river management which does not involve federal land acquisition or the direct federal management presence of more traditional park units. The “Partnership” approach was deemed best suited to the upper Missisquoi River and Trout River area by the pre-study team. Local support for designation was based on the expectation that river management would be accomplished through the Partnership method, not solely by the NPS.

- 2. State Management:** Federal Wild and Scenic designation by the Secretary of the Interior under Section 2(a) (ii) of the Federal Wild and Scenic Rivers Act would mean that the State of Vermont would serve as the manager for the upper Missisquoi and Trout Rivers. This management approach was eliminated from consideration during the pre-study authorization phase. Based on the high level of early local support and involvement in the process by riverfront towns and conservation organizations, the need for state management was determined to be not appropriate for this river designation. The pre-study team also determined that the “Partnership” model for the Wild and Scenic Study and designation, which serves as a successful model of the coordinated approach to river management, was best suited to the upper Missisquoi River and Trout River area.



### Identification of Environmentally Preferable Alternative

In accordance with the DO-12 Handbook, the NPS identifies the environmentally preferable alternative in its NEPA documents for public review and comment [Sect. 4.5 E(9)]. The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the Responsible Official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative (43 CFR 46.30).

Alternative B most fully protects the free-flowing river character, water quality and Outstandingly Remarkable Values. Based on the analysis of environmental consequences of each alternative in Section 5.F., Alternative B is the environmentally preferable alternative. Under this alternative the Federal Power Commission (FERC) shall not license the construction of any dam or other project works. This full designation alternative would provide special recognition and protection for the watercourses, and for the identified Outstandingly Remarkable Values (ORVs) for which the rivers would be designated. The Preferred Alternative B is National Wild and Scenic River designation of all segments found eligible and suitable with a river management plan implemented through the local Upper Missisquoi and Trout Rivers Wild and Scenic Committee (comprised of local, state and federal partners).

Environmentally Preferable Alternative B:

- Most fully protects the free-flowing river character, water quality and Outstandingly Remarkable Values
- Allows designation of all currently eligible and suitable river segments

- Protects the river from the harmful effects of federally licensed or funded development projects

### Affected Environment

The Wild and Scenic Study included the approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy, the approximately 25-mile segment of the upper Missisquoi from the Canadian border in East Richford to Enosburg Falls, the approximately 20-mile segment of the Trout River from its headwaters to its confluence with the Missisquoi River, and the tributaries of these Rivers. The area is described in detail in Chapter 2 of this Report.

In addition, NEPA asks federal agencies to analyze the likely environmental impacts of a proposed action, in this case designation as a National Wild and Scenic River. Wild and Scenic River designation (and the Wild and Scenic Rivers Act) is specifically targeted toward the preservation of free-flowing river character, and protection, and enhancement of identified “outstandingly remarkable” values. Therefore, the “affected environment” for the NEPA analysis is free-flowing river character, water quality, and “outstandingly remarkable” natural, cultural and recreational river values. These values have been extensively described in the Outstandingly Remarkable Values Chapter 3 of this Report. A fuller understanding of the resources in question, their existing management and the likely impacts of Wild and Scenic designation can also be gained from reading the companion document to this Study Report, the Upper Missisquoi and Trout Rivers Management Plan.

### Impact of Alternatives

This section of the Environmental Assessment allows for comparisons of the alternatives and their impacts on the resources of the upper Missisquoi and Trout Rivers. It is not anticipated that any part of the natural environment of the waterways will be adversely or negatively impacted by the designation of the river into the National Wild and Scenic River System or via

the adoption of the Management Plan. No river construction projects or improvements that may impact the river environment are being considered as part of this planning process.

The impacts of the alternatives are estimated based on professional experience related to similar designations in the northeast region utilizing the “Partnership Wild and Scenic River” designation model. Such a designation has been in effect on twelve similar rivers in the larger Northeast Region of the National Park Service which collectively provide a sound basis for understanding the impacts of designation.

**Impact of Alternatives - Tables**

**Table 6.** Description of each alternative.

**Alternative A: No Action  
Description of Alternative**

This alternative would maintain existing state and local controls for resource protection on the upper Missisquoi and Trout Rivers without additional federal protection from federal water resource projects or federal support for local river protection efforts.

Under this alternative, no portion of the upper Missisquoi River or Trout River would be designated as a component of the National Wild and Scenic Rivers System. The existing local, state, and federal river management and protection context would be unchanged. The Upper Missisquoi and Trout Rivers Management Plan, prepared as part of the Study, could be utilized by existing river stakeholders to guide and improve future river management and protection efforts; however, the absence of the federal designation and anticipated federal support for the Plan and its implementation would likely mean that the Plan and its implementation would be utilized to a much lesser extent than if designation were to occur. Long-term federal support and assistance to protection of free-flowing river conditions, water quality, and ORVs would not be in place. Similarly, it is possible that some other entity (the National Park Service would not be involved if the river is not designated) might organize, convene and support a committee charged with overseeing implementation of the Management Plan. The likelihood is, however, that the committee will not be a significant long-term factor in the absence of federal designation and support. In the absence of designation, federally assisted water resource development projects, such as hydroelectric projects, could be developed at existing dam sites or at new sites.

**Alternative B: Full Designation - NPS and Environmentally Preferable Alternative  
Description of Alternative**

This alternative would designate, as a component of the National Wild and Scenic Rivers System, all segments of the upper Missisquoi and Trout Rivers found to meet the criteria of eligibility and suitability, totaling 46.1 miles. The upper Missisquoi River, from the Westfield/Lowell Town Line to the Canadian Border in North Troy, with the exception of two river segments in Troy and North Troy that include dams; the upper Missisquoi from the Canadian Border in Richford to the project boundary of the Enosburg Falls dam in Enosburgh; and the entire Trout River from the confluence of Jay and Wade Brook in Montgomery to where it meets the Missisquoi River in East Berkshire would be subject to the additional protections of the federal designation. If designated, the National Park Service would convene an Upper Missisquoi and Trout Rivers Wild and Scenic Committee, ensuring that this oversight and coordination body exists and functions to stimulate implementation of the Upper Missisquoi and Trout Rivers Management Plan. Federal funding and technical assistance (subject to Congressional appropriations) would be available to assist in Plan implementation and would motivate increased long-term efforts to protect and enhance free-flowing river conditions, water quality and identified ORVs. Section 7 of the Wild and Scenic Rivers Act would be in effect for all eligible and suitable segments, providing maximum protection to the free-flowing river character from potentially adverse federally assisted water resource development project. This alternative best matches the desires of the communities, local governments and river stakeholders.

**Table 7.** Impacts on Free-Flowing Character

### **Alternative A: No Action**

#### **Impacts on Free-Flowing Character**

This alternative would provide no additional protection (beyond existing State and federal project review and permitting programs) to the free-flowing character of the upper Missisquoi and Trout Rivers. Federally permitted or funded water resource projects that could alter the free-flow of the river and its undisturbed shoreline areas would only continue to be subject to Section 7(b) review for three full fiscal years after this Study Report is submitted to Congress. Since most, and perhaps all, projects posing a threat to free-flowing condition require federal assistance/permitting, this lack of future protection could be significant over time. New or former and historical dam sites on the upper Missisquoi and Trout Rivers could attract potential hydroelectric proposals, though no such proposals have surfaced as part of the Study investigations. The feasibility of any such proposals is highly speculative and influenced by such factors as energy prices, government renewable energy incentives, the larger state and federal regulatory climate, and other factors. Beyond hydroelectric development, this alternative would provide no additional review or scrutiny of Army Corps permits or other federal assistance projects related to the Rivers. Over time the absence of this additional scrutiny and regulatory protection could allow for degradation of free-flowing character through rip-rap, channel alterations, or similar projects. Any such degradation would be expected to be long-term and incremental in nature.

### **Alternative B: Full Designation**

#### **Impacts on Free-Flowing Character**

This alternative would permanently protect 46.1 miles of the upper Missisquoi and Trout Rivers from federally assisted or permitted projects that could alter the free-flow of the river, and would specifically prohibit the FERC from licensing any new hydroelectric project on or directly affecting the designated segments. The exclusion of the upper Missisquoi River areas surrounding the Enosburg Falls, North Troy and Troy dams would allow continued hydropower at the existing dams.

This alternative would provide the maximum protection to free-flowing character from other forms of federally/assisted water resource development projects such as rip-rap, channel modifications, diversions. Over time, this additional protection and project scrutiny could have the effect of better preserving and/or enhancing free-flowing river character and natural stream channel conditions.

**Table 8.** Impacts on Protection of Identified Outstandingly Remarkable Values (ORVs).

**Alternative A: No Action**

**Impacts on Protection of Identified Outstandingly Remarkable Values (ORVs)**

Under the No Action Alternative A there would be no increased protection of the identified natural, cultural and recreational Outstandingly Remarkable Values, or water quality. The current level of protection through local, state and federal channels would remain unchanged and without the Wild and Scenic designation’s protections, could lead to incremental decline in the ORVs over time. The increased scrutiny afforded by the direct application of Section 7(a) of the Wild and Scenic Rivers Act would not be in effect for the oversight of federally funded or assisted projects beyond the three-year post-study report submission deadline. In addition, the increased examination of other federal projects (non-water resource development projects) that could be expected through required NEPA processes would not include recognition and protection of federal Wild and Scenic River status. Similarly, the probable lack of oversight and project assessment applied to nonfederal projects, through Wild and Scenic Committee support, would erode local and state efforts to protect identified natural, cultural, and recreational values. Without Wild and Scenic Rivers designation, resource protection strategies set forth within the Upper Missisquoi and Trout Rivers Management Plan to promote protection and enhancement of ORVs would not be implemented to the same extent since there would be no Wild and Scenic Committee to lead the effort. Furthermore the National Park Service would not be available to provide technical assistance, further leading to a potential long-term deterioration of identified resources.

**Alternative B: Full Designation**

**Impacts on Protection of Identified Outstandingly Remarkable Values (ORVs)**

Alternative B would provide the highest degree of protection to the identified ORVs and would permanently protect the ORVs of the upper Missisquoi and Trout Rivers from federally permitted/funded water resource development projects that would have a potential direct or adverse effect. FERC licensed projects on or directly impacting designated river segments would be prohibited, and as a result the ORVs of the upper Missisquoi and Trout Rivers would be permanently protected from the potential impacts of new projects. In addition, the NEPA review processes for federally funded/assisted, non-water resource projects would necessitate weighing impacts on the identified ORVs. The National Park Service would comment through existing federal agency review processes to ensure this consideration. The Upper Missisquoi and Trout Rivers Wild and Scenic Committee could take the lead and responsibility for following guidance provided in the Management Plan and could undertake desirable steps and actions needed to protect the identified ORVs and provide opportunities for resource protection and enhancement. This “Partnership” management framework has proven effective on other Wild and Scenic Rivers and in the Northeast Region.

**Table 9.** Impacts on Socio-Economic Values.

### **Alternative A: No Action**

#### **Impacts on Socio-Economic Values**

Under Alternative A, long-term impacts to socio-economic values could be anticipated relative to non-designation scenarios. For instance, there would be no designation-related special recognition of the upper Missisquoi and Trout Rivers and their associated resources. In addition, resource related protection that a designation offers would not be available through consistent long-term implementation of the Management Plan, or through reviews conducted under Section 7 of the Wild and Scenic Rivers Act likely resulting in some level of degradation of the free-flowing conditions, ORVs and water quality of the Rivers. Over the long-term, small, incremental, detrimental changes could affect local quality of life. Indicators of quality of life related to the river can include home prices, sense of place, and availability of high quality waters for human needs and recreational uses, as well as other related natural values. The proactive protection and enhancement strategies of the Management Plan aimed at maximizing the natural, cultural and recreational values to the abutting communities would see less implementation, thus reducing, over time, the value of these resources to the community. With widespread local support for designating the upper Missisquoi and Trout Rivers as Wild and Scenic Rivers, it is anticipated that the river communities would be dissatisfied with a non-designation result. River communities and stakeholders would not have access to the opportunities and associated prestige the designation affords, and that communities along designated rivers gain access to after designation.

Alternative A could result in hydroelectric proposals on new or former and historical dam sites on the upper Missisquoi and Trout Rivers, though no such proposals have surfaced as part of the Study investigations. The feasibility of any such proposals is highly speculative and influenced by such factors as energy prices, government renewable energy incentives, the larger state and federal regulatory climate, and other factors.

### **Alternative B: Full Designation**

#### **Impacts on Socio-Economic Values**

Alternative B would maximize the protection of natural, cultural, and recreational resource values of a Wild and Scenic designation in the form of river-focused, community-based values, consistent with wide support expressed by local municipalities. Over time it would be reasonable to expect that quality of life values, home prices, tourism, and similar socio-economic standards might be preserved or increased through such efforts. High quality, protected river resources have been shown in numerous studies to have such positive economic community benefits. Landowners along the watercourses may be more likely to adopt voluntary protection strategies due to the pride associated with a designation. There would be increased incentive for river communities to work cooperatively on river resource issues to benefit all. An increase in volunteer service could also result from the designation. Under this alternative, FERC licensed water resource projects are not permitted in the designated segments, and other federally funded/assisted water resource projects could be restricted. Alternative B allows for exploration for continued use or redevelopment of hydroelectric power facilities in Enosburg Falls, North Troy and Troy. At this time strong community support exists for designation and protection of river related resources.

**Table 10.** Anticipated cost of each alternative.

**Alternative A: No Action  
Anticipated Costs**

There are no direct costs associated with this alternative. Over the long term, however, there could be substantial indirect costs if important river values, including water quality and identified Outstandingly Remarkable Values, are allowed to deteriorate.

**Alternative B: Full Designation  
Anticipated Costs**

Direct costs of this alternative to the federal government may be anticipated to be comparable to the direct costs of similar designations in the NPS Northeast Region that provides seed funding for implementation of the Management Plan. In recent years, annual congressional appropriations through the National Park Service operating budget approximated \$175,000 for each of the twelve designated “Partnership National Wild and Scenic Rivers.” Some direct and indirect costs may also accrue to State agencies and non-governmental organizations partnering with the NPS through the Wild and Scenic Committee if they choose to devote increased resources as compared to the No Action alternative. Municipal involvement is expected to be all-volunteer, while indirect costs may be accrued through projects willingly undertaken in partnership with the NPS and Wild and Scenic Committee. Indirect costs through increased attention to preservation of river values may also occur. There would also be shared resources and funding across municipal borders for the benefit of the rivers’ protection. Multiple opportunities for collaboration and pooling of resources with the upper Missisquoi and Trout Rivers Wild and Scenic Committee would provide economy in scale. There would also be opportunities for the Committee, municipalities and local organizations to leverage additional funding as a result of the seed funding provided by the National Park Service.

Under this alternative, FERC licensed water resource projects are not permitted within the designated area, and other federally funded/assisted water resource projects could be restricted. Full designation results in a loss of the potential future development of hydroelectric projects in the designated segments of the Rivers (there are no proposals known at this time). It is feasible that in the future the local energy needs or economic conditions could shift and that appropriate technology for hydropower could be desirable. Alternative B allows for exploration for continued use or redevelopment of hydroelectric power facilities in Enosburg Falls, North Troy and Troy. At this time strong community support exists for designation and protection of river related resources.

### Impact of Alternatives - Discussion

#### **Alternative A: No Action**

Alternative A fails to support protection and enhancement of the natural, cultural, and recreational Outstandingly Remarkable Values (ORVs) of the upper Missisquoi and Trout Rivers. This alternative would allow for the possibility of a slow loss of these values, contrary to the strongly expressed desires of adjacent communities and other river stakeholders demonstrated during the Wild and Scenic Study. Twenty years of accumulated experience on other Partnership Wild and Scenic Rivers has demonstrated that each such river annually accomplishes many projects through the Wild and Scenic River Committees and with the assistance of NPS staff and Congressional appropriations aimed at protecting and enhancing identified river ORVs. Absent these Wild and Scenic Committee led efforts to implement action programs, it is reasonable to assume a corresponding deterioration (or lack of enhancement) would be observed over the long-term. Quality of life values may decline under this alternative and there would be less incentive and cooperative management structure for recognizing and protecting the special river values.

This alternative does not provide protection of free-flowing river conditions, as provided by Section 7 of the Wild and Scenic Rivers Act that would prohibit FERC licensed water resource development projects, and provide the ability for the NPS to review federally funded/assisted water resource projects. Other than those three which would be excluded from designation due to their lack of suitability and eligibility, there are no other known dam sites on the upper Missisquoi and Trout Rivers that have the capability of generating a large enough amount of power to make development feasible at this time, though conditions could change in the future that provide increased incentive to dam the upper Missisquoi and Trout Rivers and damage free-flowing conditions.

No corresponding advantages to the No Action

alternative are known, other than a slight savings in financial expenditures and human capital devoted to the rivers and their protection. These savings would likely be more than offset by resource value losses and the leveraging of volunteer support and funds through alternate sources that bring additional value to the designation. Without the designation there would be no increase in visibility and prestige that a Wild and Scenic designation affords.

There are no direct costs associated with this alternative. Over the long-term, however, there could be substantial indirect costs if important river values, including water quality and identified Outstandingly Remarkable Values, are allowed to deteriorate.

#### **Alternative B: Full Designation**

Alternative B is both the environmentally preferable alternative and the NPS preferred alternative. It is the most protective of the rivers' free-flowing character, water quality, and Outstandingly Remarkable Values of the designation alternatives considered. This option best reflects the desires of the Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee, local communities and majority of river stakeholders. In particular it is the alternative supported by the eight municipalities in the Study area which voted at their March 2013 Town Meetings to support designation under the Management Plan. The designation would also acknowledge the widespread support expressed by the State of Vermont, river towns and stakeholders. Strong support for long-term protection of the upper Missisquoi and Trout Rivers resources through a Partnership Wild and Scenic Rivers' designation was clearly indicated through town votes and letters of support.

Under this alternative all currently eligible and suitable segments of the upper Missisquoi and Trout Rivers would be designated. The exclusion of the segments of the river surrounding and including the Enosburg Falls, North Troy and Troy Dams would permit hydropower continuation or redevelopment of the existing dams. This Alternative is designed to protect the existing hydroelectric operations by excluding the



dams, their associated properties, facilities, and project areas from the designated area. Section 7 of the Wild and Scenic Rivers Act does not preclude FERC licensing of a water resource project so long as the project does not invade the designated area or unreasonably diminish the fish, wildlife, scenic or recreational values within this area that were present as of its designation.

This full designation alternative would provide special recognition and protection for the watercourses, and for the identified Outstandingly Remarkable Values (ORVs) for which the rivers would be designated. The ORVs were identified and documented by a team of experts as part of the Study process and were determined to be unique, rare or exemplary features on a regional and/or national scale (the Eligibility Chapter of this report provides an overview of the ORVs and the Management Plan which serves as a companion document to this Study Report details the ORVs in depth).

Direct costs of this alternative to the federal government may be anticipated to be comparable to the direct costs of similar designations in the National Park Service (NPS) Northeast Region. In recent years, annual congressional appropriations through the National Park Service operating budget approximated \$175,000 for each of twelve designated "Partnership National Wild and Scenic Rivers." Some direct and indirect costs may also accrue to State agencies and non-governmental organizations partnering with the NPS through the Wild and Scenic Committee, if they decide to devote more resources toward the upper Missisquoi and Trout Rivers than they would with the No Action Alternative A. Municipal involvement is expected to be all-volunteer, while indirect costs may be accrued through projects undertaken in partnership with the NPS and Upper Missisquoi and Trout Rivers Wild and Scenic Committee. Indirect costs through increased attention to preservation of river values may also occur when partners decide to participate; however, significant, long-term savings would be gained with this alternative by preventing costs associated with loss or deterioration of important river values, including water quality and identified

Outstandingly Remarkable Values. There would also be shared resources and funding across town borders for the benefit of greater river protection. Wild and Scenic designation would provide opportunities to coordinate projects and funding through the Wild and Scenic Committee, towns, and local organizations, and to leverage additional funding as a result of the small amount of seed funding provided by the NPS. The river towns would realize an increase in prestige and visibility due to the designation. This increase may have a positive local economic impact. The communities have acknowledged the benefit of a funding source for river-related conservation work that is critical to protecting and enhancing local resources and quality of life.

During the Wild and Scenic Study, the Study Committee identified resources that are highly valued by residents, businesses and recreational users who strongly support a Wild and Scenic River designation as a way to further river protection. Residents strongly support the diverse recreational opportunities that the watercourses offer.

### **Cumulative Impacts**

The main purpose of designation can, in many ways, be seen as a way to preserve the existing condition of river-related resources (i.e. to prevent degradation of resources), as well as to protect the waterways from the cumulative impacts of activities in and adjacent to the rivers. For the most part, local and State regulatory measures are currently in place that protect the resources. The principal effect and impact of Wild and Scenic River designation is to add specific Wild and Scenic River protections and federal funding/ assistance opportunities onto the existing framework of local, state and federal river management and protection. These protections are tightly aimed at protecting and enhancing a river's free-flowing character, water quality, and identified "outstandingly remarkable" natural, cultural and recreational resource values. In addition, Section 7 of the Act indeed has the stated purpose of preventing federal assistance to water resource development projects that would have a "direct and adverse impact" to free-

flow, water quality and identified ORVs. Under Alternative B (full designation), Section 7 protections would be in place for all eligible and suitable segments, providing permanent and maximum protection to the free-flowing character from potentially adverse federally assisted water resource development projects.

Under Alternative A, the absence of a Wild and Scenic designation entirely, federally funded or permitted projects could have a significant adverse impact on river resources over time. Hydroelectric projects could be expanded or developed under this scenario that could result in degradation of free-flowing character or loss of resources that are described in detail within this report. A new dam site could present a barrier to fish passage/migration, and to recreational uses and could impact water quality. This No Action Alternative A would provide no additional review or scrutiny of Army Corps permits or other federal assistance projects related to the river. Over time the absence of this additional scrutiny and regulatory protection could allow for degradation of free-flowing character through rip-rap, channel alterations, or similar projects. Any such degradation would be expected to be long-term and incremental in nature. The full designation Alternative B provides the maximum protection to free-flowing character from other forms of federally/assisted water resource development projects. Over time, this additional protection and project scrutiny could have the effect of better preserving and/or enhancing free-flowing river character and natural channel conditions.

Documentation of baseline conditions as a part of the Wild and Scenic Study provides the starting point from which future change can be measured. While opportunities to enhance resources are certainly identified as a part of the designation's and Management Plan's objectives, such opportunities are incremental in nature, with no dramatic change anticipated immediately as a result of designation. Over the long-term, small incremental positive changes could have the effect of added protection and enhancement of the rivers' free-flowing character, water quality and resources.

Whether the impact being considered is that of increased scrutiny to federal permits such as those of the Army Corps of Engineers or the impacts of federal financial and technical assistance, virtually all impacts are of a long-term and incremental nature, with the predominant effect of designation being preservation of existing conditions. The only exception to this general rule is the case of major federally assisted water resource development projects, particularly FERC licensed hydroelectric facilities that would be precluded by designation. In this case, there can be a dramatic impact of designation. For this reason, much of the attention in the comparison of alternatives is devoted to this potential impact, and the manner in which the different alternatives would potentially affect future hydroelectric development on the upper Missisquoi and Trout Rivers.

### **Public Involvement, Consultations and Coordination**

#### ***Introduction***

This section documents the consultation and coordination procedures with federal, state and local agencies, governing bodies and the public outreach and education process employed during the Wild and Scenic Study. Refer to Appendix 4 for examples of outreach and education materials utilized during the Study.

A high level of consultation and coordination occurred during the Wild and Scenic Study and resulted in the successful involvement of the public, local communities, the State of Vermont, federal agencies and resource experts in the Study Process and in the endorsement of designation by voters in municipalities in the Study area. Given that the "Partnership Wild and Scenic Rivers" approach was employed in conducting this Study, there was an emphasis on a local, collaborative process. The locally appointed Upper Missisquoi and Trout Rivers Study Committee made up of local, Select-board appointed representatives and river stakeholders, with support from the NPS, led the effort to engage the public in every aspect of the Study. Of central importance was the local development of the Management Plan that

offers recommendations for protection and enhancement of the Outstandingly Remarkable Values. This planning process included widespread opportunity for input, comment, and review.

The upper Missisquoi and Trout Rivers Wild and Scenic Study Bill H.R. 146, the Omnibus Public Land Management Act of 2009, was signed into law on March 30, 2009 by President Obama as Public Law 111-11. In December 2009 a locally appointed Study Committee began participating in earnest in the Wild and Scenic Study process with support from and in consultation with National Park Service Staff (a list of Study Committee members may be found at the beginning of this Report).

A great deal of time and care was taken over the course of the intensive four-year Wild and Scenic Rivers Study to ensure that adequate communication occurred and that there was ample time for comments and input from all interested agencies, governmental entities, non-governmental and local organizations, and the public. Consultations with resource experts and ensuing research results contributed to the body of knowledge required to determine the river's eligibility for designation. Numerous types of communication techniques were utilized to extend and share information about the possible designation, results of research, and Study findings. Successful development of the Management Plan included providing opportunities for frequent input and extensive stakeholder review of the Management Plan.

Though there are no other designated rivers in Vermont, the Lower Farmington and Salmon Brook Study and other Partnership River designations in the Northeast Region provided many resources and examples for local education regarding the value of a successfully implemented designation in New England.

### **Consultations**

#### *Federal*

As outlined in Section 4(b) of the Wild and Scenic Rivers Act, copies of this Study Report and

Environmental Assessment will be furnished to the head of any affected Federal department or agency for recommendations or comments for a ninety-day review period. Comments will also be received on-line through the NPS Planning, Environment and Public Comment (PEPC) website:

<http://parkplanning.nps.gov/>

In addition to the review of the draft Study Report and Environmental Assessment during the Wild and Scenic Study, the U.S. Fish and Wildlife Service (USFWS) was called upon to provide expertise regarding review of the Troy Hydroelectric Project which was undergoing licensing review during the period of the Study. Section 7 of the Endangered Species Act requires all federal agencies to consult with the USFWS to ensure that any action authorized, funded, or carried out by a federal agency does not jeopardize the continued existence of listed species or critical habitat (data on state and federal endangered species is collected through the Vermont Fish and Wildlife, Wildlife Diversity Program—formerly Nongame & Natural Heritage Program). U.S.D.A. Natural Resource Conservation Service representatives attended several Study Committee meetings, and provided expertise on the NRCS farm related programs along the Missisquoi and Trout Rivers. Missisquoi National Wildlife Refuge representatives were kept apprised of Study progress, and coordinated with as a part of the Study.

#### *Tribal*

The Wild and Scenic Study did not identify the existence of any federally recognized tribes or tribal lands impacted by this Study and no tribal representatives were required to participate in the Study process. Abenaki representatives were invited to participate; however, none did.

Copies of the Study Report will be made available to tribal representatives within Vermont who request a copy.

#### *State*

Vermont Department of Environmental Conservation  
(Vermont Agency of Natural resources)

wholeheartedly supports the Upper Missisquoi and Trout Rivers Study Committee's efforts to proceed with seeking Congressional authorization for designating defined segments of the upper Missisquoi and Trout Rivers as Wild and Scenic Rivers. Department support for Wild and Scenic designation is for segments endorsed by town voter approval during town meeting day in early March 2013.

The Vermont Agency of Natural Resources' (ANR) Department of Environmental Conservation (DEC) was an active participant and cooperator throughout and was extensively consulted on all aspects of the Wild and Scenic Study via three staff persons that served as Study Committee representatives. The VT DEC participated in the preparation and review of the Management Plan and provided data and input on the Outstandingly Remarkable Resources including water quality and biodiversity. Other consultations with the VT DEC related to the collection of detailed information regarding dam inventories of the Study area rivers, river dynamics, and fish diversity and passage issues.

Consultations with the State Division of Historic Preservation and research in its archives revealed detailed documentation of the existence of cultural resources (archaeological resources and National Register listed resources).

Due to the importance of the working landscape and prevalence of agricultural lands along the upper Missisquoi and Trout Rivers, the Vermont Agency of Agriculture, Food and Markets was also represented on the Study Committee and consulted during the Study process and Management Plan drafts.

### *Public Involvement*

**Outreach and Education:** The Study Committee held monthly public meetings for four years in part to support the process of facilitating local involvement in the Study process and in the development of the Management Plan that forms the basis of the potential designation and may guide subsequent management. The Committee's role was also to assess local support for the designation. A comprehensive outreach and

education campaign was developed and carried out to access many different audiences. The NPS cooperative agreement with the Missisquoi River Basin Association provided the local mechanism for using appropriated NPS funding to support the Study Committee's public outreach and education efforts and to conduct cooperative research. An important element of the study approach was to involve the interested public to the greatest extent possible through an intensive education campaign. The wide-reaching plan for education carried through in a series of meetings, presentations, open houses, workshops, booths at events, newsletters, posters, news articles, and mailings. Public input was sought throughout the Study and in particular at key junctures in the process.

Major outreach and education efforts included:

- Three Newsletters covering the Outstandingly Remarkable Values, topics of interest, Committee member stories, and updates on the Wild and Scenic Study process were mailed, emailed, and distributed by locally during the study period. Newsletters and informational postcards were distributed to town libraries, local stores, riverfront landowners, and other locations
- An Upper Missisquoi and Trout Rivers website was developed early on in the Study process. Along with many important documents displayed, the Management Plan was posted to encourage formal public comment and review
- Numerous meetings were held in all ten towns throughout the Study process. The purpose was to educate residents, landowners, and local government representatives about the process, to gather public comments, and to inform Selectboards, municipal commissions (such as planning and zoning or conservation commissions), and the public on important study milestones. Depending on the individual municipality's needs, meetings were held at a variety of points during the Study including at the start of the Study, mid-point and towards the end. The meetings covered Wild and Scenic Rivers Act background and ongoing progress of the Study Committee. The meetings served to educate, gain input, and seek recommendations for the development of the

Management Plan as well as to keep the public engaged in the Study and aware of its progress. Education and Outreach materials may be found in Appendix 4 of this Report.

- Community Open Houses in both Franklin and Orleans County were widely publicized. Educational materials on display included maps, research studies, Management Plan findings, and a video. Representatives from the Study Committee were present to educate the public regarding proposed ORVs, designation boundaries, and management priorities for protecting the key resource values. Soliciting feedback for the Management Plan from the public and educating voters prior to Town Meeting votes were primary objectives of the open houses.
- Mailings, press releases, signage, news articles, and a video were used to inform the public of the Wild and Scenic Study. Letters announcing the commencement of the Study and explaining the goals and opportunities for participation were sent to Town Selectboards.
- Postcards soliciting ORV identification, and describing the Town Meeting article for vote were sent to riverfront landowners. There were numerous articles in regional, local, and town newspapers as well as in local organizations' and partners' newsletters.
- A Wild and Scenic Study Booth was displayed at local events staffed by the Study Committee representatives.
- Additional meetings, presentations, phone calls, and email messages with town staff members and leaders, kept them up-to-date and facilitated communications and collaboration between boards and commissions and the Study Committee. In addition, a subcommittee on outreach and education developed a comprehensive plan for engaging a broad spectrum of the public.
- Additional methods of communication that were utilized included:
  - ≈ A Library display was circulated to all ten Study area municipalities
  - ≈ The Wild and Scenic Town Meeting vote was

highlighted and the Study Coordinator interviewed on VPR's Radio Program Vermont Edition

- ≈ Video presentation was developed and shown on local TV stations, posted on website, shown at Community Open Houses
- ≈ The local TV news WPTZ interviewed Committee members. This program was distributed and also aired on WPTZ prior to the Town Meeting vote
- ≈ A PowerPoint slide show was developed. The presentation was given at local meetings
- ≈ Posters and postcards with eye-catching designs and information were widely distributed
- ≈ Printed materials included contact and website information as well as requests for questions, input, and comments
- ≈ River paddles, work days and clean ups were also hosted to educate local community members about Wild and Scenic designation and collect information on locally valued resources while providing enjoyable activities on the rivers

These education and outreach activities were vital to developing the Management Plan through a broadly participatory process with guidance from locally-based representatives in consultation with the Study area municipalities. Examples of education and outreach materials are provided in Appendix 4 of this Report.

**Selectboard Meetings:** In addition to the regular monthly Study Committee meetings that were publicized locally and open to the public, there were updates conducted in all ten municipalities throughout the Study at Selectboard meetings, Conservation Commission, and other meetings. The purpose was to educate residents about the process, to gather public comments, and to inform Selectboards, commissions, and the public on important study milestones. The meetings covered Wild and Scenic Rivers Act background and ongoing progress of the Study Committee and served to educate, gain input, and seek recommendations for the development of the

Management Plan as well as to keep the public engaged in the Study and aware of its progress. Small group meetings were also held with town staff and officials to share preliminary Study results and receive feedback.

Generally there was an initial educational presentation to town leaders, boards, and committees followed by updates given by Study Committee representatives at regular intervals and important milestones. All Selectboards were visited prior to Town Meeting vote as well.

Presentations to local organizations, such as historical societies, the Northern Forest Canoe Trail or Missisquoi River Basin Association volunteers, and meetings with interested members of the public afforded additional opportunities for the public to participate in the review of the Management Plan. The locally appointed town representatives to the Study Committee were responsible for remaining in close communication with town staff, leaders, and boards, and available to answer questions from community members throughout the Study. The Study Coordinator was also available for technical guidance and support.

### **Local Support for the Management Plan and Wild and Scenic Designation**

Though the Management Plan is advisory, it is critical that so many partners have had an active role in developing its recommendations, and in that light endorsed the strategies that can be used to protect the Outstandingly Remarkable Values. This commitment of the various partners in river protection, a commitment developed and reaffirmed throughout the study process, will foster effective implementation. Community and Vermont Department of Environmental Conservation endorsement of the Management Plan substantiates suitability for designation by demonstrating commitment to river conservation. The support indicates that there is a demonstrated commitment to protect the river and be a partner in the implementation of recommendations in the Management Plan.

### **Preparers and Contributors**

Shana Stewart Deeds, Upper Missisquoi and Trout Rivers Wild and Scenic Study Coordinator

#### ***National Park Service Northeast Region Study Team***

Chuck Barscz, Division Chief

Jamie Fosburgh, New England Team Leader

Jacki Katzmire, Regional Environmental Coordinator

Jim MacCartney, River Manager

#### ***National Park Service Advisors***

Carol Cook, WASO Office of Park Planning and Special Studies

Cherri Espersen, WASO Office of Park Planning and Special Studies

Cassie Thomas, WASO Office of Park Planning and Special Studies

#### ***Local Study Committee***

Study Committee Representatives from ten municipalities in the Study area, VT DEC/Agency of Natural Resources/Water Quality Division, Missisquoi River Basin Association, Vermont Agency of Agriculture, Food and Markets and the Northwest Regional Planning Commission.

#### ***Expert Advisors - Outstandingly Remarkable Values (ORVs)***

Scenic and Recreational ORVs

John Little, expert paddler and Chair, Missisquoi River Basin Association

Walter Opuszynski, Director of Partnerships and Marketing, Northern Forest Canoe Trail

Keith Sampietro, Owner, Montgomery Adventures

Cynthia Scott, Coordinator, Missisquoi River Basin Association and Missisquoi Valley Rail Trail

#### ***Natural Resource ORVs***

Barry Doolan and Stephen Wright, Geologists at the University of Vermont

Marjorie Gale, Geologist, Vermont Geological Survey, VT DEC

Charlie Hancock, Vermont Certified Consulting Forester

Parma Jewett, Licensed realtor and expert fisherwoman

Rich Langdon, Aquatic Biologist, VT Department of Environmental Conservation

Mike Manahan, Board Member, Missisquoi River Basin Association and expert fisherman

Corrie Miller and Bob Hawk, Linkage Coordinators, Staying Connected Initiative

Jeff Parsons and Dori Barton, Consulting Ecologists, Arrowwood Environmental

Nancy Patch, Vermont County Forester

Bernie Pientka, Wildlife Biologist, Vermont Fish and Wildlife Fisheries Division

Kristen Sharpless, Conservation Biologist and Education Coordinator, Vermont Audubon Society

Eric Sorenson, Natural Communities Ecologist, Vermont Fish and Wildlife, Wildlife Diversity Program (formerly Nongame & Natural Heritage Program)

### *Water Quality Resources and Hydropower*

VT DEC/Agency of Natural Resources/Watershed Management Division

Karen Bates, Watershed Coordinator

Jeremy Deeds, Environmental Scientist

Brian Fitzgerald, Streamflow Protection Coordinator

Rick Hopkins, Environmental Analyst

Neil Kamman, Program Manager

Cathy Kashanski, Environmental Analyst

Leslie Matthews, Environmental Scientist

Staci Pomeroy, River Scientist

### *Historic and Cultural ORVs*

Bobby Farlice-Rubio, Executive Educator, Fairbanks Museum

Janice Geraw, Enosburgh Historical Society

Giovanna Peebles, State Archeologist, Vermont Division for Historic Preservation

Scott Perry, Montgomery Historical Society

Sam Thurston, Lowell Historical Society

### **List of Recipients**

The Study Report and Environmental Assessment Draft will be made available for public comment through the NPS Planning, Environment & Public Comment website and notice of availability will be published in the local paper.

### **Federal Agency Heads**

- Secretary of the Interior
- Secretary of Agriculture
- Chief of Army Corps of Engineers
- Administrator Environmental Protection Agency
- Chairman of Federal Energy Regulatory Commission (FERC)
- Administrator of Federal Emergency Management Agency
- Administrator of Department of Transportation Federal Highways Department
- Head of any other affected federal department/ agency

### **Regional and State Federal Agency Heads**

- Regional Forester of Eastern Region 9 of USDA Forest Service
- State Conservationist of USDA Natural Resource Conservation Service
- Commander and District Engineer of New England District of Army Corp of Engineers
- Northeast Regional Director of US Fish & Wildlife Service
- New England Ecological Services Field Office, Northeast Region (5), Concord, NH (Section 7 Endangered Species review)
- Regional Administrator Region 1 of Federal Emergency Management Agency
- Regional Administrator Region 1 of Environmental Protection Agency
- Vermont Division Administrator of US Department of Transportation Federal Highways Department
- Head of any other affected federal department or agency

*Upper Missisquoi and Trout Rivers Study documents will be posted on the NPS website for public view and formal comment:*

<http://parkplanning.nps.gov/>

*Also available on the Study website for review:*

<http://www.vtwsr.org/>

### *State of Vermont*

- Patrick Berry, Commissioner, Fish and Wildlife Department, Vermont Agency of Natural Resources
- Pete LaFlamme, Director, Watershed Management Division, Department of Environmental Conservation, Vermont Agency of Natural Resources
- Deb Markowitz, Secretary, Vermont Agency of Natural Resources
- David Mears, Commissioner, Department of Environmental Conservation, Vermont Agency of Natural Resources
- Chuck Ross, Secretary, Vermont Agency of Agriculture, Food and Markets
- Brian Searles, Secretary, Vermont Agency of Transportation
- Peter Shumlin, Governor, State of Vermont
- Mike Snyder, Commissioner, Department of Forests, Parks and Recreation, Vermont Agency of Natural Resources



# Appendix 1. Upper Missisquoi and Trout Rivers Study Act

PUBLIC LAW 111-11—MAR. 30, 2009

Title V - Rivers and Trails

Subtitle B - Wild and Scenic Rivers Studies

Section 5101 -

Amends the Wild and Scenic Rivers Act to designate a specified segment of the Missisquoi and Trout Rivers in Vermont for study for potential addition to the National Wild and Scenic Rivers System. Authorizes appropriations.



Public Law 111-11  
111th Congress

## An Act

To designate certain land as components of the National Wilderness Preservation System, to authorize certain programs and activities in the Department of the Interior and the Department of Agriculture, and for other purposes.

Mar. 30, 2009  
(H.R. 146)

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

### SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the “Omnibus Public Land Management Act of 2009”.

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

Sec. 1. Short title; table of contents.

### TITLE V—RIVERS AND TRAILS

#### Subtitle A—Additions to the National Wild and Scenic Rivers System

Sec. 5001. Fossil Creek, Arizona.  
Sec. 5002. Snake River Headwaters, Wyoming.  
Sec. 5003. Taunton River, Massachusetts.

#### Subtitle B—Wild and Scenic Rivers Studies

Sec. 5101. Missisquoi and Trout Rivers Study.

## TITLE V—RIVERS AND TRAILS

### Subtitle B—Wild and Scenic Rivers Studies

#### SEC. 5101. MISSISQUOI AND TROUT RIVERS STUDY.

(a) DESIGNATION FOR STUDY.—Section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(a)) is amended by adding at the end the following:

“(14) MISSISQUOI AND TROUT RIVERS, VERMONT.—The approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy, the approximately 25-mile segment from the Canadian border in East Richford to Enosburg Falls, and the approximately 20-mile segment of the Trout River from its headwaters to its confluence with the Missisquoi River.”

(b) STUDY AND REPORT.—Section 5(b) of the Wild and Scenic Rivers Act (16 U.S.C. 1276(b)) is amended by adding at the end the following:

“(19) MISSISQUOI AND TROUT RIVERS, VERMONT.—Not later than 3 years after the date on which funds are made available to carry out this paragraph, the Secretary of the Interior shall—

“(A) complete the study of the Missisquoi and Trout Rivers, Vermont, described in subsection (a)(14); and

“(B) submit a report describing the results of that study to the appropriate committees of Congress.”

(c) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this section.



## Appendix 2. Town Meeting Results

The following are the official letters, minutes and Town Reports from the March 2013 Study Town Meetings in Franklin and Orleans Counties, Vermont.

### Franklin County, Vermont

Berkshire passed the March 4, 2013 Town Meeting article to support Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands.

TOWN OF BERKSHIRE  
CHARTERED IN 1781  
4454 WATERTOWER RD  
ENOSBURG FALLS, VT 05450  
PHONE 802-933-2335  
FAX 802-933-5913

March 25, 2013

Berkshire held its Town Meeting on Monday March 4, 2013 at 7:00 P.M. to transact its business.

Article 6 of the warning of the 2013 annual town meeting reads as follows:

"Shall the Town of Berkshire petition the Congress of the United States of America that the upper Missisquoi and Trout Rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or managements of lands."

The legally qualified Voters of the Town of Berkshire passed said article in a voice vote during the Town Meeting on March 4, 2013.

*Emily Fecteau*  
Emily Fecteau  
Town Clerk

## Appendix 2. Town Meeting Results

### Franklin County, Vermont

Enosburgh Town and the Village of Enosburgh Falls passed the March 5, 2013 Town Meeting article to support Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands.

## TOWN OF ENOSBURGH

---

PO BOX 465

ENOSBURG FALLS, VT 05450

SHANA STEWART DEEDS

RE: VOTE ON TOWN MEETING DAY FOR WILD AND SCENIC

DEAR SHANA:

THIS LETTER IS TO VERIFY THAT THE TOWN OF ENOSBURGH, WHICH INCLUDES ALL VOTERS, PASSED OUR ARTICLE IN REGARDS TO THE WILD AND SCENIC, THE VOTE WAS 66 YES AND 44 NO.

  
BILLIE JO DRAPER

ENOSBURGH TOWN CLERK



## Appendix 2. Town Meeting Results

### Franklin County, Vermont

Montgomery passed the March 5, 2013 Town Meeting article to support Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands.

Montgomery Town Meeting Minutes 2013, abbreviated

#### Minutes ANNUAL TOWN MEETING - 2013

**Moderator Tim Murphy called the meeting to order @ 9:00AM**

1. Elect a Moderator for the ensuing year.

**Sue Wilson nominated Tim Murphy. Tim was re-elected by voice vote.**

**Without objections Representative Cindy Weed was allowed to address the Town. She gave a brief legislative update.**

13. Shall the Town vote to petition the Congress of the United States of America that the upper Missisquoi and Trout Rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.

**Todd Lantery moved to accept as written and was seconded. There was a short video shown and Montgomery Wild and Scenic River representatives, Todd Lantery and Keith Sampietro gave a brief explanation of the project and answered questions. Motion passed by voice vote.**

14. To do any other business proper to be done at said meeting.

**Sarita Khan moved to accept a resolution: "The Voters of Montgomery Vermont gathered at Town Meeting vote to oppose the development of the Alberta Tar Sands" and was seconded. Non-binding vote passed by voice vote.**

**Barry Kade moved that our Delegates to the General Assembly be instructed that the voters of Montgomery support a State mandate labeling genetically modified foods and was seconded. Motion passed by voice vote.**

**Scott Perry moved to adjourn and was seconded. Motion passed by voice vote. Meeting adjourned @ 1:27pm.**

A true record this 12<sup>th</sup> day of March, 2013.

ATTEST:

## Appendix 2. Town Meeting Results

### Franklin County, Vermont

Richford passed the March 4, 2013 Town Meeting article to support Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands.



### **Town of Richford**

Alan Fletcher, Town Clerk/Treasurer  
PO Box 236, 94 Main St.  
Richford, VT 05476

Tel. 802-848-7751 Fax 802-848-7752

April 12, 2013

At Town Meeting on Monday March 4<sup>th</sup>, 2013, Article 6 was approved by a voice vote of the attendees of the Town Meeting. Article 6 asked if the voters would approve petitioning the Congress of the United States of America that the upper Missisquoi and Trout rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.

### Orleans County, Vermont

At their March 5, 2013 Town Meeting, the voters present in the Town of Lowell did not carry the article supporting Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands. There was a voice vote, and not a ballot vote. They were the only municipality voting 2013 that did not support designation in their Town.

### LOWELL TOWN & SCHOOL ANNUAL REPORT



For Year Ending December 31 **2012**

**ARTICLE 24:** Shall the voters of the Town of Lowell vote to help support the proper observance of Memorial Day each year by placing flags on all veterans' graves in all cemeteries in the Jay Peak Post No. 28 area in the amount of \$200.00?

**ARTICLE 25:** Shall the voters of the Town of Lowell petition the Congress of the United States of America that the upper Missisquoi and Trout rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management plan and would not involve federal acquisition or management of lands?

**ARTICLE 26:** To do any other "NON-BINDING" business found necessary?

**ARTICLE 27:** TO ADJOURN

**SELECTBOARD:** Richard Pion, Chair; Dwight Richardson, Alden Warner  
**SCHOOL DIRECTORS:** Steve Mason, Chair; Kevin Hodgeman, Laurine Pion  
Received for posting: January 31, 2013 7 Karen Clinger- Town Clerk

## Appendix 2. Town Meeting Results

### Orleans County, Vermont

Troy Town and the Village of North Troy passed the March 5, 2013 Town Meeting article to support Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands.

**Town of Troy**  
142 Main Street  
North Troy VT 05859  
(802) 988-2663  
[townoftroy@comcast.net](mailto:townoftroy@comcast.net)

On March 5, 2013 at the annual meeting, the voters of the Town of Troy voted to designate the Missisquoi River as Wild and Scenic.

The results were 47 Yes 13 No.

TOWN OF TROY

*Terri a. medley*  
Terri Medley  
Clerk/Treasurer

SELECTBOARD MEMBERS

*Mark Faulkner*  
*Ray R. Roy*



### Orleans County, Vermont

Westfield passed the March 5, 2013 Town Meeting article to support Wild and Scenic River designation for the upper Missisquoi and Trout Rivers based on the Management Plan, and without federal acquisition or management of lands.

WARNING  
and Minutes  
2012

The legal voters of the Town of Westfield are hereby warned and notified to meet at the Westfield Community Center on Tuesday March 5, 2013 at 10:00 A.M. to act on the following articles:

11. To see if the voters of the Town of Westfield will petition the Congress of the United States of America that the upper Missisquoi River and Trout River Be designated as Wild and Scenic Rivers with the understanding that such Designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.

Motion by Mike Piper and seconded by Dianne LaPlante to bring the article to the floor.

A video was presented by Jacques Couture. Jacques is a member of the committee that has been working on public awareness. Dianne LaPlante also worked on the committee. A voice vote followed. So moved.

17. To adjourn

Motion by MaryLou Jacobs and seconded by Margaret Rowley to adjourn.

Meeting adjourned at 2:00 p.m.

Minutes taken by:

Connie LaPlume, Clerk  
Election Official

Pat Sagui, Moderator  
Other Election Official



## Appendix 3. Designation Support Letters

The following are records of support and endorsement for Wild and Scenic Designation.

Support Letter for the Upper Missisquoi and Trout Rivers

Wild and Scenic Study - Berkshire, VT

**TOWN OF BERKSHIRE, VERMONT**

CHARTERED IN 1781  
4454 WATERTOWER ROAD  
ENOSBURG FALLS, VT. 05450  
PHONE (802) 933-2335  
FAX (802) 933-5913

October 16, 2006

*Missisquoi River Basin Association  
2839 Vt. Route 105  
East Berkshire, VT. 05447*

Dear MRBA,

*The Berkshire Town Selectboard are hereby giving their support to the Missisquoi River Basin Association in applying for the Missisquoi River's individualism as a "Wild and Scenic River". The river is a great natural resource and this would be a fitting label*

*The project requires a study as the first step to acquiring the label "Wild and Scenic which would also be very beneficial to the community.*

*If there is anything else that the Town Of Berkshire can do, please feel free to contact us.*

Sincerely,




Selectboard of Berkshire  
Robert Archambault  
Chairman

## Appendix 3. Designation Support Letters

Support Letter for the Upper Missisquoi and Trout Rivers

Wild and Scenic River Designation - Vermont Agency of Natural Resources

1 National Life Drive, Davis 2 Montpelier, VT 05620-3901  Tel: (802) 828-1294 Fax: (820) 828-1250  www.anr.state.vt.us	 <b>State of Vermont</b> <b>Agency of Natural Resources</b>	Deborah L. Markowitz Agency Secretary  Justin G. Johnson Deputy Secretary
--	--	---

May 1, 2013

Missisquoi/Trout Rivers Wild & Scenic Study Committee  
c/o Missisquoi River Basin Association  
2839 VT Route 105  
East Berkshire, VT 05447

Dear Members of the Wild and Scenic Study Committee,


On behalf of the Vermont Agency of Natural Resources, allow me to express my enthusiasm and appreciation for your efforts over the last several years to carefully examine the land and water related features of the Upper Missisquoi and Trout Rivers. The Committee's recently finalized and issued Management Plan regarding those waters is truly an impressive piece of work.

The purpose of this letter is to give the Agency's whole hearted support for the Committee's efforts to seek Congressional authorization for designating defined segments of the upper Missisquoi and Trout Rivers as Wild and Scenic. Agency support for Wild and Scenic designation is for affected segments endorsed by town voter approval during town meeting day in early March 2013.

The Agency looks forward to continuing its work with the Study Committee and to celebrating actions taken by Congress which result in official Wild and Scenic designation.

Thank you and congratulations for all your time and efforts, production of a meaningful management plan and the successful endorsement by the affected towns.

Sincerely,

  
Deb Markowitz, Secretary  
Vermont Agency of Natural Resources

---

*Department of Forests, Parks & Recreation      Department of Fish & Wildlife      Department of Environmental Conservation*  
**Respect. Protect. Enjoy.**

## Appendix 3. Designation Support Letters

### Support Letter for the Upper Missisquoi and Trout Rivers

#### Wild and Scenic River Designation - Enosburgh Conservation Commission

April 29, 2013

Wild and Scenic River Study Committee

2839 VT Route 105

East Berkshire, VT 05447

Dear Wild and Scenic River Study Committee,


We the Enosburgh Conservation Commission strongly support the designation of the Missisquoi River as Wild and Scenic. We have supported the effort from its beginnings through personal contacts and a public meeting to educate the community about the benefits and misconceptions of the wild and scenic designation. We feel that this designation will benefit the river and the town of Enosburgh.

Our recent conservation and education efforts have been on the river corridor. We were actively involved in helping conserve a 7 acre parcel on the river last year. We know that the Missisquoi River is a jewel in our community and are rigorously working to conserve land and preserve the water quality of the river and educate our citizens about the importance of the river.

The Wild and Scenic designation meshes with our mission as a conservation commission. We appreciate all the work that your committee is doing to make this possible for us.

Sincerely,

Sarah Downes

  
Chairperson/Enosburgh Conservation Commission

## Appendix 3. Designation Support Letters

### Support Letter for the Upper Missisquoi and Trout Rivers

### Wild and Scenic River Designation - Richford Conservation Commission

Upper Missisquoi and Trout Rivers  
Wild and Scenic Study  
2839 VT Route 105  
East Berkshire, VT 05447  
802-393-0076  
info@vtwsr.org  
<http://www.vtwsr.org/>

May 30, 2013

Wild and Scenic River Study Committee

The Town of Richford is located on the Missisquoi River. The vitality of the River is transmitted to its surroundings, and the sights and sounds of the Missisquoi River are thoroughly appreciated by the Richford community.

At Town Meeting on March 4 2013, the voters of Richford showed their support of the Missisquoi River as part of the Wild and Scenic River Program.

The members of the Richford Conservation Commission proudly and fully support designation of the Upper Missisquoi and Trout Rivers as part of the Wild and Scenic River Program.

Richford Conservation Commission Members

Gregg Campbell  
Debbie Foote  
Carrie Garrow  
Annette Goynes  
Mary Robinson

## Appendix 3. Designation Support Letters

### Support Letter for the Upper Missisquoi and Trout Rivers

### Wild and Scenic River Designation - Missisquoi River Basin Association (MRBA)



#### Missisquoi River Basin Association

Our goal is to restore and maintain the ecological integrity of the Missisquoi River system so that the uses and values desired by the community are supported by the river and quality of its water.

---

May 1, 2013

Wild & Scenic Rivers Study Committee  
2839 VT Route 105  
East Berkshire  
VT 05447

Dear Committee Members,

I am writing to express the Missisquoi River Basin Association (MRBA)'s enthusiastic support for the Missisquoi and Trout Rivers to be included in the National Parks Service's Wild and Scenic Rivers Program. This 61-mile stretch of river (25 miles of the Missisquoi from Lowell, VT to Canada, 25 miles of the Missisquoi from Richford to Enosburg Falls, and 11 miles of the Trout River from Montgomery to East Berkshire) has been recognized by the voters of the 8 municipalities through which the rivers pass as having unique values and resources which make them worthy of inclusion as Wild & Scenic Rivers.

We are a volunteer-based watershed organization, working since 1996 to improve water quality in the Missisquoi River, and to increase community interest in and use of this treasured resource. Having the Upper Missisquoi and Trout Rivers designated Wild & Scenic would complement our efforts and would recognize the valued place this part of the Missisquoi River and its tributary, the Trout River, hold in this community, both for recreational and tourism purposes.

We wish the Wild & Scenic River Study Committee every success in acquiring Wild & Scenic designation and will help in the process in whatever way possible.

Sincerely,

John Little  
Chair

---

2839 VT Route 105, East Berkshire, VT 05447  
Tel: (802) 933-9009 E-mail: mrba@pshift.com

## Appendix 3. Designation Support Letters

Support Letter for the Upper Missisquoi and Trout Rivers

Wild and Scenic River Designation - Missisquoi Valley Rail Trail



### MISSISQUOI VALLEY RAIL TRAIL

### NORTHWEST VERMONT RAIL TRAIL COUNCIL

c/o Northwest Regional Planning Commission  
155 Lake Street • St. Albans, VT 05478  
Phone: 802-524-5958 • Fax: 802-527-2948

#### APPOINTED MEMBERS

**St. Albans City**  
Jim Smith

**St. Albans Town**  
Vacant

**Swanton**  
Alan Lampson

**Fairfield**  
Jane Williams

**Sheldon**  
Vacant

**Enosburg Town**  
Robert Gervais, Sr.

**Enosburg Falls**  
Michael Manahan

**Berkshire**  
Carol Hickey

**Richford**  
Phyllis Tiffany

**VAST**  
Mark Bushey

**At Large**  
Don Mueller  
Alisha Sawyer  
David Stanley  
Nini Worman

**Ex-Officio**

VT Agency of  
Transportation

Northwest Regional  
Planning Commission

VT Dept. of Forests,  
Parks, & Recreation

May 1, 2013

Wild & Scenic Rivers Study Committee  
2839 VT Route 105  
East Berkshire  
VT 05447

Dear Wild & Scenic Committee:

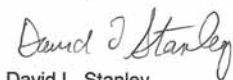
The Northwest Vermont Rail Trail Council is pleased to offer its support for Wild & Scenic Rivers designation of the Upper Missisquoi and Trout Rivers as decided by the voters of the 8 municipalities affected.

The Rail Trail Council is always looking for ways to attract more trail users, from providing amenities such as information kiosks and benches/tables to creating trail loops off the Missisquoi Valley Rail Trail. Wild & Scenic designation of the Upper Missisquoi and Trout Rivers will undoubtedly increase visitor traffic to this area of the State and many of these people will be participating in the recreational opportunities of Franklin County, including the Rail Trail.

The Missisquoi Valley Rail Trail (MVRT) is a 26.4 mile crushed-stone multi-season multi-use recreational trail on a rail corridor extending from St. Albans to Richford. Hiking, biking, horseback riding, snowmobiling, and cross-country skiing are permitted. While the State of Vermont owns the MVRT, the Council advises the State on trail management issues.

Good luck with acquiring Wild & Scenic designation for 2 very deserving rivers. We look forward to working with you on future recreation-related projects involving the Missisquoi and Trout Rivers.

Sincerely,



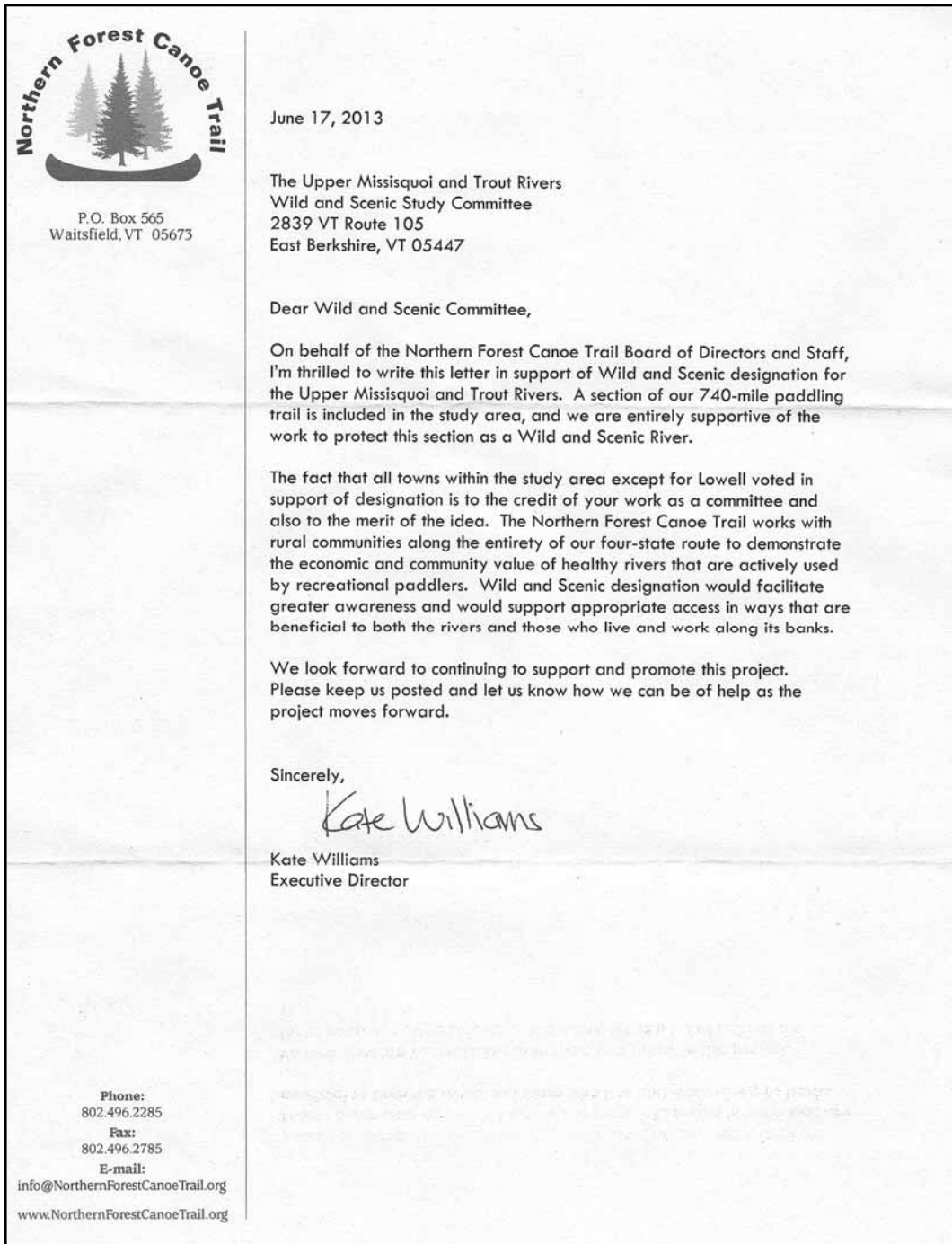
David L. Stanley  
Chair



## Appendix 3. Designation Support Letters

### Support Letter for the Upper Missisquoi and Trout Rivers

### Wild and Scenic River Designation - Northern Forest Canoe Trail (NFCT)



## Appendix 3. Designation Support Letters

Support Letter for the Upper Missisquoi and Trout Rivers

Wild and Scenic River Designation - Vermont Chapter of the Sierra Club

April 12th, 2012



Vermont Sierra Club Supports  
Upper Missisquoi and Trout River  
Wild and Scenic River Designation

To Whom It May Concern,

The Executive Committee of the Vermont Sierra Club, on behalf of our three thousand members, has unanimously voted to support the classification of the Upper Missisquoi and Trout Rivers as wild and scenic waterways. We, along with Vermonters in general, understand these rivers to be important natural and cultural resources for our state and the nation.

If we are to deliver a Vermont to our grandchildren which is recognizable to our forbearers, it is essential that we place a high conservation value upon such beautiful rivers as the Missisquoi and the Trout.

Therefore, we are happy to lend our full support to the fine efforts of our friends conducting the Wild and Scenic River study concerning these majestic waters ways.

Sincerely,  
Executive Committee of the  
Vermont Chapter of the Sierra Club

---

*Vermont Sierra Club, Montpelier, Vermont, (802) 522-5812, [www.vermontsierraclub.org](http://www.vermontsierraclub.org)*

## Appendix 3. Designation Support Letters

### Support Letter for the Upper Missisquoi and Trout Rivers

### Wild and Scenic River Designation - Vermont Council of Trout Unlimited



Vermont Council

November 14, 2013

Ms. Shana Stewart Deeds  
Study Coordinator  
Upper Missisquoi and Trout River  
Wild and Scenic Study  
2839 Vermont Route 105  
East Berkshire, VT 05447

Dear Ms. Deeds:

The Vermont Council of Trout Unlimited supports the inclusion of the proposed Missisquoi River and Trout River reaches to the National Wild and Scenic Rivers System. As the Wild and Scenic Rivers Act was implemented to protect our waterways, the inclusion of these reaches will add a layer of protection afforded by this federal designation against riparian development and to help restore fisheries habitat.

The vast majority of our rivers in Vermont are obstructed. The Vermont Council believes that obstructing or diverting a river flow for hydropower is environmentally harmful and fragments aquatic habitat, thereby diminishing what some consider a 'clean' source of power. It is important that all levels of state and federal protection be employed to protect our rivers as wildlife habitat, for recreation and as drinking water sources.

Because of this, we support the Wild and Scenic designation of these reaches of the Missisquoi and Trout Rivers in the hopes that this designation will further protect these rivers from future hydropower construction, be it a traditional dam, run-of-river, a diversion project, or otherwise. It is also our hope that any future federal support will include consideration of removal of existing, unutilized dams, as well as bank stabilization, stream crossings, culvert modernization, fish passage through existing dams, and other means to protect aquatic habitat. This will protect these rivers for today's anglers and recreationists, as well as for future generations.

Sincerely,

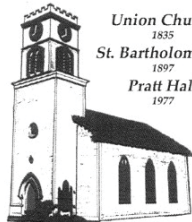


Vermont Council of Trout Unlimited

## Appendix 3. Designation Support Letters

Support Letter for the Upper Missisquoi and Trout Rivers

Wild and Scenic River Designation - Montgomery Historical Society



Montgomery Historical Society  
P.O. Box 47 Montgomery, VT 05470  
[pratthall@gmail.com](mailto:pratthall@gmail.com)  
[www.montgomeryhistoricalsociety.org](http://www.montgomeryhistoricalsociety.org)

November 20, 2013

Shana Stewart Deeds  
Study Coordinator  
Upper Missisquoi and Trout Rivers  
Wild and Scenic Study  
2839 VT Route 105  
East Berkshire, VT 05447

Shana,

As you know the Town of Montgomery enthusiastically supported and endorsed the designation of the Upper Missisquoi and Trout Rivers as part of the Wild and Scenic River Program at Town Meeting in March of 2013. The Society took great pride in supporting your work researching the area's history and identifying the Outstandingly Remarkable Values of the study area, and were pleased to host a Study Group meeting at Pratt Hall.

The Montgomery Historical Society has members from: 20 VT towns including 8 in Franklin County, 16 states & the District of Columbia, 2 Canadian Provinces, and 3 foreign countries other than Canada. We enthusiastically add our organizations' voice to all of those others in support of the designation and its goals of preserving this unique national resource, and enhancing our community's and region's quality of life.

For the Board of Directors who unanimously approved this letter:


  
Scott Perry  
Chairman

The Montgomery Historical Society Board is...  
Scott Perry, Bill Branthoover, Marijke Dollois, Sue Wilson, Bill McGroarty, Tim Chapin  
Ken Secor, Elsie Saborowski, Parma Jewett, John Beaty, Jo Anne Bennett, Pat Farmer & Patricia Perl

## Appendix 4. Outreach and Education Examples

The following are examples of outreach and education materials utilized during the Wild and Scenic Study.

Upper Missisquoi and Trout Rivers Wild and Scenic Study Newsletter Example.



**Upper Missisquoi & Trout Rivers Study**

### NEWSLETTER FOR THE UPPER MISSISQUOI & TROUT RIVERS WILD AND SCENIC STUDY

*Thank you for exploring the second newsletter from the first Wild and Scenic Rivers Study in Vermont!*

#### UPCOMING EVENTS

- Our next Study Committee meetings are June 16th in Montgomery at the Emergency Services Building, July 21st in Westfield, and August 18th in Franklin County. Study Committee meetings are the 3rd Thursday of the month at 7pm.
- The Wild and Scenic Study Committee will be hosting a paddle on the upper Missisquoi River on June 4th. Check out our website for future canoe trips and other events.
- Please check out our website or contact our coordinator, Shana Stewart Deeds, for more information on our Study, upcoming events, or if you would like a representative to speak to your organization about the Wild and Scenic Study.

Issue #2 Spring/Summer 2011

#### WHAT IS THE WILD AND SCENIC STUDY COMMITTEE?

The Upper Missisquoi and Trout Rivers Wild & Scenic Study Committee is formed of local appointees and partner organizations to evaluate Wild and Scenic Designation along the upper Missisquoi and Trout Rivers.

The group's mission is to facilitate the transfer of information between the ten communities the rivers run through, Berkshire, Town of Enosburgh, Village of Enosburgh Falls, Jay, Lowell, Montgomery, Village of North Troy, Richford, Westfield, and the Town of Troy, and evaluate the potential benefits of the Wild & Scenic designation. At the end of the study in 2012, we will provide an accurate assessment as to whether the rivers fit designation criteria and whether designation is supported, and make recommendations of voluntary strategies for protection of the rivers' resources. Study Committee meetings are open to the public and driven by consensus.

#### HELP US IDENTIFY OUTSTANDING RIVER RESOURCES

**Identifying Outstandingly Remarkable Values (ORVs):**  
As part of a Wild and Scenic River Study, a determination must be made whether the river area contains any outstandingly remarkable values (ORVs).

The process of determining whether a river contains any ORVs often begins with an effort to gather information about river-specific resources that may be unique, rare or exemplary when compared to similar resources at a regional or national scale. For the upper Missisquoi and Trout Rivers this will be done by the Wild and Scenic River Study Committee with the help of area specialists.

Many different kinds of resources can be ORVs. They include things like wildlife and their habitat, fisheries, scenery, swimming holes, geologic features, and historical, archaeological and recreational sites. Please contact us if you have ideas for ORVs, and take a few minutes to complete our survey at <http://www.surveymonkey.com/s/TVLFWFR>



Sunrise at Big Falls, Missisquoi River. Photo by John Selmer - our 2010 Wild and Scenic photo contest grand prize winner. See page 2 for information on how you can enter our 2011 photo contest.

#### NEWSLETTER DETAILS

This newsletter will be published during the approximately 3-year Wild & Scenic Study scheduled to end in 2012. If you are receiving this newsletter you likely live or work within the study area, you are on our mailing list, or you belong to a local watershed or conservation organization. Your contact information will not be sold or shared by our organization, and will not be used for any purpose other than Wild & Scenic education and outreach. Please contact Shana Stewart Deeds if you wish to be added or removed from our mailing list, or if you can help us save money and resources by receiving this newsletter electronically! Newsletter archives, meeting minutes, designation FAQs, and more are available on our website.

Upper Missisquoi & Trout Rivers Wild & Scenic Study, 2839 VT Route 105, East Berkshire, VT 05447 - 802-393-0076 - [www.vtwsr.org](http://www.vtwsr.org)

# Appendix 4. Outreach and Education Examples

## WHAT ARE THE EFFECTS OF WILD & SCENIC RIVER DESIGNATION FOR THE MISSISQUOI AND TROUT RIVERS? (CONTINUED ON PAGE 4)

Wild & Scenic River Designation is granted by Congress under the 1968 Wild & Scenic Rivers Act and its amendments. The Partnership Wild & Scenic River model used in New England was designed for rivers primarily in private ownership. This model empowers communities to better manage, protect and enhance the special values of their rivers. There are three essential aspects to implementing Wild & Scenic Designation; this article discusses these designation efforts.

**The Management Committee** - If the Wild & Scenic Study Committee believes that the Missisquoi and Trout Rivers fit the criteria for designated rivers, and that designation is desirable they will bring the question of designation to vote at Town Meeting. If voters support designation, the matter will be brought to Congress. If Wild & Scenic Designation occurs, then there would be a Wild & Scenic Management Committee, established similar to the current Study Committee, to oversee the designation and the federal funds made available to designated rivers. The establishment and support of a local Management Committee to oversee designation, made up of members appointed by the town, is key to making Wild & Scenic Designation work. The Management Committee works across the town lines, with landowners and various partners to implement the recommendations of a Management Plan written by the Study Committee. The Management Plan will lay out a vision for protecting the special values of the Missisquoi and Trout Rivers valued by the community (please see page 1 for information about how you may help us identify these values). It will detail the natural and cultural resources, and describe their current condition, threats, opportunities, and recommendations for management. The Plan will be extensively reviewed by local boards, and then brought to Town Meeting to be sure it reflects community goals and values.

**Federal Support** - To be sure that the Management Plan does not sit on a shelf and to support the Management Committee, designated rivers typically receive regular Federal financial appropriations. In 2010, the twelve Partnership Wild & Scenic Rivers each received approximately \$170,000 to help the Management Committee function, provide salary for staff, and provide

### Upper Missisquoi and Trout Rivers Wild and Scenic Photo Contest

The Upper Missisquoi and Trout Rivers Wild and Scenic Study is sponsoring a photo contest! Our second photo contest is open from now until December 30, 2013. Winners of our photo contests will be featured on our website and newsletter, and entered into the raffle for the best photo of 2013-2012, and receive a gift from a local business. This year Nicole Lantry has generously donated a 1 hour massage from her business Better Living Massage, Montgomery, VT. Each photo submitted must be accompanied by its own completed entry form which can be downloaded from our website [www.stmvt.org](http://www.stmvt.org). Please submit both a hard copy and email a digital version of your photos. Digital copy may be emailed to [stms@stmvt.org](mailto:stms@stmvt.org). You may also request an entry form by mail.



Congratulations to the 2010 winners of the Upper Missisquoi and Trout Rivers Wild and Scenic Photo Contest!



Upper Missisquoi & Trout Rivers Wild & Scenic Study, 2839 VT Route 101, East Berkshire, VT 05447 • 802-359-0076 • [www.stmvt.org](http://www.stmvt.org) Page 2



Historical photos of East Berkshire, VT provided by the John Wolf and the Berkshire Historical Society

### SPOTLIGHT ON OUR TOWNS: BERKSHIRE, VT

The town of Berkshire was chartered on 22 June 1781. It was most likely named after Berkshire County, Massachusetts (many of the grantees lived there), which in turn was most likely named after Berkshire, England. The Missisquoi River provided major use and historical significance for the area now known as the town of Berkshire by Native Americans primarily as a mode of transportation during their hunting trips. Traditionally, the river's power has been harnessed elsewhere. Even during the 1927 flood, the damage done in Berkshire was minor compared to its neighboring towns of Richford and Ensbury.

What the Missisquoi River currently provides as it meanders through the east and south-east portion of the town, virtually splitting the small village of East

Berkshire in two, is its scenic beauty. When one walks the rail trail north towards Richford, he or she would cross the river on the same bridge once used by the trains when the railroad was in use. Others have sometimes been seen at play in the water flowing below.

The Berkshire Historical Society Building (the former First Congregational Church) is located on Montgomery Road in East Berkshire, not far from the river. The sanctuary remains intact and has been recently used for weddings, while the downstairs is used as a museum to house and display our artifacts and the Wolf of Honor (not up yet, but hopefully soon) for all of Berkshire's men and women who have served in the past or are currently serving in our nation's military. Books are also available on the history of Berkshire, and can be purchased through the Berkshire Historical Society or at the Berkshire Town Clerk's Office. Our meetings are the third Thursday of each month, and we are open summers by appointment.

By: John Wolf, President, Berkshire Historical Society

### ARRANGED 2010 ACCOMPLISHMENTS (PLEASE SEE THE RESOURCES SECTION OF OUR WEBSITE FOR A MORE COMPLETE LIST)

#### Organization and Administration

- Elected a slate of officers in March 2010.
- Approved decision making procedures in March 2010.
- Adopted a Mission Statement in July 2010.
- Conduct monthly Study Committee meetings in the 10 towns in the study area.

#### Resource Review

- Geography - Presentation by Stacy Pharo of VT Department of Environmental Conservation showing aerial photos of the Missisquoi and Trout Rivers.
- Recreation - Presentation by Walter Dupertuis on the Northern Forest Cause Trail which includes Missisquoi River sections (S-13-10), and Humea Picnic (Fish and Wildlife) on stocked fisheries in the rivers (11-18-10).
- Natural Resources - BRAN - Presentation by Corie Miller and Bob Hawk on wildlife habitat connectivity and the Staying Connected Project (S-7-13-10), and Rich Longtin (NR) on natural fisheries (11-18-10). Water - Staff Presentation from the VT AND set up the Bore river model to demonstrate river dynamics at our 10-21-10 meeting. Don Barton, from Arrowwood Environmental, presented 10-21-10 the preliminary findings from their geomorphic assessment conducted on the Missisquoi this summer.
- Agriculture - Presentation by Laura DiPietro, VT Department of Agriculture on farm operations. Accepted Agricultural Practices Regulations, and Best Management Practices (B-19-10).
- Cultural/Historical - Presentation 09-16-10 by Bobby Faxon-Rubin on Native American occupation of the Missisquoi and Trout River valleys, & Jessie Green, Ensbury Historical Society, gave a brief presentation (4-15).

#### Meetings and Events

- Hosted a public on the Missisquoi River from Richford to East Berkshire on June 26, 2010.
- Advertised and participated in MRBA's June 19, 2010 Missisquoi River cleanup.
- Participated at the Missisquoi River Basin Association's Event on August 28, 2010.
- Hosted a public on the Missisquoi River from East Berkshire to Ensbury Falls on September 18, 2010.

Upper Missisquoi & Trout Rivers Wild & Scenic Study, 2839 VT Route 101, East Berkshire, VT 05447 • 802-359-0076 • [www.stmvt.org](http://www.stmvt.org) Page 3

# Appendix 4. Outreach and Education Examples



## WHAT THE MISSISSAQUOI AND TROUT RIVERS MEAN TO ME

**LOCAL OBSERVATIONS:**  
Northern Forest Cares Trails

Cherish, New Hampshire, and Maine. NFWC means to people in the Trout River watershed, forest logging, and management consultation by consulting, planning, and providing services to ensure our forest ecosystem along this river.

The US and the Missisquoi River is a part of the NFWC based effort that "These heavy woods when through fields the NFWC will save the Missisquoi River of the North's head of the Missisquoi National Wildlife Refuge passing VT's largest blueberry meadow. They will then walk their way upstream through wetland forested and a break in the Trout River before crossing into Canada. The project is done with the cooperation of the North State of the Missisquoi. The number of paddlers volunteer about 100 people, enjoying the Missisquoi in a non-motorized direction and enjoying its wide and meandering flow. The Missisquoi is like no other stretch of the NFWC being periodically disturbed. The maintenance of the Trout River through and to the valley bed. As an organization we have found great support from these communities, and there is an obvious desire to protect these waters for their natural beauty, history, and ecological importance. The NFWC is honored to join these communities to be a part of this river's history. One paddler's job is the opportunity to follow the historic woodcutters used by generations of laborers from the Adirondack to the present day paddlers. The Missisquoi lies in the heartland of our Trout and without it we would miss not only the unique character of people and land, but also the significant and interconnected connection the Missisquoi provides. To learn more, visit their website at [www.nfwcvt.org](http://www.nfwcvt.org).

**Special Chat Regarding Federally Funded or Permitted Projects:** The Wild & Scenic Rivers Act prohibits agency funded, funded or permitted projects that could harm their values. There is a category of low-impact projects, such as the New York or Massachusetts. The Act states that a low-impact project is one that does not have a significant effect on the river's natural, cultural, or historic values. The Act states that a low-impact project is one that does not have a significant effect on the river's natural, cultural, or historic values. The Act states that a low-impact project is one that does not have a significant effect on the river's natural, cultural, or historic values.

**Review of Other Federally Funded or Permitted Projects (Apply to the State):** Projects that are federally funded, constructed or developed, water related, and have a direct relationship to the Missisquoi River are reviewed under Section 7 of the Wild & Scenic River Act by the NFWC and the Management Committee to ensure that the special river values identified during the study are protected. This is the only "regulatory" provision of the Act, and it only refers to federally funded or permitted projects directly related to the river. At our January meeting we discussed water related projects, such as the Upper Missisquoi and Trout Rivers water treatment plant. While most projects will be routine, if the project demonstrates likely adverse impact on the river, the NFWC in consultation with the local Management Committee authority to conduct open public hearings that will consider all river values, as in other cases, into the project. Project values have been relatively low in New England, so most cases, projects proceed with adequate conditions in place to ensure that their values are protected. A project which was studied was extensive, it required three years of 24-hour-a-day design for access to a hydroelectric power plant, and was along one of the largest waterfalls in the state. In practice, the local Management Committee and NFWC have a strong bias to ensure that any federal project is consistent with the values of the Management Plan, and desirable to the town. There are also federal projects for wilderness, and areas up and downstream of the designated area. There are in place to ensure that projects do not harm the designated area or have an unreasonable adverse impact on it through, providing a major diversion of water from an important tributary.

**Special Protection and Public Hearings:** Designation provides general protection for the designated area by establishing a watershed plan to "protect and enhance" the river values identified in the Management Plan. Such environmentally conditioned policy goals to be recognized and enforced by any federal agency undertaking a project. NFWC National Environmental Policy Act (NEPA) requires that federal agencies review and consider the environmental consequences of proposed actions. If a project is proposed in the designated area, two water related hearings, and how generally to the river, then the Wild & Scenic Management Committee and NFWC must be consulted. Wild & Scenic Designation does not change anything about the existing NEPA process, but it provides direct, local input to the process. The Committee can provide insight into any potential impacts of a project on outstanding values, and give suggestions for reducing those impacts.

Designation provides local input into projects proposed on designated rivers and flowing to carry out desirable river-related projects. It also provides protection for the environmentally sensitive areas by providing a mechanism for working with the help of local communities. To find out more about effects of designations, and for a more complete discussion of Wild & Scenic, please see our January 2011 Study Committee Meeting materials and sign up for our website at [www.nfwcvt.org](http://www.nfwcvt.org). By: Anne Foubert, the NFWC's and Missisquoi Trout River Study Committee.

Upper Missisquoi & Trout Rivers Wild & Scenic Study, 2833 VT Route 101, East Berkshire, VT 05447, 802-339-0076, [www.nfwcvt.org](http://www.nfwcvt.org)

## CURRENT TOWN APPOINTERS

The Wild and Scenic Study Committee is made up of two official members from each of the ten towns in the study area. These official members are appointed by the towns. The following is the current roster of appointed members from each of the ten towns.

Town	Member
Berkshire	1. Todd Elmer 2. Carol McInerney
East Berkshire	1. Edward G. Ellis 2. Ken Sizer
Windsor	1. Mike Manahan 2. Dianne Laplante
North Troy	1. Sue Stewart 2. Jim Star
Richford	1. Mike Dow 2. Annette Payne 3. George Dill
Windsor	1. Jackson Douthett 2. Dianne Laplante
Windsor	1. Helene Ouellet 2. Robert Langlands
Windsor	1. Helene Ouellet 2. Robert Langlands

Other agencies and organizations represented include: Missisquoi River Basin Association, National Park Service, Jamie Foubert, Jim MacCarty, Northwest Regional Planning Commission (NRPC), Catherine Cimrnik, Bethany Kemmer, VT Agency of Agriculture, Sylvia Jensen, VT Department of Environmental Conservation (DEC), Bill Weathers (or Cathy Kaufman) and Steve Pomeroy, VT Federation of Sportmen's Clubs Bill Laplante, VT Troutlodge Coalition Robert Oak. Study Committee members make every effort to attend monthly Study Committee meetings, and to assist in the Wild and Scenic Study process whenever possible. If you live in a town in the study area and are not on the list, please contact the Wild and Scenic Study Committee chair or your local Board or your coordinator. For more information please contact: Shana Stewart Dwyer the Wild and Scenic Study Coordinator at 802-339-0076 or [info@nfwcvt.org](mailto:info@nfwcvt.org). Please also visit our website for updated information and meeting minutes at [www.nfwcvt.org](http://www.nfwcvt.org).

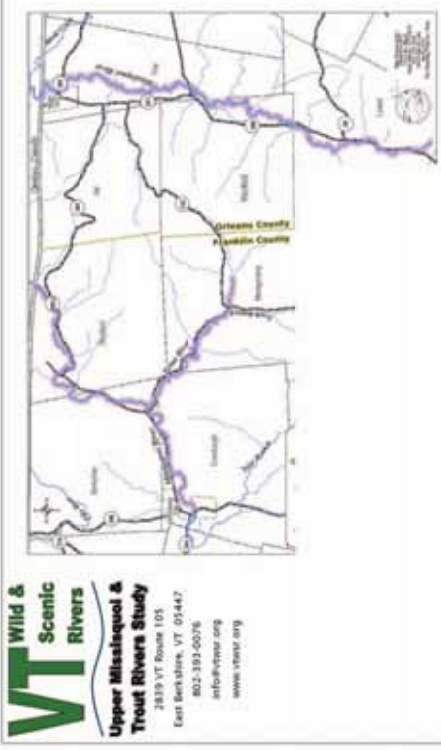
## MEET OUR COMMITTEE MEMBERS

**Mike Manahan** Secretary

Mike Manahan is the secretary for the Wild and Scenic Rivers Study Committee. He grew up in Berkshire, and has helped local citizens for over 20 years. He is involved in the study of the Missisquoi River Basin Association and supports all of their study committee efforts. Carrying the study of the river, a great outdoor diversion, making the river one of the great pleasures in life. Waterways that provide the study of the river, a great outdoor diversion, making the river one of the great pleasures in life. Waterways that provide the study of the river, a great outdoor diversion, making the river one of the great pleasures in life. Waterways that provide the study of the river, a great outdoor diversion, making the river one of the great pleasures in life.

**Dianne Laplante** Treasurer

Dianne Laplante is the treasurer for the Wild and Scenic Rivers Study Committee. She grew up in Berkshire, and has helped local citizens for over 20 years. She is involved in the study of the Missisquoi River Basin Association and supports all of their study committee efforts. Carrying the study of the river, a great outdoor diversion, making the river one of the great pleasures in life. Waterways that provide the study of the river, a great outdoor diversion, making the river one of the great pleasures in life. Waterways that provide the study of the river, a great outdoor diversion, making the river one of the great pleasures in life.



## Please enjoy this Wild and Scenic Crossword Puzzle!

Answers may be found on our website under RESOURCES  
[www.nfwcvt.org](http://www.nfwcvt.org)

**ACROSS**

- This town has the highest named peak in our Wild and Scenic Study Area, the 16th highest named mountain in Vermont?
- It is in East Berkshire that this river joins the Missisquoi, where the two rivers are one Wild and Scenic Study come together.
- The Upper Missisquoi and Trout Rivers Wild and Scenic Study is the \_\_\_\_\_ study of Vermont's Covered Bridge Capital due to the six standing Vermont Brothers bridges, the most of any town in the county!
- Vermont's only active stream-flowing town.
- The headwaters of the Missisquoi River are in this Vermont town in Orleans County.
- This major tributary to the Missisquoi River is listed in the 1992 Vermont (Including Hole Study) The "Trout Run Canyon" including both is a very popular recreational area.
- This park in Richford is the location of their nearest farmer's market, and a good place to meet for a paddle on the Missisquoi River.

**DOWN**

- The Wild and Scenic River Act defines ORV's \_\_\_\_\_ Remarkable Values, as the recreational, geological, historical, cultural, scenic or natural resource values that make our rivers worthy of designation. You can help our Study Committee identify these.
- This "Covered Bridge Town" is known as the Wild and Scenic Study is the \_\_\_\_\_ study of Vermont's Covered Bridge Capital due to the six standing Vermont Brothers bridges, the most of any town in the county!
- The largest unadorned waterfall in a major river in Vermont can be found in this State Natural Area in Troy.
- It is in this small northern village that the Missisquoi River joins to one brook and enters into Canada.
- This "Dairy Capital of the World" is the home of the Vermont Dairy Festival.
- According to their town plan, the outer bridges of Hume's North, westwards of Hume, and the Missisquoi River, as it meanders through the lake to \_\_\_\_\_ this town is one Wild and Scenic Study Area.

WILD AND SCENIC STUDY  
2833 VT ROUTE 101, EAST BERKSHIRE, VT 05447  
[info@nfwcvt.org](mailto:info@nfwcvt.org)  
[www.nfwcvt.org](http://www.nfwcvt.org)

## Appendix 4. Outreach and Education Examples

Postcards sent to riverfront landowners, and community members.

### Did you know that your town is participating in the Upper Missisquoi and Trout Rivers Wild & Scenic Study?

The Upper Missisquoi River and the Trout River are the first two rivers in Vermont to be considered for inclusion under the National Wild and Scenic Rivers Act. A Study Committee has formed to identify what makes these rivers special. We are studying the outstanding values of the rivers, evaluating the protections that exist for these values, and making suggestions in the form of a voluntary management plan about what steps towns could take to preserve these values for all to enjoy. This management plan is non-regulatory, and private landowners would continue to be the stewards of their property while towns would continue to be responsible for regulating land use along the river.

If after the two year study the Committee (made up of volunteers from the ten towns in the study area) feels that designation of the rivers is desirable, they will bring the decision to town meetings in order for the voters in the ten towns to decide if the Study Committee should present their findings to Congress to seek Wild and Scenic designation of the rivers. If designated, Congress would appropriate funds for projects to preserve the recreational, scenic, historic, cultural, natural, and geologic resources in the Upper Missisquoi and Trout Rivers.

To be considered Wild and Scenic under the Act the rivers must have at least one *Outstanding Resource Value* (ORV), be it recreational, natural, or cultural. **THIS IS WHERE YOU COME IN!** Help us celebrate these rivers by letting us know what YOU feel are the outstanding resources of the Upper Missisquoi and Trout Rivers.

What areas of these rivers provide outstanding recreational opportunities? Where are the best fishing and swimming holes? Where do you like to picnic or hike along the rivers?

Are there locations adjacent to the rivers that were important to Native Americans, early Europeans, loggers or farmers?

What natural expanses of the river do you think are special because of their scenic qualities, wildlife habitat, or ability to preserve water quality? **SEND US YOUR INPUT!** [info@vtwsr.org](mailto:info@vtwsr.org)

We encourage you to be part of the Wild and Scenic Study process by sending us your pictures and your opinions on what areas of the Upper Trout and Missisquoi Rivers are outstanding. Postal mailings are expensive, stay informed by [signing up for our mailing list by emailing or calling us \(802-393-0076\)](#). Also, all are welcome to attend our Study Committee meetings. Stay up to date on activities via our website at [www.vtwsr.org](http://www.vtwsr.org).


Thank you for your help!



Photo used with permission from David Justice





## Appendix 4. Outreach and Education Examples




*Upper Missisquoi & Trout Rivers  
Wild and Scenic River Study*

*Berkshire Enosburgh Falls Enosburgh Lowell Montgomery North Troy Richford Troy Westfield*

*Make an informed vote on Wild and Scenic designation  
for the upper Missisquoi & Trout Rivers at your March  
2013 Town Meeting*



Upper Missisquoi and Trout Rivers  
Wild and Scenic Study  
2839 VT Route 105, East Berkshire, VT 05447  
[www.vtwsr.org](http://www.vtwsr.org) | [info@vtwsr.org](mailto:info@vtwsr.org)



PRSRT STD  
ECRWSS  
U.S. POSTAGE  
PAID  
EDDM RETAIL

Please join us for an open house to ask any questions you have about Wild and Scenic designation prior to your Town Meeting vote – Enosburgh Emergency Services Building, Thursday 2/28/13, 5-6pm.

\*\*\*\*\*ECRWSSEDDM\*\*\*\*  
Postal Customer

Nine municipalities in the Study area will vote on the adoption of the voluntary Management Plan written by the Study Committee comprised of Selectboard appointed citizens from each town.

The article reads as follows:

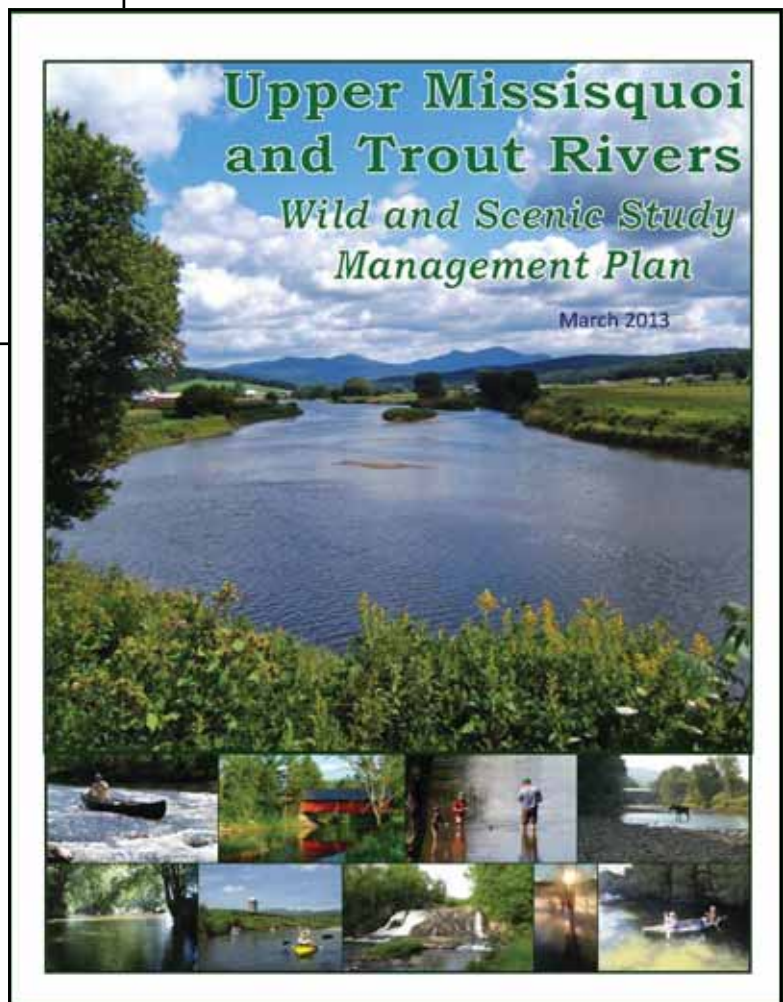
*To see if the voters of the Town of \_\_\_\_ will petition the Congress of the United States of America that the upper Missisquoi and Trout Rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.*

Please contact us with any questions prior to Town Meeting. The final Management Plan and a short video will soon be available on our website:

**[www.vtwsr.org](http://www.vtwsr.org)**

## Appendix 4. Outreach and Education Examples

Letters to Town Clerks and Village Managers accompanying the final Management Plan.



## Appendix 4. Outreach and Education Examples

Poster soliciting input on the Study Committee's Management Plan.

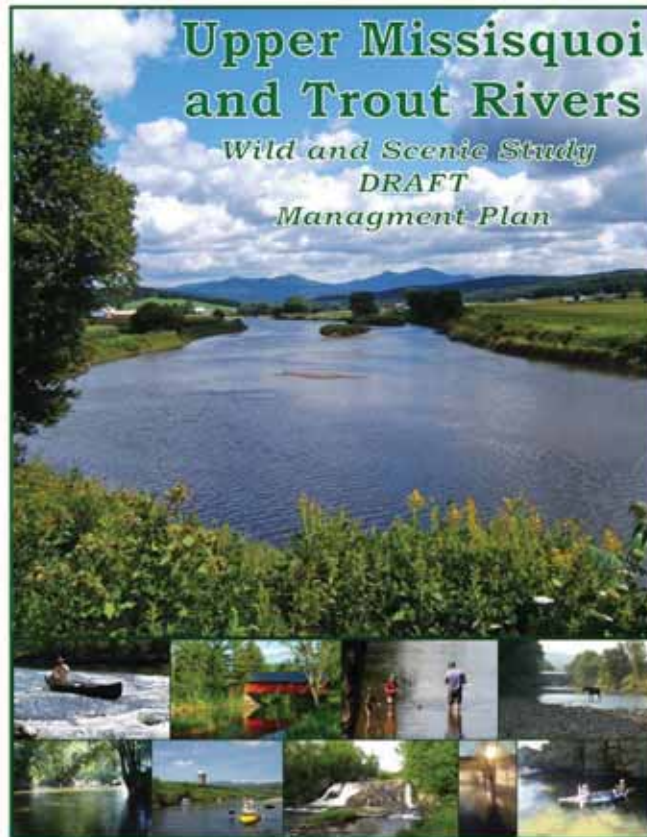
### Check out the DRAFT Upper Missisquoi and Trout Rivers Wild and Scenic Management Plan Here

This locally written, voluntary draft Management Plan is now available for review and public comment until December 17, 2012.

This is a non-regulatory Plan summarizing the information collected over the three year study by the Selectboard-appointed Study Committee illustrating examples of management success stories in our region, and encouraging the voluntary recommendations we feel will maintain the Missisquoi and Trout Rivers in healthy condition.

**Make an informed decision at Town Meeting, March 2013**, when you vote on whether the upper Missisquoi and Trout Rivers should be designated as Wild and Scenic with the understanding that it will be based on this management plan, and will not increase federal ownership or management of your private lands.

For more information about Wild and Scenic designation, please join us at our Study Committee meeting on the 3<sup>rd</sup> Thursday of each month, or check out our website: [www.vtwsr.org](http://www.vtwsr.org)



**VT** Wild &  
Scenic  
Rivers  
Upper Missisquoi &  
Trout Rivers Study

Shana Stewart Deeds - Study Coordinator  
2839 VT Route 105  
East Berkshire, VT 05447  
info@vtwsr.org

[www.vtwsr.org](http://www.vtwsr.org)

# Appendix 4. Outreach and Education Examples

Letters to be included in annual Town Reports in each of the Study municipalities.



The Wild and Scenic Study of the upper Missisquoi and Trout Rivers was congressionally authorized in 2009 at the request of local advocates. The Study has focused on the rivers in 10 area municipalities: Berkshire, Enosburg Falls, Enosburgh, Jay, Lowell, Montgomery, North Troy, Richford, Troy, and Westfield.

The Study Committee, made up of Select-board appointed, local representatives, gathered information about the rivers and their value to local citizens. They found that our rivers and valleys are cherished because of their agricultural heritage, rural character, quality waters, recreational opportunities, scenic working landscapes, history and natural resources. As these resources are unique or outstanding at local, state and national levels, the upper Missisquoi and Trout Rivers qualify for National Wild and Scenic designation.

The Study Committee developed a voluntary, non-regulatory Management Plan to inform citizens about these outstanding resources, and present recommendations designed to help protect the rivers' values for current and future generations.

At your 2013 Town Meeting you will be asked to vote on the adoption of the Management Plan, which recommends applying for federal Wild and Scenic Designation. The article is written as follows:

*To see if the voters of the Town of Montgomery will petition the Congress of the United States of America that the upper Missisquoi and Trout Rivers be designated as Wild and Scenic Rivers with the understanding that such designation would be based on the locally-developed rivers Management Plan and would not involve federal acquisition or management of lands.*

Favorable votes at Town Meeting will demonstrate local support for designation which is important for further action by Congress; designation will occur if Congress enacts a bill adding the upper Missisquoi and Trout Rivers into the Wild and Scenic Rivers System which is then signed into law by the President. If there are towns which do not vote to support designation, the Study Committee will talk with community members in 'no' towns to ascertain why the voters may have rejected the article, work to

address any concerns, and consider requesting municipal reconsideration of the article at a future town-wide vote.

Voting in favor of this article will not require appropriation of Town funds; in fact, designated rivers typically receive federal funds for river-related projects.

Benefits of Wild and Scenic Designation include:

- Qualification for annual federal funds to help support river-related resources
- Formation of a locally-appointed Committee to implement the Management Plan
- Greater protection for the rivers from federal projects, along with greater involvement in the federal project review process through the local Committee
- Use of designation in marketing to increase business and tourism if desired

Designation does not:

- Designation does not involve federal acquisition or management of lands; local communities maintain governance and control of rivers and their valleys
- Designation does not cost local communities; it does qualify the municipalities to receive federal funds to support recommendations in the Management Plan
- Designation does not allow for new hydroelectric dams in the Study Area; however, we have excluded existing projects from the designated area

Our Management Plan is available on our website, and questions may be directed to our Coordinator or your Town Representatives.

Respectfully submitted by your Appointees to the Study Committee, Todd Lantery and Keith Sempietro, and the Wild and Scenic Study Coordinator, Shana Stewart Deeds.

Please contact us with any questions or comments prior to the vote:  
www.vtwsr.org | info@vtwsr.org

## Did you know that your town is participating in the Upper Missisquoi and Trout Rivers Wild & Scenic River Study?



Source: at Big Falls' photo by our grand prize 2009 photo contest winner, John Sisker, Westfield

### What is a Wild and Scenic River Study?

- A voluntary, congressionally authorized study to determine whether a particular river is eligible and suitable for designation as a national Wild and Scenic River
- The Upper Missisquoi and Trout Rivers are being reviewed by a local Study Committee
- The Wild and Scenic Study Committee is made up of two official members from each of the ten towns in the study area (Berkshire, Enosburgh, Enosburg Falls, Jay, Lowell, Montgomery, North Troy, Richford, Westfield, and Troy).

### How to Get Involved?

- **TAKE OUR PLEASER TO FIND OUT MORE!**
- There are currently some vacancies on the Study Committee; contact your Select Board about being appointed to represent your town
- Participate in Study Committee meetings whenever possible - all are welcome to attend
- Give input to the Study Committee regarding what you think is an outstanding recreational, historic, cultural, or natural resource of the Upper Missisquoi and Trout Rivers
- For more information please contact Shana Stewart Deeds the Study Coordinator at 802-393-0076, or shana.stewart@vtwsr.org -or- Jamie Fouburgh, National Park Service 617-223-5191, Jamie\_Fouburgh@nps.gov
- Please also visit our website for updated information and meeting agendas at [www.vtwsr.org](http://www.vtwsr.org)

The Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee wishes to update your town on our Study. These rivers are the first two in Vermont to be considered for inclusion under the National Wild and Scenic Rivers Act. The Study is expected to run until 2012. The Study Committee meets at 7pm on the 3<sup>rd</sup> Thursday of each month; all members of the public are welcome. Information about meeting agendas and locations (rotated among the 10 towns in the study area) can be found on our website, or by contacting:

Shana Stewart Deeds - Wild and Scenic Study Coordinator  
Upper Missisquoi and Trout Rivers Wild and Scenic Study  
2439 VT Route 105, East Berkshire, VT 05447  
802-393-0076  
info@vtwsr.org, www.vtwsr.org

The Study Committee is collaborating with the National Park Service and key local and state partners to study the resources of the rivers, evaluate the existing protections that exist for these resources, and develop a voluntary management plan based on local ideas and strategies to preserve these resources for all to enjoy. This management plan is only advisory; private landowners will continue to be the stewards of their property and towns will continue to be responsible for regulating land use along the river.

At the end of the Study, the Study Committee will present its findings and recommendations to the Towns. Any decision to pursue Wild and Scenic River designation must have the broad support of the Study Committee, Town Boards and voters at Town Meeting. If designation is granted, Congress would appropriate funds for projects to preserve the resources in the upper Missisquoi and Trout Rivers, and the National Park Service would provide support for a locally-based implementation committee, also made up of local appointees, following the same model used during this study.

We encourage you to be part of the Wild and Scenic Study process by sending us pictures and information on what areas of the Upper Missisquoi and Trout Rivers are recreationally, culturally, historically, or naturally outstanding. You may also be aware of management issues or opportunities that you would like to share with us. Please contact your official town appointees, or the study coordinator with any questions, or ideas. You also are invited to participate in our online survey at: <http://www.surveymonkey.com/e/TVLPWFR>

Respectfully submitted by your Appointees to the Study Committee and the Wild and Scenic Study Coordinator, Shana Stewart Deeds.

THE UPPER MISSISQUOI AND TROUT RIVERS WILD AND SCENIC STUDY - Check out [WWW.VTWSR.ORG](http://www.vtwsr.org) for more information.

# Appendix 4. Outreach and Education Examples

Informational flyer handed out to farmers and agricultural organizations.

## Would federal designation of the Upper Missisquoi & Trout Rivers as Wild & Scenic River affect property rights or my ability to farm?

No. Local towns retain control of land use planning and zoning laws. The federal government's role is predominantly encouraging and promoting good land use decision making which protects river values and promotes flood resiliency.

### What are the effects of Wild and Scenic River designation on landowners within the river corridor?

Under the Wild and Scenic Rivers Act, designation neither gives nor implies government control of private lands within the river corridor. The federal government has no power to regulate or zone private lands under the Act. People living within a river corridor would be able to use their property as they had before designation.

**Can the federal government regulate or zone private lands?** Under the Wild and Scenic Rivers Act, the federal government has no authority to regulate or zone private lands. Land use controls on private lands are solely a matter of state and local zoning. Although the WAS Act includes provisions encouraging the protection of river values through state and local governmental land use planning, there are no binding provisions on local governments. The management plan recommendations which come out of the study process are voluntary.

**Can the federal government force me to change my agricultural practices due to Wild and Scenic Designation?** Agricultural practices are regulated as they were prior to designation. The following describes the only regulatory part of the Wild & Scenic Act. Under Section 7 of the WAS Act, projects which are federally permitted or funded, construction/development, AND water related are reviewed by the local WAS Committee & the National Park Service. This review is meant to maintain the free-flowing condition of the rivers, & protect community-identified Outstandingly Remarkable Values (ORVs) for which the river is designated. Only the mainstem, the primary river channel & not the tributaries, of the Missisquoi & Trout Rivers are being considered for designation. There are three possible outcomes for review: 1) your project is found to have no adverse effects on ORVs, so it may continue as proposed; 2) your project is found to have adverse effects on ORVs; if you revise your proposal based on feedback from the local WAS Committee & the NPS your project will continue as proposed; 3) your project is found to have adverse effects on ORVs & may not continue as planned. Option #3 is avoided, & only extreme cases typically fall into this category such as large-scale dredging or damming projects which would likely be blocked by state regulations anyway. Remember, the only projects which fall under this review must be federally permitted/funded, construction/development & water related.

**Will designation mean increased delays or costs for reviewed projects?** The reviews are short and typically happen in conjunction with any already existing river permits. Additionally, our voluntary management plan, which guides the activities of the WAS Committee states support for efforts to maintain or improve riparian buffers and the current movements to support agricultural best management practices, and encourages the Committee to work in tandem, rather than at odds with these programs and avoid additional review or approval requirements.

**Can the federal government force landowners to move because of Wild and Scenic designation?** No, land is never seized. The river study, Wild and Scenic legislation, and subsequent management planning will explore how to protect river values while recognizing private property rights.

**Can riverside lands be developed?** Wild and Scenic river designation does not affect private landowners' ability to develop privately-owned lands within the river corridor.



Source: [www.vtrsr.org](http://www.vtrsr.org) [www.vtrsr.org](http://www.vtrsr.org)  
Additional questions? Contact your local study coordinator:

**Shana Stewart Deeds**

Study Coordinator, Upper Missisquoi and Trout Rivers Wild and Scenic Study

2839 VT Route 105, East Berkshire, VT 05447  
802-393-0076  
[info@vtrsr.org](mailto:info@vtrsr.org)

## The Upper Missisquoi and Trout Rivers Wild & Scenic River Study



Working with Deeds on the Trout River photo by our 802 phone number owner in the Environmental Category, Brenda Elwood, Eastburg Falls, VT

### What is a Wild and Scenic River Study?

- A congressionally authorized study to determine whether a particular river is suitable and suitable for designation as a national Wild and Scenic River
- The process is primarily voluntary, and in the hands of the local community members, please find your local representative on our website
- The Study enables local residents to collectively identify the goals they have for the upper Missisquoi and Trout Rivers
- Local support (through town vote on the voluntary management plan and designation at March 2013 Town Meeting) and additional Congressional action are required before the rivers are designated Wild and Scenic.

### What Parts of the Rivers are Being Considered for Wild and Scenic Designation?

- 27 miles of the upper Missisquoi, Franklin County including Eastburg, Eastburg Falls, Berkshire & Richford
- 25 miles of the upper Missisquoi, Orleans County including Troy, N. Troy, Westfield, & Lowell
- 20 miles of the Trout River including Berkshire & Montgomery

### What Would Wild and Scenic Designation Achieve?

- The Missisquoi and Trout would be recognized among the nation's best rivers. Designation would be granted if the Study demonstrates 1) statewide, regionally or nationally outstanding resources, and 2) a local commitment to protect them.
- Designation would modify the Missisquoi and Trout for federal funds on an annual basis to support projects and activities that protect and enhance the river's outstanding values identified by the local Study Committee and community members - please contact us with resource ideas!
- A locally-based advisory committee would be established to oversee implementation of the voluntary river Management Plan developed during the Study by the local Study Committee

### Do You Have Questions about the Wild and Scenic Study and Designation? Consider Getting Involved:

- Check out our website [www.vtrsr.org](http://www.vtrsr.org) which documents information such as the fact that private property rights and current land-use will not be affected by designation. Town and state laws and regulations will continue to govern private property rights and land use.
- Attend our monthly Study Committee meetings. The Study Process was initiated by local citizens with leadership from the Missisquoi River Basin Association, and letters of support from Select Boards in all ten towns, and continues with official appointees from those towns and villages
- Review our upcoming voluntary Management Plan. The Study Committee is producing recommendations for local actions related to river management and protection. This plan will be open for public review and comment in the fall of 2012.
- For more information please contact your local representative or Shana Stewart Deeds the Study Coordinator at 802-393-0076, or [info@vtrsr.org](mailto:info@vtrsr.org)

[www.vtrsr.org](http://www.vtrsr.org)

Please see the reverse side for more info →

## Appendix 4. Outreach and Education Examples

Newspaper articles published in local papers during the Study.

Federal Designation Sought for Missisquoi & Trout Rivers | Newport Daily Express Page 1 of 2

Skip to main content

WHILE SUPPLIES LAST, ENERGY STAR® CFLs ARE JUST 99¢ Efficiency Vermont LEARN MORE

73°F AccuWeather.com Weather Forecast

THE NEWPORT DAILY EXPRESS

HOME NEWS SPORTS CLASSIFIEDS OBITUARIES LIFESTYLES SPECIAL SECTIONS

contact us subscribe archives photo gallery terms

### Federal Designation Sought for Missisquoi & Trout Rivers

July 20, 2011

BY SUSAN A. DAVIS MANAGING EDITOR AND SHANA STEWART WESTFIELD—A group of Northern Vermont residents have made it their mission to have stretches of the Missisquoi and Trout Rivers designated under the Wild and Scenic Rivers Act, enacted by Congress in 1968.

If designated, Congress would appropriate funds for projects to preserve the recreational, scenic, historic, cultural, natural and geological resources in the upper Missisquoi and Trout Rivers. These funds could amount to over \$100,000 annually. Designation of the land would not deprive landowners of private land use and the federal government does not take control of the rivers. If attracting tourists is a goal, the designation could be a great marketing tool for local businesses and regions supporting ecotourism.

If approved, a local advisory committee would be established to oversee the designation funds and provide outreach for the recommendations in the management plan. The study committee would have input during the review of projects that are fully or partially federally funded, construction or development projects, and projects having a direct impact on the rivers. These types of projects would be reviewed even without designation, but designation provides more local input into the permitting of these projects.

The Wild and Scenic Act was created at a time of large-scale dam building. In an effort to balance dammed rivers with those that were free-flowing, there is a stipulation in the Act which prevents the establishment of new dams or hydro facilities on the designated portion of the river.

This does not affect pre-existing, permitted hydro facilities such as those in Troy and Lowell. It also does not prevent existing dams from being retrofitted for purposes other than hydro.

Study treasurer Dianne LaPlante from Westfield said, "The Missisquoi has been a part of our heritage since it carried indigenous people by canoe, then supported the traders, homesteaders, and loggers.

It has helped feed our lakes and provide us with fish. Its beauty is eternal. It is now appreciated by the locals and tourists for its wild beauty."

The study process is entirely voluntary and in the hands of the local people who, like Dianne, are members of the study committee. The members were appointed by local select boards from each of the ten towns and villages within the study area.

Log in or register to post comments Print-friendly version Send to friend



A scene of Big Falls, in Troy, Vermont, along the Missisquoi River. Photo courtesy the Upper Missisquoi River and Trout River Study Committee

POPULAR COMMENTS OPINIONS

- Faith, Faith, And A Home
- Experience Wins Newport Daily Express Golf Tourney
- Deniro's Road
- World War II Vets Honored at Newport Event
- Shelley (Shirley) Lacoss



SIMON-TANNE R  
Corner of Cross & Main Street, Island Pond, VT  
802-723-4452  
Fax: 802-723-4191  
New 80 S. New Road #10, Troy, VT  
Dr. P.A. Clark, DVM

Woolrich  
Columbia  
ROYAL ROSSBINS

<http://newportvermontdailyexpress.com/content/federal-designation-sought-missisquoi-tro...> 7/25/2011



Science and Nature

### **River Study Committee Educates Paddlers On The Missisquoi**



On July 7, the upper Missisquoi and Trout Rivers Wild and Scenic Study Committee organized a paddle on the Missisquoi River from Loop Road in Westfield to the old Bakers Falls Dam in Troy being revitalized by the Chases. Tuesday, July 24, 2012.

If you live here in Franklin or Orleans County you know that we are blessed with amazing rivers, two of which are under study for designation nationally as Wild and Scenic rivers. On Saturday, the upper Missisquoi and Trout Rivers Wild and Scenic Study Committee organized a paddle on the Missisquoi River from Loop Road in Westfield to the old Bakers Falls Dam in Troy being revitalized by the Chases. Eighteen folks met at Couture's Maple Shop in Westfield. What a wonderful day! Much of this stretch of the Missisquoi is bordered by silver maple trees which provide welcome shade and cooling for both the paddlers and the trout! We were greeted by mergansers which have toothy edges to help them hold onto fish. We saw them with young which the mother protects. Young common mergansers are not fed by the mother; they eat insects, called aquatic macroinvertebrates, until they are old enough to eat fish. We also saw ebony and river jewelwing damselflies. Damselflies are predators which eat insects such as flies and mosquitoes. Dragonflies and damselflies are important in the riverine food web. They have an extendable jaw, called a prehensile labium, which they shoot out to snag prey. This physiological feature was reportedly the inspiration for the aliens in the Alien movie franchise. Our sixteen boats floated quietly down the Missisquoi, three with passengers paddling the Missisquoi for the first time. If you would like to be along for our next paddle please see our website ([www.vtwsr.org](http://www.vtwsr.org)) for details. This paddle will likely be in early fall as a cleanup in conjunction with the Missisquoi River Basin Association. Our website also contains information about the Wild and Scenic Study Committee monthly meetings held the 3<sup>rd</sup> Thursday of each month at 7pm in varying locations in Franklin and Orleans Counties. All are welcome to attend. Our committee is made up of representatives from towns and villages in the study area, though we are still looking for appointees from Berkshire and Jay. The recommendations of the Study Committee and our voluntary management plan will go to vote at Town Meeting in March 2013 in the towns and villages in our study area. Later this year, in preparation for this vote, our draft management plan will be available on our website for public comment. Please contact our Study Coordinator for details at [info@vtwsr.org](mailto:info@vtwsr.org).

## Appendix 4. Outreach and Education Examples

Work Days in the Barton Chronicle

The screenshot shows the Barton Chronicle website. At the top, the title "the Chronicle" is displayed in a large, bold font, with "VERMONT'S NORTHEAST KINGDOM PAST AND PRESENT" and "online" below it. A navigation menu includes links for Home, Events, Obituaries, Classifieds, Online Edition, Archives, Advertise, Subscribe, and Contact Us. Below the menu, there are headlines for "THIS WEEK'S HEADLINES:" and "Weather for Barton Area" for Today, Saturday, and Sunday. A logo for "Vermont's NORTH COUNTRY CHAMBER OF COMMERCE" is also visible. The main content area features an event listing titled "WORK DAY: TREE PLANTING".

**WORK DAY: TREE PLANTING**

Date/Time *Map Unavailable*  
Date(s) - 11/08/2012  
:1:00 pm - 3:00 pm

Category(ies) No Categories

On Thursday, November 8, from 1 to 3 p.m., a work day will be held for volunteers to plant trees for streambank stabilization at Mercy Farmstead in Montgomery. No experience required. Any time you can participate would help. Please provide your own refreshments and, if possible, a shovel and a bucket. Waterproof footwear recommended. For directions and more information, call (802) 933-9009 or e-mail [mrba@pshift.com](mailto:mrba@pshift.com).

<http://bartonchronicle.com/events/work-day-tree-planting/>



## Appendix 4. Outreach and Education Examples

The screenshot shows the Barton Chronicle website interface. At the top, there is a navigation menu with links: Home, Events, Obituaries, Classifieds, Online Edition, Archives, Advertise, Subscribe, and Contact Us. Below the menu, the page is divided into several sections:

- THIS WEEK'S HEADLINE S:** A section for weekly highlights.
- Weather for Barton Area:** A weather forecast table for Today, Saturday, and Sunday, showing icons for rain, snow, and snow, along with temperature ranges and chances of precipitation.
- Advertisement:** A banner for "YOUR AD HERE!" with the email address "bethany@bartonchronicle.com" and a small image of a dog.
- Business directory:** A logo for a business directory featuring a telephone icon.
- Who's Who in Business?:** A section for local business listings.
- Next ->** A navigation arrow.
- Click for the ONLINE EDITION:** A circular button with "SUBSCRIBE" and "LOGIN" text.
- NEK VERMONT'S NORTHEAST KINGDOM:** A logo for a local organization.
- Deer in the Forest:** A logo featuring a deer silhouette.
- LOG IN:** A login form with a "Username:" label and an input field.

The main content area features an event listing for "WORK DAY: TREE PLANTING IN N. TROY". The event details are as follows:

- Date/Time:** Date(s) - 11/09/2012, 1:00 pm - 3:00 pm. A note indicates "Map Unavailable".
- Category(ies):** Environmental.
- Description:** On Friday, November 9, from 1 to 3 p.m., a work day will be held for volunteers to plant trees for streambank stabilization at Chaput Farm in North Troy. No experience required. Any time you can participate would help. Please provide your own refreshments and, if possible, a shovel and a bucket. Waterproof footwear recommended. For directions and more information, call (802) 933-9009 or e-mail [mrba@pshift.com](mailto:mrba@pshift.com).

Below the screenshot, the URL for the event is provided:

<http://bartonchronicle.com/events/work-day-tree-planting-in-n-troy/>

## WILD AND SCENIC GROUP GOES AFLOAT

By Shana Stewart Deeds, Study Coordinator

Do you enjoy paddling along the Missisquoi River? Whether it is your first canoe or kayak trip or you are an experienced paddler, please consider joining members of the Wild and Scenic Study Committee for a paddle along the Missisquoi River. Our next paddle is on Sunday, July 31st at 10 a.m. We will meet at Couture's Maple Shop in Westfield to finalize boat logistics, and then paddle from the Loop Road in Westfield to Troy. Boaters are welcome to join us for an informal picnic following the paddle in North Troy. Please contact Shana Stewart Deeds, the Study Coordinator, or check our website for details if you are interested in joining us - she will need an estimate of how many will attend, and whether you need a boat.

### WATER MATTERS

*Editor's note: This is another a periodic series of reports from volunteers and staff of the various organizations that monitor and work to improve Franklin County water quality in our lakes, rivers, ponds and streams*

At our last paddle on a beautiful day in June, 11 canoers and kayakers set out to explore the stretch of the Missisquoi River from Lowell to the Loop Road in Westfield. We had wonderful weather for our paddle, and enjoyed beautiful bedrock outcrops, and lunch on a little beach. The water was still very

high after all of the rain we had this spring. This trek was one of the outings organized by the Study Committee for the Upper Missisquoi and Trout Rivers Wild and Scenic Study. Study Committee members are available at these paddles to discuss any questions you may have about our study.

Our Wild and Scenic Study Committee is continuing to work to identify what makes the Missisquoi and Trout Rivers special, and whether designation is desired by the ten towns in the study area. The Study Committee is comprised of partner organizations, and official appointees from each town or village in the study area (Berkshire, Town of Enosburgh, Village of Enosburgh Falls, Jay, Lowell, Montgomery, Village of North Troy, Richford, Westfield,

and the Town of Troy).

The following are possible ways in which you may get involved!

- Become a committee appointee from Berkshire, Enosburgh Falls, or Jay

- Sign up to be on our mailing list (info[at]vtwsr[dot]org; 802-393-0076) - we do not share your contact information

- Check out our website [www.vtwsr.org](http://www.vtwsr.org) for meeting and event information, agendas, minutes, and more

- Join and participate in the dialogs on our blogs: <http://vtwsr.blogspot.com/> and <http://vtorvs.blogspot.com/>

- Join us for our Study Committee Meetings on the 3rd Thursday of each month at 7pm

- Read our newsletter on the 'Resources' page of our website, or pick up copies in each of the ten towns

- Participate in our photo contest - information is on our website or can be mailed to you

- Visit our booth at the Jay Summerfest August 13th, and MRBA's Riverfest in Montgomery on August 27th

Help us celebrate these rivers by letting us know what YOU feel are the outstanding resources of the Upper Missisquoi and Trout Rivers. For example:

- What areas of these rivers provide outstanding recreational opportunities?

- What river locations were important to Native Americans, early Europeans, loggers or farmers?

- What natural expanses of the river are special because of their scenic qualities, or wildlife habitat?

We hope to hear from you! info@vtwsr.org; 802-393-0076

#### VOTE YES FOR WILD AND SCENIC ON THE UPPER MISSISQUOI AND TROUT RIVERS

On Town Meeting Day this year, the towns of this often forgotten region of Vermont will have a unique chance to recognize one of our region's best assets: the opportunity is to vote YES to ask the United States Congress to recognize the upper Missisquoi (above Enosburgh Falls) and Trout Rivers by designating these two rivers as nationally recognized Wild and Scenic Rivers.

LET IT BE KNOWN THAT THE FOLLOWING STATES ALREADY HAVE WILD AND SCENIC RIVERS, WHILE VERMONT HAS NOT A SINGLE ONE: New Jersey (4), Massachusetts (3), New Hampshire (2), Connecticut (2), Rhode Island, New York and Maine (1).

If the towns vote to seek recognition by voting yes on town meeting day, the Upper Missisquoi and Trout Rivers Study Committee will petition congress to include these rivers in the national list of partnership Wild and Scenic Rivers. Our congressional representatives, Senators Leahy and Sanders, and Representative Welch will need to introduce bills in both the U.S. House and Senate, get them passed, and then the President will need to sign it into law. This obviously is not an overnight endeavor, and could take years.

If the towns vote yes, and Congress decides to recognize the unique and special qualities of our rivers, then what happens? If our rivers become nationally recognized as Wild and Scenic Rivers this gives us bragging rights, and recognition. The National Park Service is then obligated to help the local, Selectboard appointed Wild and Scenic Committee maintain, or even enhance the outstanding qualities of the rivers for which they were designated. Federal funds and technical expertise are provided for river related projects that community sees as beneficial.

Will this create a new bureaucracy, park or government agency? NO. There will be a local committee formed to advise, direct and disburse the funds allocated by the National Park Service's Wild and Scenic Partnership program. That is it.

Will it lead to a loss of the rights of land owners? NO. There are no new rules or regulations on private landowners. Those local, state and federal laws regarding property rights that exist on the books now, are those that would continue to be enforced (or not!).

What would it mean to the region if the upper Missisquoi and Trout Rivers were recognized by the United States Congress as worthy of designation? It will lead to an increase in tourism for the local businesses if communities take the opportunity to market that way. In addition, a yearly appropriation of funds will be allocated to help maintain, repair and restore our rivers that we show through a YES vote at Town Meeting that we feel are worth protecting and preserving. This currently amounts to \$170,000.00 to each of the designated partnership rivers per year. This money may be used as the locally designated committee sees fit with the Park Service in an advisory capacity.

If you live in the municipalities of BERKSHIRE, ENOSBURG FALLS, ENOSBURGH, LOWELL, MONTGOMERY, NORTH TROY, RICHFORD, TROY or WESTFIELD please come out and vote. There will be an informational video, along with brochures available at town meetings. To find out more, go to the web site ([www.vtwsr.org](http://www.vtwsr.org)) and check out the information available. Come to our open house at the Enosburgh Emergency Services Building, Thursday, February 28 from 5-6pm with questions. You may also go to the National Park Service's web site ([www.rivers.gov](http://www.rivers.gov)) and check out their information on the Wild and Scenic Partnership program.

Sincerely,

John Little  
Resident of Montgomery and long-time paddler and science educator

# Appendix 4. Outreach and Education Examples

Newsletter publications from local organizations.



## Watershed Update

Missisquoi River Basin Association      Fall 2012

---

### River Festival 2012

Another year, another beautiful summer evening and another fabulous River Festival! With music by the Missisquoi River Band and The Shady Trees, roustabout from The Black Lantern Inn, The Snow Shoe Lodge & Pub, Dave Bott, the Montgomery Conservation Commission and The Betty, the very popular portage race, paddle toes and hula hoops, there was plenty of entertainment for everyone!



Hula hoops and the portage race attracted River Festival participants of all ages

A huge thanks to our many sponsors for supporting MRBA and our water quality improvement efforts: Champlain Chevrolet, Concept, Little Painters, T&J's Country Store, Vermont Farms & Homes Real Estate, The Abbey Group, Green's Ace Hardware, Missisquoi Construction, Montgomery Properties, Outdoor Gear Exchange, Poulin Grain, and Whitehead Electrical Services. Your support is greatly appreciated. **Thank You!**

The River Festival is a fundraiser for MRBA to help us raise awareness of water quality issues and recruit volunteers to implement actions which will stabilize streambanks, reduce phosphorus run-off from fields, and control soil erosion.

The third volunteer workday was held on 4 May 5<sup>th</sup> in the town of Highgate, along a tributary of the Rock River. This workday was also co-ordinated by the 350.org climate change initiative as one of hundreds of volunteer efforts on the around the globe. This group's efforts can

### Field Work

This year has had a great number of workdays ranging from tree planting, invasive plant control, to installation of Compost Filter Socks (CFS) and riparian buffer stewardship. The early arrival of warm weather this past spring led to the earliest start of volunteer workdays for the Missisquoi River Basin Association (MRBA). The first project this year was on Saturday, April 14 in the Town of Highgate at the Parent Road farm land owned by Brian and Bill Rowet of Green Mountain Dairy. This is the third planting at this Rock River watershed site, and volunteers using speckled alder and live willow stakes filled in portions of this 3.4 acre Conservation Reserve Enhancement Program (CREP) and Partners in Wildlife (PIW) Program buffer. These programs from the USDA Natural Resource Conservation Service (NRCS), Vermont Agency of Agriculture, Food and Markets (VT AAFM) and US Fish and Wildlife Service (USF&WS) support many of the tree and shrub plantings in riparian areas. The surprise "celebrity" volunteer was VT AAFM Secretary Chuck Ross – indicating his personal and his agency's support for water quality and conservation practices.

The second workday was held Saturday, 4 at Ernest and Rolande Fortin's farm in St. Franklin. This CREP and PIW buffer project tributary to the Missisquoi River. A group of volunteers was able to plant about 175 tree and shrub species include speckled alder, sika dogwood, northern white cedar, larch (larix), and red maple. These trees come from a Michigan-based nursery, Cold St Farm.

The third volunteer workday was held on 4 May 5<sup>th</sup> in the town of Highgate, along a tributary of the Rock River. This workday was also co-ordinated by the 350.org climate change initiative as one of hundreds of volunteer efforts on the around the globe. This group's efforts can

You can contact the Montgomery Conservation Commission at 802.326.2083, or attend one of the monthly Commission meetings the first Wednesday of every month at 5:30pm at the Town Office in Montgomery Center.

Chade Hancock, Chair, Montgomery Conservation Commission

### Wild & Scenic Rivers Study

The Upper Missisquoi and Trout Rivers Wild and Scenic Study Committee has been hard at work on its (non-regulatory) Management Plan. This plan is a requirement of the Wild and Scenic Study process regardless of whether or not designation is sought.

Our goal is to write this Management Plan with the maximum amount of local input. In this Plan we discuss our findings from the Study, identify the locally important resources, and make voluntary suggestions for managing these resources. Each river designated must have at least one Outstandingly Remarkable Value (ORV); these are water-related resources significant at the regional or national level in categories including scenic, historic, cultural, natural resource, recreational or water quality. The Montgomery Covered Bridges are an example on the Trout River, while Big Falls is an example on the Missisquoi River. We are excited to share our findings with you!

The information gathered for the Management Plan was discussed at monthly Committee meetings; the information discussed at these meetings was made available on the Committee's website ([www.vtwar.com](http://www.vtwar.com)) through meeting minutes. The Management Plan, written by the Study Committee, will shortly be available to the public for a review period after which comments will be incorporated into the Plan. You may soon access the plan from our website, or via hard copy at various locations in the Study area including Town Clerk's offices.

The long-term goal of the Study Committee is to encourage, through education and outreach, planning at the local, regional and state levels which utilize the information and voluntary recommendations outlined in the Management Plan regardless of the outcome of designation. These actions do not require funding by towns, and typically use federal funds for projects which maintain or improve the outstanding resources for which they were designated.

At Town meeting in 2013, Study area towns will vote on whether they support designation with the understanding that designation would be based on the locally-developed river Management Plan and would not involve federal acquisition or management of lands. Please contact us with any questions or concerns you may have prior to this vote ([info@vtwar.org](mailto:info@vtwar.org)); 852-280-0276, 2838 VT Route 105, East Bleckstein, VT 05447.

Shane Street Deeds, Study Coordinator

### Paddling in the north... just over the border!

With a forecast of severe thunderstorms and high winds, a group of intrepid paddlers made the trek to Canada to paddle on the Missisquoi River from the town of Highwater to Glen Station, QC on Saturday September 8<sup>th</sup>, 2012. Recent rains had brought the water level up high enough to paddle the meandering stretch of river. It was just the right height and as it turned out, a beautiful day to paddle. The storm never materialized; in fact it was a sunny day. The fall wind gently pushed us down river to our destination and the air and water were warm. We stopped on a gravel bar at the bottom of a small riffle and enjoyed each other's company, a bit to eat, and the beauty of the river. We had hoped to have an "international" paddle, but ended up with all Americans. Next time we venture north we hope to entice many more people from both sides of the border.

Wendy Scott

### After Nearly Four Years ..... It Happened!

On a rainy Saturday, September 22<sup>nd</sup>, a quiet celebration took place on Enosburg's bridge of Flowers and Lights. There were about 2 dozen folks gathered around.

Nearly four years ago, a local gentleman noticed that the shore line downstream from the bridge and falls was posted as NO TRESPASSING. For as long as anyone could remember, this has been a favored place to throw in a line, and spend some quality time with nature and friends or family. The spectacular view of the falls is coupled with great fish habitat both below the falls and all the way around the corner.



Fishing below the Falls, painted by Jim Focht

The reason for the celebration was three fold. Firstly, the Vermont River Conservancy had raised approximately \$180,000.00 to buy the 11 acre property from its previous longtime owner, Mr. Bill Fletcher. Secondly, they were donating the majority of the

# Appendix 4. Outreach and Education Examples

## CONNECTIONS

THE NEWSLETTER OF COLD HOLLOW TO CANADA FOREST LINE



SPRING 2013

### INSIDE

- Wild and Scenic Rivers
- Roads with a View
- Conservation in the Neighborhood
- Development in the Area
- Upcoming Events



### CONSERVATION DEMOCRACY

By Charles Hancock

Greetings Friends and welcome to the Spring 2013 edition of *Connections*, the quarterly newsletter for Cold Hollow to Canada. The sap's been running for a few weeks now, and we're seeing signs of spring everywhere. Pretty soon buds will be popping and the skis will be stowed away again until next year. Hopfully you've had a great winter and fun plans for spring.

**T**wo meetings were a few weeks ago, and we saw a number of conservation related success stories in our region, illustrating the commitment to natural resources that form the foundation of our communities. The largest of these success was the passage of the Wild and Scenic petition in Enosburgh, Montgomery and Richford (all three of the towns it was passed in). See inside for an article from Shana Stewart Deeds, the project coordinator in our region. Other success that passed included the establishment of a Conservation Commission reserve fund in Montgomery, and some funds allocated to the Richford Conservation Commission for the first time since it was established. Enosburgh has raised about \$10,000 to date in their Conservation Reserve fund, and continues to save for future conservation initiatives.

continued on page 2

### UPCOMING EVENTS

#### BAKERSFIELD CONSERVATION COMMISSION

Meet the last Thursday of every month at 7:00 PM in the Town Hall Building, 41 East Bakerfield Rd, Bakerfield.

#### ENOSBURGH CONSERVATION COMMISSION

Meet the fourth Monday of every month at 7:30 PM in the Emergency Services Building, 83 Southampton Rd (Rte 116), Enosburgh Falls.

#### MONTGOMERY CONSERVATION COMMISSION

Meet the first Wednesday of every month from 5:30 to 7:30 PM at the Montgomery Town Office, 98 Main St (VT Route 116), Montgomery Center.

#### RICHFORD CONSERVATION COMMITTEE

Meet the fourth Monday of the month at 6:00 PM in the upstairs-conference room of the Arvin A. Brown Public Library, 88 Main St, Richford.

#### WILD AND SCENIC RIVERS STUDY COMMITTEE

Meet the third Thursday of every month from 7:00 PM to 9:00 PM. Locations vary so visit [www.vrwsr.org](http://www.vrwsr.org) for up-to-date information.

Want to stay up to date on all the latest news? Visit [www.vrwsr.org](http://www.vrwsr.org) for up-to-date information.

#### Apple Tree Planting Workshop

Sponsored by the Montgomery Conservation Commission. **Sunday April 14th from 1-3pm** Green Mountain Road, Montgomery. Free and open to the public. Contact the Montgomery Conservation Commission for details.

#### Virtual Bird Walk

Sponsored by the Montgomery Conservation Commission. **Sunday May 5th from 1-3pm** Sheldon Farm Road, Montgomery Center. Free and open to the public. Contact the Montgomery Conservation Commission for details.

#### A Walk in the Woods

**Sunday May 12th 9:00-1:00**, at 2107 Wiscasset Rd, Enosburgh. Join Nancy Frick, Casey Fineman and Steve Hagelback from Audubon VT to discuss Ecological Management for Timber and Wildlife. Sponsored by Vermont Woodlands Association, Vermont Conservancy and Audubon VT. Please register by May 11th by calling 802-747-7900 or emailing [info@vermontwoodlands.org](mailto:info@vermontwoodlands.org). Please bring a lunch and drink of the outdoors.

**Vermont Conservancy 5-day Cooperator Training** Vermont Conservancy's 5-day training is designed specifically for landowners, offering classroom and field studies in forest and wildlife management. Learn how a healthy forest can enhance wildlife habitat, provide recreational and timber benefits. You will discover how to make a difference on your own land and provide guidance to neighbors and within your communities to manage forest sustainably.

#### 2013 Dates

June 7-9 Northwoods Statehood Center, East Charlotte, VT  
September 6-8 Ketchikan Conservation Camp, Ketchikan, VT

The training program is free and includes meals, board and materials. A \$100 deposit is required to hold your space (refundable upon request at the completion of the training). For more information or to register, visit our website [www.vtconservancy.org](http://www.vtconservancy.org) or contact Jan Swindle, Executive Director, (802) 388-2886 or [jan@vtconservancy.org](mailto:jan@vtconservancy.org).

SPRING 2013

CONNECTIONS

## WILD AND SCENIC UPDATE

By Shana Stewart Deeds

Study Coordinator

Upper Missisquoi and Trout Rivers Wild and Scenic Study

**T**he Upper Missisquoi and Trout Rivers Wild and Scenic Study wish to thank you for your support and update you on the outcome of the March 2013 Town Meeting votes. Berkshire, Enosburgh/Enosburgh Falls, Montgomery, Richford, Troy/North Troy, and Westfield all voted yes to support petitioning Congress to include the upper Missisquoi and Trout Rivers as national Wild and Scenic Rivers. Lowell did not support designation at their Town Meeting vote this March.

Many thanks to all of the Study Committee members who worked to get information to their communities so that they could make an informed decision about designation.

The Study Committee will now meet to discuss next steps at our March 21, 2013 Study Committee Meeting in Richford. I anticipate that we will agree to

request our US Senate and House Representatives to introduce bills to Congress that request an amendment to the National Wild and Scenic Rivers Act to include the Missisquoi (from Westfield to Enosburgh Falls) and the Trout Rivers as Wild and Scenic rivers. We will also have to write a report to Congress to accompany any such introduced bills.

Should this pass through Congress, it would be signed into law by the President. Then a local Selectboard appointed Wild and Scenic Advisory Committee would be established to oversee designation much as the Study Committee was formed.

More information may be found on our website ([www.vrwsr.org](http://www.vrwsr.org)) or by contacting your local representatives to the Study Committee or the Study Coordinator — 2839 VT Route 105, East Berkshire, VT (544) 7; [info@vrwsr.org](mailto:info@vrwsr.org).



JOANNE WASH

## Out of the Blue

A Newsletter of the  
Water Quality Division

---

Summer 2010 No. 37

### Deep Lake Conservation History

By Perry Thomas

Shortly after oil began leaking into the Gulf of Mexico this spring, one reporter compared the disaster to the burning of Cuyahoga River as it flowed through Cleveland, Ohio. This intriguing reference has prompted this look back at the roots of lake conservation.

The burning of the Cuyahoga is sometimes described as the reason for Earth Day (1970), the EPA (1970), and the Clean Water Act (1972). Yet, the oft-published picture shown below was actually taken in 1952, and the river burned several times before then. By 1969, when Time magazine ran a story describing the most recent river fire, grass-roots efforts to clean up Ohio's Cuyahoga River were well underway. There were no dramatic pictures of the 1969 fire, because it only burned for about half an hour. What those 30 minutes did, though, was catalyze a citizen movement that had been slowly taking form over more than a century, as people's understanding of ecology matured.

See page 2, "Lake Conservation"



Cuyahoga River Burning in 1952  
Photo by James Thomas, Cleveland Press

### In This Issue

State of the Lakes - Lake Associations	6
Clean Shores and Clean Water	6
Exotic Invasive Species Highlights	7
Strengthening the Watershed Process	7
Green and Lamoille River Flood Plans	8
Lay Members Sampling Lakes Statewide	8

### How Wild and Scenic Are the Missisquoi and Trout Rivers?

By Shana Stewart

Portions of the Missisquoi and Trout Rivers are under study to determine if they are eligible and publicly supported for Wild and Scenic designation. The Wild and Scenic Rivers Act became a federal law in 1968 with the purpose of protecting the nation's rivers which possess outstandingly remarkable values (ORVs) for the benefit of present and future generations.

Thanks to the efforts of John Little, Wendy Scott, Anne McKay and Chris O'Shea of the Missisquoi River Basin Association (MRBA) and the support of Vermont Representative Peter Welch and Senators Patrick Leahy and Bernard Sanders, President Barack Obama signed a bill into law in March 2009 authorizing funding for a three year Wild and Scenic study of the upper Missisquoi and Trout Rivers. This study is supported by the ten towns through which these rivers flow.

See page 4, "Wild and Scenic Study"



Missisquoi River  
Photo by MIRA

(continued from page 1) **Wild and Scenic Study**

**The Study Committee**  
Representatives from these ten towns and from partner organizations such as the Missisquoi River Basin Association, National Park Service, Northwest Regional Planning Commission, the Vermont Agency of Agriculture, the Vermont Department of Environmental Conservation, the Vermont Federation of Sportmen's Clubs, and the Vermont Traditions Coalition make up the Study Committee. The Study Committee is charged with determining which areas, if any, are best suited for designation and encourage all to participate in their monthly meetings, held on the third Thursday of each month.

Current discussions are focused on the questions: what areas of these rivers provide outstanding recreational opportunities; where are the most significant historical sites in or along these rivers; what areas are the most scenic; and what areas provide the best wildlife habitat? Based on public input, once the ORVs are identified, the current levels of town, state and federal protections will be assessed, and suggestions made for voluntary steps that could be taken to ensure these protections. The Study Committee will then decide whether or not to pursue the Wild and Scenic federal designation. If designation is sought, it will then go to vote at Town Meeting in the ten towns within the study area. And, if supported locally, then the information collected by the Study Committee will be taken to the U.S. Congress for approval.

**Wild and Scenic Designation**  
No rivers in Vermont have this designation. The designation classifies rivers in one of the following ways:

- Wild river areas are those with the cleanest water, and the least amount of development around the shoreline. These areas are typically only accessible by trail, and do not have impoundments.
- Scenic river areas are those with clean water, and minimal development around the shoreline. These areas may be accessible by roads, and do not have impoundments.




**Taft Brook, a Missisquoi River Tributary**  
Photo by Shana Stewart

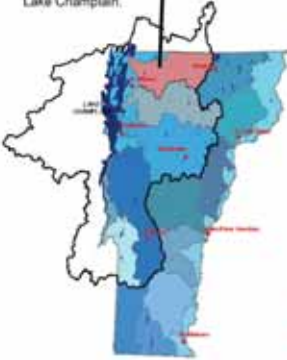
- Recreational river areas are those which may have some development along shorelines. They are readily accessible by roads or railroads, and may have had historical impoundments or diversions.

If designated a Wild and Scenic River, the U.S. Congress appropriates funds for projects to preserve the river's recreational, scenic, historic, cultural, natural, and geologic resources. The Study Committee designation is to ensure protection of and enhancement for the ORVs. Private property rights and current land-use is not affected by the designation and Town and State laws and regulations continue to govern private property rights and land use.

If the Missisquoi and Trout Rivers prove Wild and Scenic enough, then this designation would rank them among the nation's best rivers and qualify them for annual federal funding for protection projects and activities. To be a part of this study, visit the Wild and Scenic Rivers web site at: [www.wsnr.org](http://www.wsnr.org), or call Shana Stewart, the River Study Coordinator, at 802-363-0076, or email [shana.stewart@vtrsa.org](mailto:shana.stewart@vtrsa.org). Also, visit the Missisquoi River Basin Association's web site for the most up to date activities going on in these northern Vermont watersheds.




**Missisquoi River Watershed**  
Located in northern Vermont and draining into Missisquoi Bay in Lake Champlain.



Shaded areas represent the 17 major watersheds in Vermont. Black outlines the Lake Champlain watershed, which includes lands in New York and Quebec.

The oval outline above shows the approximate area of the Wild and Scenic Study, which covers the Missisquoi River from Enosburg Falls upstream (excluding the Canadian portion) to its headwaters in Lowell, and the Trout River, a major tributary joining the Missisquoi in East Berkshire.



Tributary to the Trout River  
Photo by Ken Seeger

## Appendix 4. Outreach and Education Examples

### Outreach Events.

**CONSERVATION COMMISSION GATHERING  
OCTOBER 13<sup>th</sup> 2012  
MONTGOMERY CENTER VERMONT**

Enjoy good food, good people, and an opportunity to network with other Conservation Commissions and Conservation Partnerships in Northern Vermont.

*Cold Hollow to Canada*, hosted by the *Montgomery Conservation Commission* with generous support from the *Upper Missisquoi and Trout River Wild and Scenic River Study Committee* would like to invite the members of your Conservation Commission to pot-luck dinner and social gathering

at the **Montgomery Grange Hall, Saturday October 13<sup>th</sup> from 4-7pm**  
57 Main Street, Montgomery Center

An informal event where Conservation Commissions can socialize, swap ideas, and learn how other conservation minded groups in and around northern Vermont are incorporating innovative ideas in their towns and areas.

**4-5pm** Introductions, brief overview from CCs on current projects and dreams for the future  
**5-7pm** Potluck dinner and an opportunity to meet and mingle other people working towards common goals in Northern Vermont.

Bring a dessert or salad to share, we'll take care of the grilling!

For more information please contact Charlie Hancock at 802.326.2093 or [northwoodsforestry@gmail.com](mailto:northwoodsforestry@gmail.com), or Nancy Patch at 802.933.2642 or [nancypatch@earthlink.net](mailto:nancypatch@earthlink.net)

Please RSVP with the number of attendees by Monday October 9<sup>th</sup> to [charliehanco@gmail.com](mailto:charliehanco@gmail.com)



For more information on Cold Hollow to Canada visit our website [www.coldhollowtocanada.org](http://www.coldhollowtocanada.org)

**VT Wild & Scenic Rivers** Vermont Wild & Scenic  
**Upper Missisquoi & Trout Rivers Study** Film Festival



Please join us for our film series:

**April 2012** Friday, April 20<sup>th</sup>  
7:00-9:30pm  
Montgomery Grange

*Against the Current* (18 min)  
*A River's Last Breath* (14 min)  
*The Greatest Migration* (20 min)  
*Rivers and Tides: Andy Goldsworthy* (90 min)

Saturday, April 21<sup>st</sup>  
2:00-4:30pm  
Westfield Community Center


**April 2012**

*Wild Water* (30 min)  
*Flathead Wild* (23 min)  
*Chasing Water* (19 min)  
*New England's Great River: Discovering the Connecticut* (60 min)

Visit our website or contact our Coordinator for more information:

<http://www.vtwsr.org/> — [info@vtwsr.org](mailto:info@vtwsr.org) — 802-393-0076

# Appendix 4. Outreach and Education Examples




## Upper Missisquoi & Trout Rivers Wild and Scenic Study


### Wild & Scenic Month: June 2012

Please see our website or contact our Coordinator for complete details


Sun	Mon	Tue	Wed	Thu	Fri	Sat
May 17th— Bugworks with Sara Caldwell's class in Montgomery	July—Orleans Let's Go Fishing	Possibly - Orleans VINS presentation at Lowell Graded			1	2 Paddle (cleanup w/ MRBA) 9-3; Montgomery Grange VINS Raptor event 1pm
3 Clean up rain date	4	5	6	7	8	9 VT Days June 9 & 10 - free fishing and entry to state sites - vermontdays.com
10	11	12	13	14	15	16 Wildflower/ Edibles walk in Richford (w/ Richford & Montgomery Cons. Commissions) 1-3 pm; Goync's Property
17	18	19 Tentative: Staci sets up the flume to demo. river dynamics—Montgomery pavilion	20	21 W&S Committee Meeting Jay Community Center—7pm	22	23
24	25	26	27	28	29	30 Orleans County Paddle with Montgomery Adventures



For more information, contact:  
**Shana Stewart Deeds**  
 Study Coordinator  
 2839 VT Route 105  
 East Berkshire, VT 05447  
 802-393-0076  
 info@vtwsr.org  
<http://www.vtwsr.org/>



**Upper Missisquoi & Trout Rivers Study**




## River Flume Demonstration

**Date:** Tuesday, June 19<sup>th</sup> from 5:30-7:30pm  
 (stop by or come for the whole presentation)  
**Location:** Montgomery Pavilion

Have you ever wondered how a river reacts to a flood or to certain management techniques such as dredging or armoring? Come to this engaging river model to see river dynamics in action.

A river flume demonstrates the natural physical processes of rivers and streams. Staci Pomeroy, River Resource Scientist from the Agency of Natural Resources, will set up this river model. The type of questions the flume demonstration will show include how the river interacts with the landforms around it, how rivers move across their floodplain over time, and how river management practices affect the river and the surrounding lands.

**Come with your questions!**



Study Coordinator - Shana Stewart Deeds  
 2839 VT Route 105, East Berkshire, VT 05447  
 802-393-0076  
 info@vtwsr.org  
<http://www.vtwsr.org/>

## Appendix 4. Outreach and Education Examples

River Clean-up  
by canoe & kayak



**Volunteers needed**  
to remove trash from  
river banks.

When: Saturday, June 2, 2012  
9 am – 3 pm  
Where: Missisquoi River  
East Berkshire, VT  
(call for meeting place)

Bring your own canoe/kayak, paddles,  
PFD, and a picnic lunch.  
Trash bags provided.

Info: (802) 393-0076 or [info@vtwsr.org](mailto:info@vtwsr.org)



Organized by the Missisquoi River Basin Association  
and the Wild & Scenic Rivers Study Committee  
2839 VT Route 105, E. Berkshire, VT 05447



**VT Wild & Scenic Rivers**  
Upper Missisquoi & Trout Rivers Study

**JOIN US FOR A PADDLE**  
**SATURDAY, JUNE 26<sup>TH</sup> ON THE**  
**MISSISQUIOI FROM**  
**RICHFORD TO EAST BERKSHIRE**

We will meet at Davis Park in Richford by 10am on Saturday, June 26<sup>th</sup>  
Directions (from East Berkshire): Head into Richford on Main Street (Route 105)  
Make a left just after the bridge in Richford onto River Street  
Parking for Davis Park is on the left about 1,000 feet, look for the band stand/gazebo



Please bring your own canoe/kayak, paddles, life vests, water, and a box lunch. (Let us know if you want to come but don't have a boat, we may be able to accommodate you.) You may also wish to bring rain gear, hats, sun gear/screen, and bug repellent if you are sensitive.

We will stop at the confluence of the Trout and Missisquoi Rivers to have our lunch. The paddle will be approximately from 10am – 2pm. We will shuttle you back to your vehicle in Richford from our offices in E. Berkshire where we will pull out, and enjoy cookies and beverages if desired.


There is no rain date scheduled, we will go unless the weather is dangerous. Please provide us with a phone where we can contact you Fri pm/Sat am if we need to call off the paddle due to inclement weather.

For more info contact  
Shana Stewart  
Study Coordinator  
Upper Missisquoi and Trout Rivers Wild and Scenic Study  
2839 VT Route 105  
East Berkshire, VT 05447  
802-393-0076  
[shana.stewart@vtwsr.org](mailto:shana.stewart@vtwsr.org)  
<http://www.vtwsr.org>



## Appendix 4. Outreach and Education Examples

Traveling poster that went to municipality libraries, Town Clerk Offices, and even a local transfer station.



The **Vermont Wild & Scenic Rivers Study Committee** is formed of local appointees and partner organizations to evaluate Wild and Scenic Designation along the Upper Missisquoi and Trout Rivers.

**Study committee meetings are open to the public and driven by consensus.**

The ten study area communities are: Berkshire, Enosburgh, Enosburgh Falls, Jay, Lowell, Montpelier, North Troy, Richford, Westfield, and Troy.

In 2012, we will have a draft management plan for review, which will include:

- whether the rivers fit designation criteria;
- whether designation is supported by the communities; and
- recommendations of voluntary strategies for protection of the rivers' resources.


**Help us to identify Outstandingly Remarkable Values (ORVs)**

To be eligible for designation, a river must possess one or more outstandingly remarkable value (ORV) of local, state, regional or national significance.


An ORV:

- can be recreational, scenic, historic, cultural, natural, and/or geologic;
- is located in the river or on its immediate shore;
- contributes substantially to the functioning of the river ecosystem; and/or
- gives its location or existence to the presence of the river.

Talk with your local Committee appointee or the Study Coordinator to help us identify ORVs in your area.



### Did you know that your town is participating in the Upper Missisquoi and Trout Rivers Wild and Scenic Study?




**This map of the Wild and Scenic Study area shows the segments of the main stem of the rivers under study for designation, which include:**


- 25 miles of the upper Missisquoi from the headwaters to Canada,
- 25 miles from Richford to Enosburgh Falls, and
- 20 miles of the Trout River

**For More Information:**

**VT Wild & Scenic Rivers**  
Upper Missisquoi & Trout Rivers Study


**Shana Stewart Deeds**  
Upper Missisquoi and Trout Rivers Wild and Scenic Study Coordinator  
2839 VT Route 100  
East Berkshire, VT 05447  
phone: 802-393-0176  
email: [shana.stewart@vt.gov](mailto:shana.stewart@vt.gov)  
web: [www.vtrivers.org](http://www.vtrivers.org)





**Some benefits of Wild & Scenic designation may include:**

- If designated, Congress would appropriate funds for projects to preserve ORVs in the upper Missisquoi and Trout Rivers. These funds have been over \$100,000 annually.
- A local Advisory Committee would be established to oversee these funds and provide outreach for the recommendations in the Management Plan.
- This Committee would have input during the review of projects which are fully or partially federally funded, construction and development, and have a direct impact on the river, providing more local input in project review.
- Landowners would still be the stewards of their lands.
- The federal government does not take control of the rivers which are designated.
- If attracting tourists is a goal, designation could be an effective marketing tool for local businesses and regions supporting ecotourism.
- Wild and Scenic designation prevents the establishment of new dams or hydro-power facilities on the designated portion of the river.
- Designation does not affect pre-existing, permitted hydro facilities (such as those in Troy and Lowell) nor prevent retrofitting of existing dams for non-hydroelectric uses. **If you have a hydro or dam project in mind for the area within the study, please contact our Study Coordinator.**



## Appendix 4. Outreach and Education Examples


Brochure that accompanied the Annual Report and video at March 2013 Town Meetings. Our seven minute video was shown at Town Meeting prior to the vote on our Wild and Scenic article. Please visit <http://vimeo.com/61499764> to view the video.

**Towns to Vote on Wild and Scenic Designation at Town Meeting in 2013**

The Designation of the upper Missisquoi and Trout Rivers as nationally-recognized Wild and Scenic Rivers is coming to vote at the March 2013 town meetings.


Each of the Study towns will vote on the adoption of the Wild and Scenic Study Committee's Management Plan, which details these river's outstanding resources and offers voluntary strategies to protect and enjoy them.

The management plan may be viewed on our website ([www.vtwsr.org](http://www.vtwsr.org)) and at each of the Study town offices.




**Upper Missisquoi and Trout Rivers Wild and Scenic River Study**

River sections under study for Wild and Scenic River designation



**What does Wild and Scenic designation mean for our community?**



**Upper Missisquoi & Trout Rivers Study**  
[www.vtwsr.org](http://www.vtwsr.org)

Upper Missisquoi and Trout Rivers Wild and Scenic River Study  
2836 VT Route 105  
East Berkshire, VT 05447  
web: [www.vtwsr.org](http://www.vtwsr.org)  
email: [info@vtwsr.org](mailto:info@vtwsr.org)

**Wild and Scenic Designation Coming to Vote at 2013 town meetings**

The municipalities in the Study area (Lowell, Westfield, Troy and North Troy, Berkshire, Ferrisburgh, Ferrisburgh Falls, Lowell, Montgomery, North Troy, Richford, Westfield, and Troy) will vote on whether or not to accept the Management Plan that has been prepared by the local, Secretboard appointed Wild and Scenic Study Committee, along with their recommendations to petition the United States Congress to designate the upper Missisquoi and Trout rivers as nationally-recognized Wild and Scenic Rivers.

Designation would be based on the own regulatory Plan concerning the information collected since the year that flows year study by the Study Committee, illustrating examples of management systems rivers in our region, and encouraging the voluntary recommendations which the Study Committee feels will promote the Management and Trout Rivers in healthy condition.

The Management Plan is available for on the Committee website ([www.vtwsr.org](http://www.vtwsr.org)) and to each of the town offices in the Study area.

**The Wild and Scenic Study Management Plan, upon which designation would be based (available at [www.vtwsr.org](http://www.vtwsr.org)), is a non-regulatory Plan written by local, Secretboard appointed Committee members and includes voluntary recommendations for river management.**

**The Upper Missisquoi and Trout Rivers Wild and Scenic Study Management Plan**

Should designation occur, an Advisory Committee will be established, locally appointed by the Secretboards, to manage designation and the funds that typically accompany designation. Advisory Committee actions will be based on this Management Plan and [www.vtwsr.org](http://www.vtwsr.org) federal acquisition or management of lands.

**Potential Benefits of Designation:**

- An Advisory Committee of local appointees would be established to oversee designation and the funds which accompany it.
- Availability of several federal funds to help with activities that promote river values and recreation within our working landscape.
- Designation would protect the upper Missisquoi and Trout Rivers from federal projects which could jeopardize river resources, including new dams (none are proposed in the area).
- Local communities have greater input on federal, river-related construction and development projects.
- Towns can have increased weight when negotiating grant funds and when presenting tourism and business opportunities if communities choose to market designation.
- A voluntary goal of the Plan is to enhance public access to the river via existing public lands or private property with willing landowners while helping to reduce impacts and increase public safety.

Please see the our website for more info. [www.vtwsr.org](http://www.vtwsr.org)



**What Designation Does NOT Mean:**

- Existing local and state laws still govern regardless of designation - private lands and activities will not be subject to increased federal control.
- Management Plan recommendations are voluntary, and will not result in increased costs to towns or private landowners.
- Existing land uses will occur regardless of designation.
- Local planning and zoning boards will continue to make regulatory decisions regarding land use.
- Designation does not affect pre-existing hydroelectric facilities such as those in Ferrisburgh Falls, North Troy, and Troy.
- There is no impact on hunting and fishing. Hunting and fishing laws and regulations are not affected by designation.
- Agricultural practices may continue as they did prior to designation.
- The federal government shall not acquire lands to implement the designation. The Study Committee recommends that language limiting federal land acquisition be affirmed in any legislation enabling designation. Example legislation may be found on our website.

# Appendix 4. Outreach and Education Examples

Save the Date for a typical meeting (published in newspapers and sent to the Study Committee mailing list, in addition to being posted on the website).

Minutes and agendas were also available.

### SAVE THE DATE

Upper Missisquoi and Trout Rivers Wild & Scenic Study Committee Meeting

Thursday, January 17, 2013 at 7pm (third Thursday of each month)

Town Public Safety Building (attached to the library)  
Montgomery Center, VT 05471

Agenda to follow: Please send Shana ideas to discuss in order to prepare for the upcoming Town Meeting. What concerns have been raised, and will likely be raised at the Town Meeting vote discussion? This will be the meeting's focus.

More Info: Shana Stewart Deeds  
Study Coordinator  
Upper Missisquoi and Trout Rivers  
Wild and Scenic Study  
2839 VT Route 105  
East Berkshire, VT 05447  
802-393-0076  
[info@vtwsr.org](mailto:info@vtwsr.org)  
<http://www.vtwsr.org/>

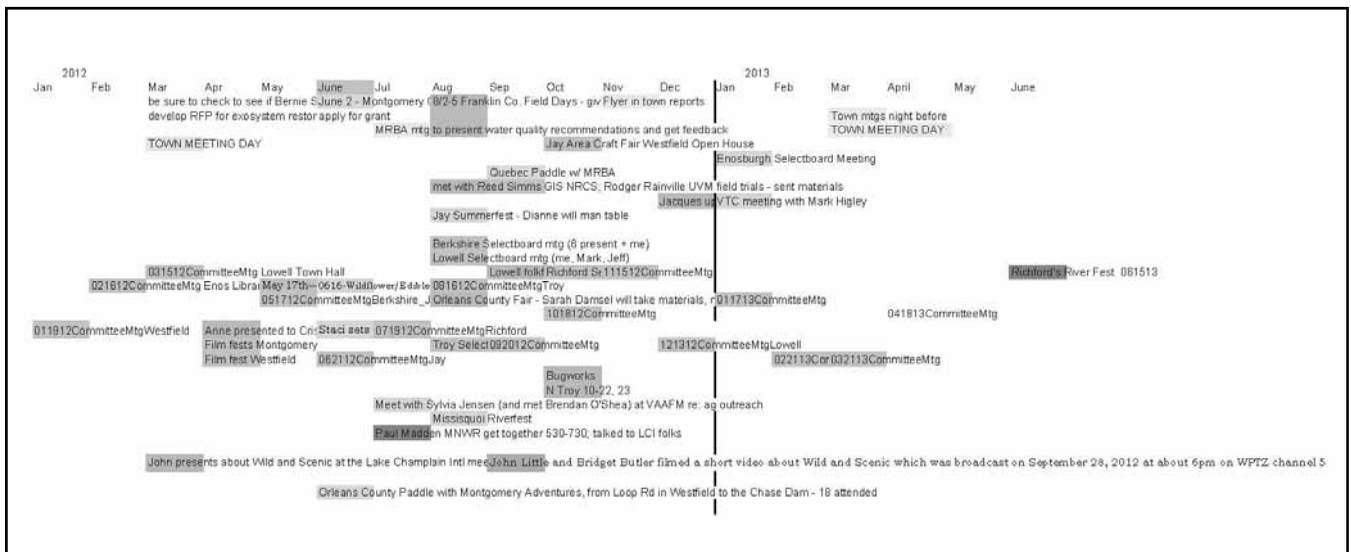
The screenshot shows the homepage of the Vermont Wild & Scenic Rivers Study (VTWSR.ORG). At the top, there is a navigation bar with the text "VTWSR.ORG > Wild + Scenic River Study / Upper Missisquoi River + Trout River, Ver... Page 1 of 2". Below this is a logo for "VT Wild & Scenic Rivers Upper Missisquoi & Trout Rivers Study" accompanied by three small landscape photos. A search bar is located below the logo. The main content area is divided into two columns. The left column contains several menu items, each with a title and a brief description, such as "Introduction / Overview", "Upper Missisquoi River Study", "Upper Missisquoi River + Trout River Study", "Designation / Policy", "Study Committee", "Study Coordinator", and "Mission". The right column contains a "Contact Us" section with a form for name and email, and a "About Us" section with introductory text. At the bottom right, there is a map of Vermont highlighting the study area.

# Appendix 4. Outreach and Education Examples

## Town Meeting Schedule, March 2013.

Town	Town Mtg	Vote from floor or ballot?	Contact/Deadline to get into report	Reps committed to go to the meeting?	Computer, projector or screen?	Confirmation?	Town Clerk/Village Manager
Franklin							
Berkshire	Monday before (3/4)	floor since we are not asking for \$	Virginia Messer Town Clerk; Jan 10, but Nov/Dec is ideal	Ciara Hickey and Russ Ford and maybe Todd Kinney	?		Virginia Messer
	Once town meeting is Tuesday, March 5, 2013 which includes the village residents, 10am at the town hall	floor since we are not asking for \$	Should be ok as long as I get it to her before the end of Jan.	Ken Seac, Ed Ellis (Mike Marahan) went to selectboard meeting 1/2/13 - KEN AND ED ARE OUT OF TOWN, ONLY MIKE CAN BE AT TOWN MEETINGS	they will take care of it	Yes	Billie Jo Draper
Ensburgh	Tuesday, March 5, 2013 which includes the village residents, Village meeting the week after, March 12, second T of March	Vote at town level that includes the village and all registered voters, see Ensburgh below	Village residents also get the town report, no included if we get a page in the Ensburgh Town Report	Mike Marahan - village trustee, too	see above	confirmed, spoke on the phone with Jonathan on 11/29/12	Jonathan Elwell
Montgomery	Tuesday, March 5, 2013	floor since we are not asking for \$ from the floor Monday evening because we are not asking for money.	Should be ok as long as I get it to her mid Jan.	Todd Laney, Keith Sarapinto, John Little	?		Kenae Patterson
Wahford	Monday before (3/4), 7:30 pm at the town hall		Have it to town clerk by early Jan, then no issue	Mary Robinson and Cynthia Scott (not Annette Gayne, has to go see her Dad, went to Selectboard 10-15-12)	No permission to show video	spoke with Alan 1/2/13	Alan E. Fletcher
Deleans	Tuesday, 10am, Jay/Westfield Elementary School	will not vote on designation of the Jay Branch or the management plan		none	NA		Tara Morse
Lowell	Tuesday, March 5, 2013	From the floor, perhaps a paper ballot vote	December/early January, Mid Jan is the 90 day deadline (8-24-12 selectboard meeting)	Mark Higley and Jeff Parsons	?	also e Karen Cinger-Lodinge@lowelltown.org	Nanette Bonneau
Troy	Tues, March 5, Troy Elementary School 10am, probably just one vote in school village goes to town meeting	floor	By Mid-January	Helene Grotzau and Robert Langlands	?		Teri Medley
North Troy	April, probably just one vote in March (village goes to town meeting)	floor	By Mid-January	Jim Star and Eugene St. Onge	?		Sue Hansen
Westfield				Jacques Couture and Danke Laplante	The other selectboard members are fine with showing the video at Town Meeting. PROJECTOR? Jacques went to the selectboard meeting 12-10-12		Connie LaPlante

## Town Meeting Schedule, March 2013.



## Appendix 4. Outreach and Education Examples

Upper Missisquoi and Trout Rivers Wild and Scenic Study Community Vision for the Rivers.

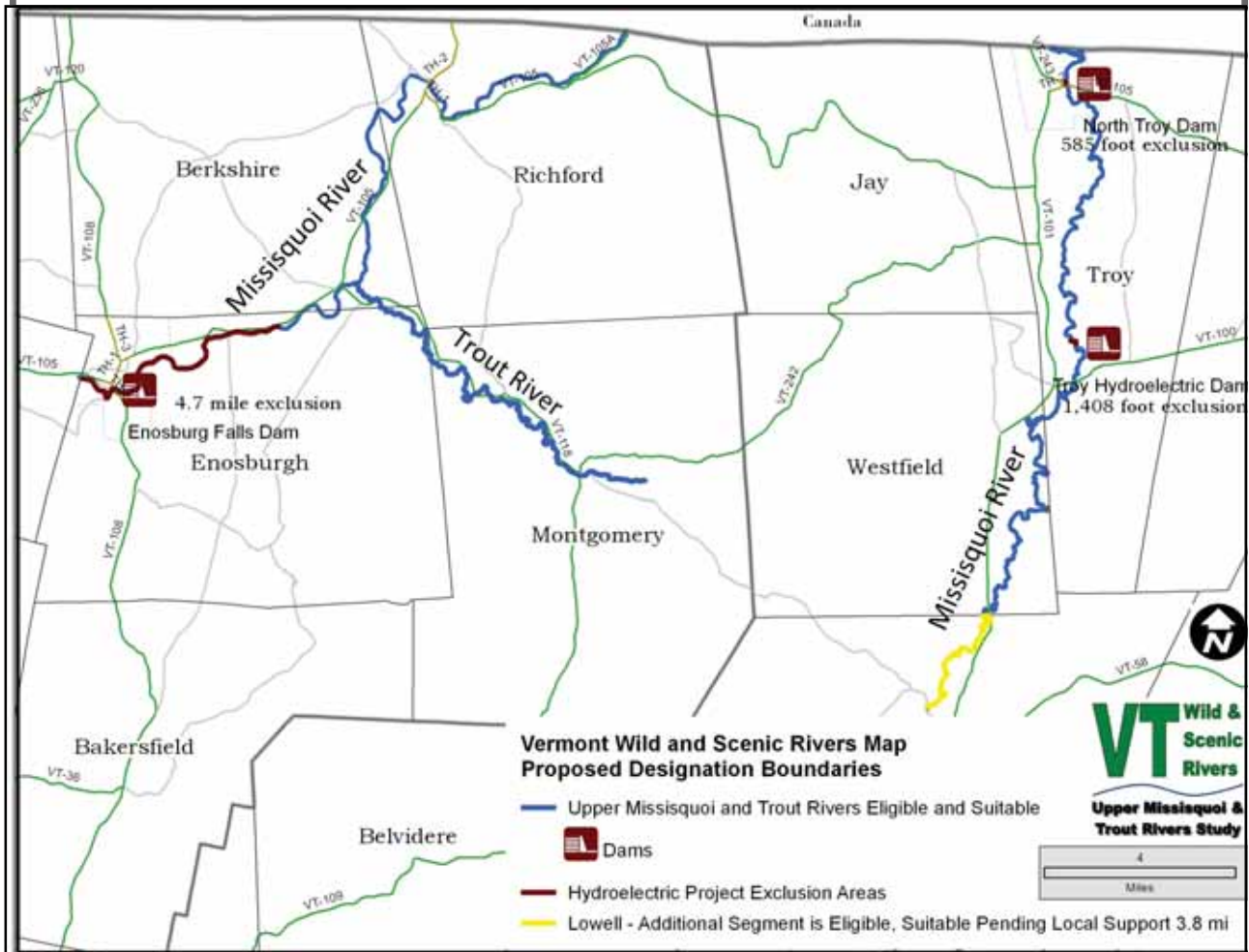
A word cloud graphic with the following text elements:

- CommunityConnections
- RiverSafety
- WoodedBuffers
- NativePlants
- GoodFishery
- Improved Access
- Water Quality
- Scenic Beauty
- NoChange
- RiverHistory



## Appendix 5. Hydroelectric Projects

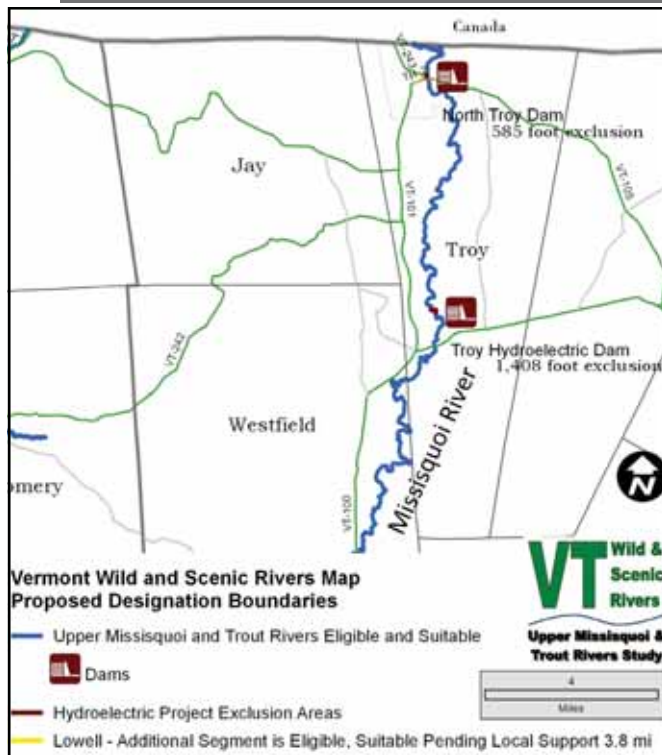
### Dams and Hydroelectric Power Facilities, Missisquoi River, Vermont



## Appendix 5. Hydroelectric Projects

### Troy Hydroelectric, Troy, VT - Missisquoi River

Proposed legislation proposes designation of the: 20.5-mile segment of the Missisquoi River from the Lowell/Westfield town line to the Canadian border in North Troy, excluding the property and project boundary of the Troy and North Troy hydroelectric facilities.



The Troy Hydroelectric project in Troy on the Missisquoi River makes 0.27 miles (1408 feet) of the Missisquoi River ineligible due to lack of free-flowing character. This facility has not operated since 1998. The project received from the Federal Energy Regulatory Commission (FERC) an exemption (FERC Project Number P-13381). As of October 2012, work is underway on the civil works to restart the project. The NPS and Study Committee have already indicated to FERC in writing that this project (including the project lands owned by the Chase family) would be excluded from the designated area, and that its proposed operation as a run-of-river facility will not have an adverse impact to potential Wild and Scenic River areas upstream or down.

The upstream influence of this dam, according to the State of Vermont Section 401s Water Quality Certificate, is 2,100 feet. It was determined that this entire upstream influence need not be excluded from proposed designation because it does not impact the free-flowing character of this section of the river, nor does it inundate the land or create a reservoir. The riverine appearance and only slight rising of the stage of the river are acceptable under the Recreational classification. Note: As of October 14, 2013 the exemption on this project was transferred from Johnathan and Jayne Chase (Exemptees) of Troy Hydroelectric Project to Johathan Chase (President) of Troy Mills Hydroelectric Inc.



**Figure 1.** The numbers in the figure above indicate parcel numbers from the digital landowner parcel data from Troy, Vermont. The green line indicates the 1408 feet used to measure the longest reach of river ineligible due to lack of free-flowing character, and thus excluded from proposed designation. All branches of the Missisquoi River from the upstream property line near the bridge to the downstream property line (parcel 21) are excluded.



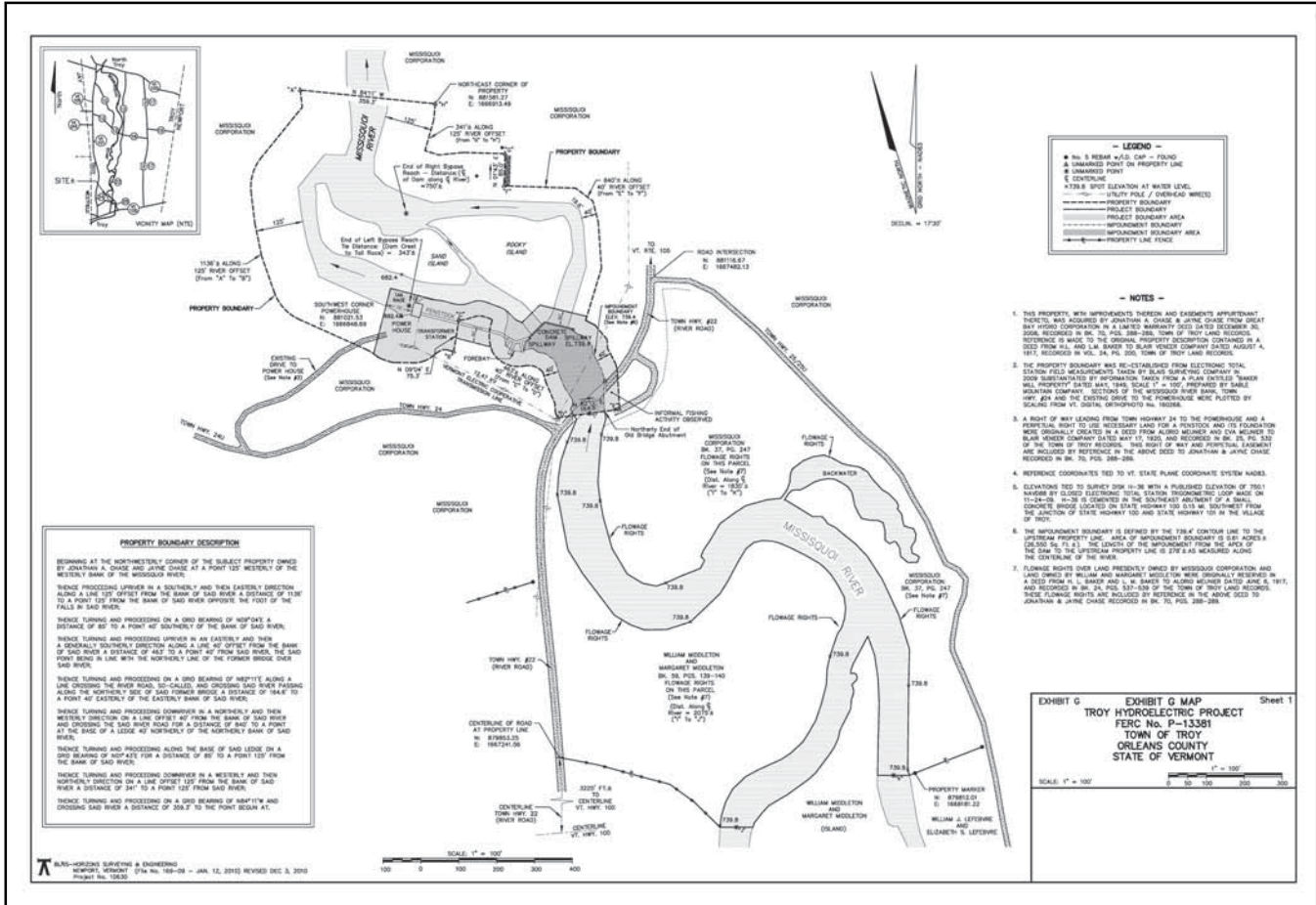


Figure 2. Exhibit G Map, Troy Hydroelectric Project, Troy, Vermont. FERC Project Number P-13381.

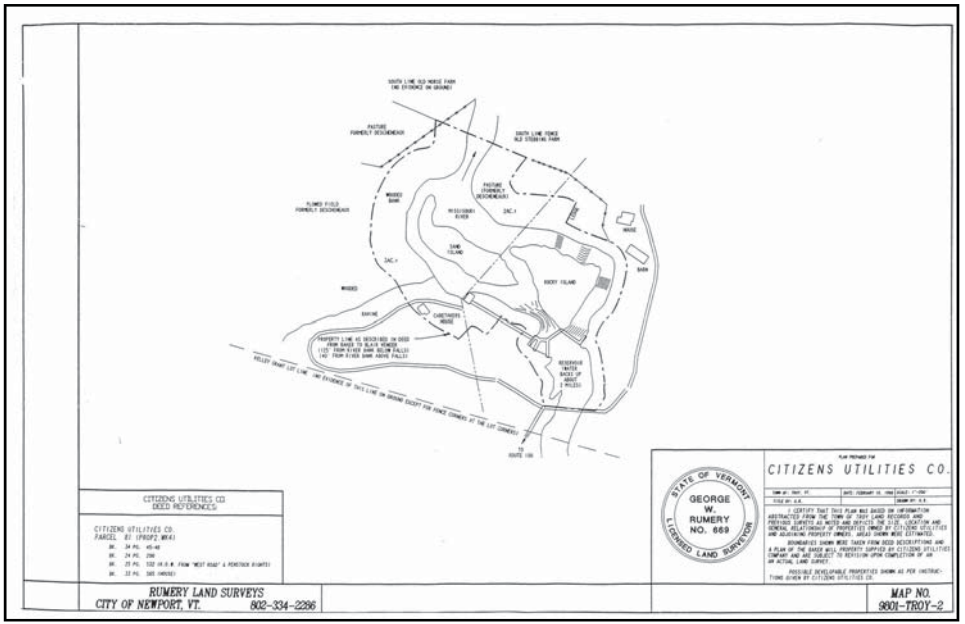


Figure 3. Rumery Land Surveys Map, Troy Hydroelectric Project, Troy, Vermont.

## Appendix 5. Hydroelectric Projects

North Troy Hydroelectric Project, North Troy, VT - Missisquoi River

Proposed legislation proposes designation of the: 20.5-mile segment of the Missisquoi River from the Lowell/Westfield town line to the Canadian border in North Troy, excluding the property and project boundary of the Troy and North Troy hydroelectric facilities.



The North Troy Project (formerly Missisquoi River Technologies) on the Missisquoi River in the Village of North Troy makes 0.11 miles (585 feet) of the Missisquoi River ineligible due to lack of free-flowing character. This facility is not-operating and has a FERC exemption (FERC P-10172) issued in 1989. The project was acquired by Missisquoi River Hydro, LLC, and the new owners are actively seeking to renew operations at the time of this Report. Designation would have no effect on the existing FERC exemption for this facility.

Hilton Dier III is the Managing Partner for Missisquoi River Hydro at the time of this Report. This project is between Route 105 and the railroad bridge in North

Troy. The dam and intake are just downstream from the highway bridge, and their discharge is just upstream of the railroad bridge. They own plots 060, 017.1, and 016 in the figure below.

The upstream influence of this dam, according to the State of Vermont Section 401s Water Quality Certificate, is 8,000 feet. It was determined that this entire upstream influence need not be excluded from proposed designation because it does not impact the free-flowing character of this section of the river, nor does it inundate the land or create a reservoir.



**Figure 4.** The numbers in the figure above indicate parcel numbers from the digital landowner parcel data from North Troy, Vermont. The yellow line indicates the 585 foot river reach ineligible for designation due to lack of free-flowing character, and thus excluded from proposed designation. The Missisquoi River adjacent to parcel numbers 060, 017.1 and 016, owned by the North Troy Project, is excluded from proposed designation.

## Appendix 5. Hydroelectric Projects

Exhibit B, North Troy Hydroelectric Project, North Troy, Vermont. FERC Project Number P-10172 .

EXHIBIT B  
PROJECT LOCATION  
NORTH TROY HYDROPOWER PROJECT

1. GENERAL LOCATION

The general location of the Project is shown by Figure B-1 prepared on a U.S.G.S. topographic map.

2. SPECIFIC LOCATION

Figure B-2 is a drawing showing Project features in relation to the Missisquoi River, State Route 105, and in the Town of North Troy.

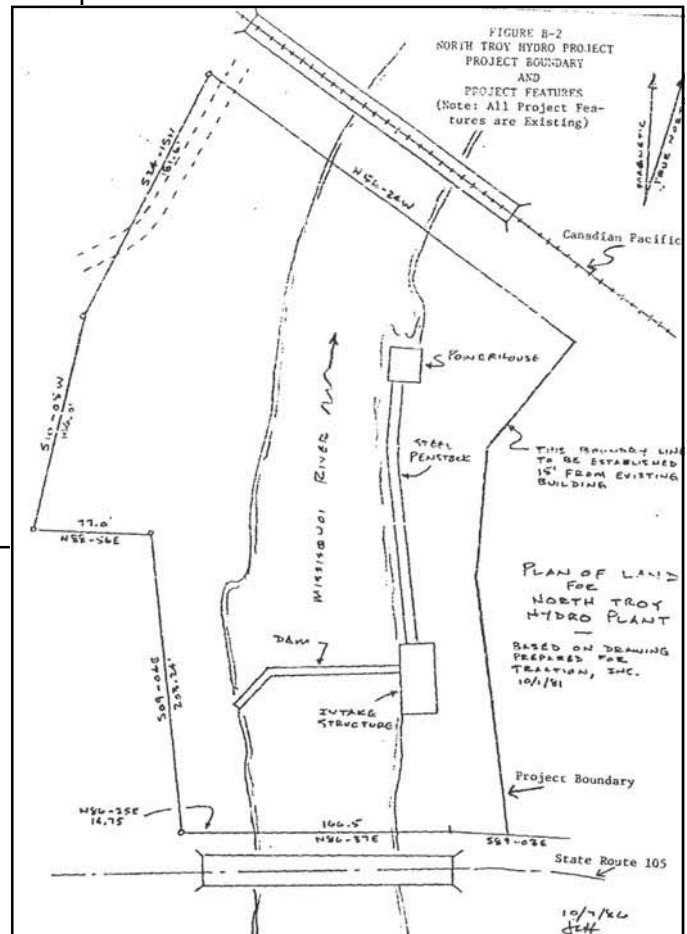
3. PROPERTY OWNERSHIP

The Applicant has an option to purchase all lands occupied by the proposed Project. The lands included are on both sides of the Missisquoi River from State Route 105 bridge downstream approximately 350 feet to a railroad trestle crossing the river. The Applicant will exercise this purchase option immediately upon issuance of the Exemption From Licensing by the Federal Energy Regulatory Commission. The lands included in the property ownership are the same as those included within the Project boundary.

4. PROJECT BOUNDARY

A proposed Project boundary is shown on Figure B-2. The proposed Project boundary coincides with the boundary of the lands of the property described in the preceding paragraph.

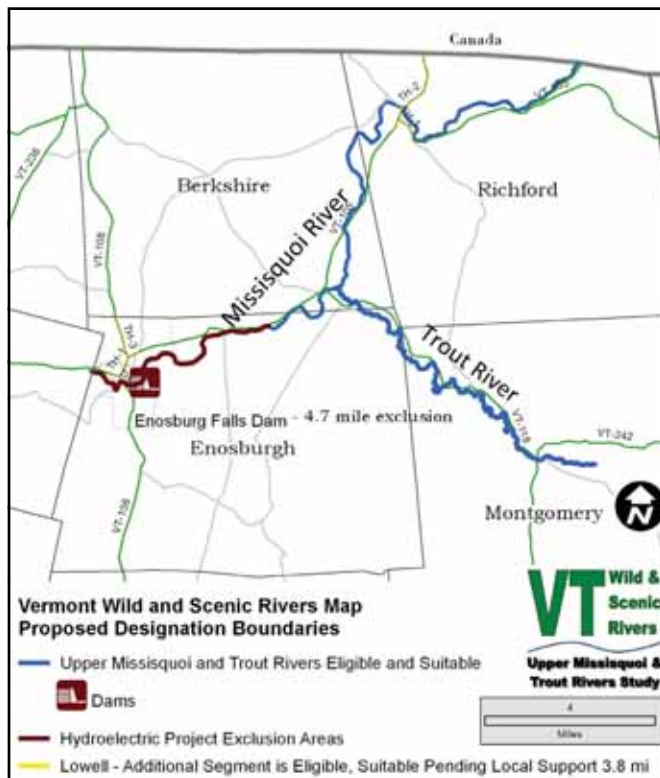
B-1



## Appendix 5. Hydroelectric Projects

### Enosburg Falls Hydroelectric Facility - Missisquoi River, Vermont

Proposed legislation proposes designation of the: 14.6-mile segment of the Missisquoi River from the Canadian border in Richford to the upstream project boundary of the Enosburg Falls hydroelectric facility in Sampsonville.



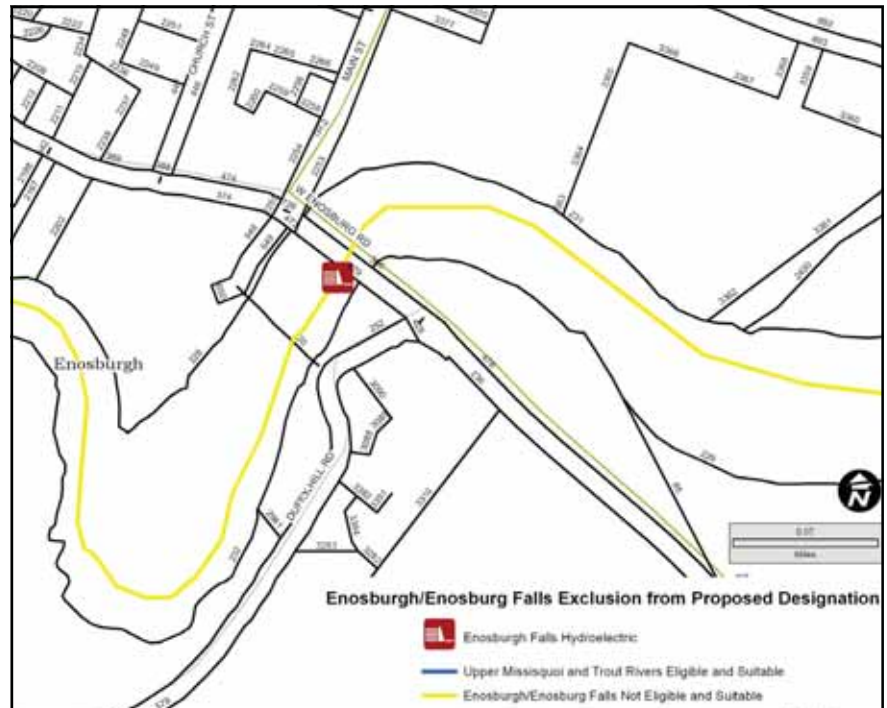
boundary of the hydroelectric facility. All the property boundaries are below the right of way for Route 108; however, the project boundary is upstream of this bridge in Sampsonville. Proposed designation would end on the upstream side of the project boundary, 14.6 miles from the Canadian border. The upstream influence of this dam, according to the State of Vermont Section 401s Water Quality Certificate, is 4.3 miles.

Proposed designation stops at the project boundary of the Enosburg Falls hydroelectric facility to remain consistent with excluding the project boundaries of hydroelectric facilities in the area potentially designated. The free-flowing character of an additional lowermost 4.7 miles of this segment of Missisquoi River remains despite the inclusion this section in the FERC project boundary of the Enosburg Falls Hydroelectric Project. Should the project boundary ever be reduced, the section of the Missisquoi up to the Route 108 bridge (19.3 miles total from the Canadian border) would be both eligible and suitable for designation.

The Enosburg Falls Hydroelectric Facility (also known as the Kendall Plant) on the Missisquoi River is operating and licensed by FERC (FERC P-2905, license expires 2023). The river segment in the immediate vicinity of this project are found ineligible for designation due to the lack of free-flowing character. An additional 4.7 mile segment contained within the project boundary of this hydroelectric facility is found eligible for designation based on the free-flowing character.

Proposed designation stops at the Route 108 crossing in Enosburg Falls just upstream of the property

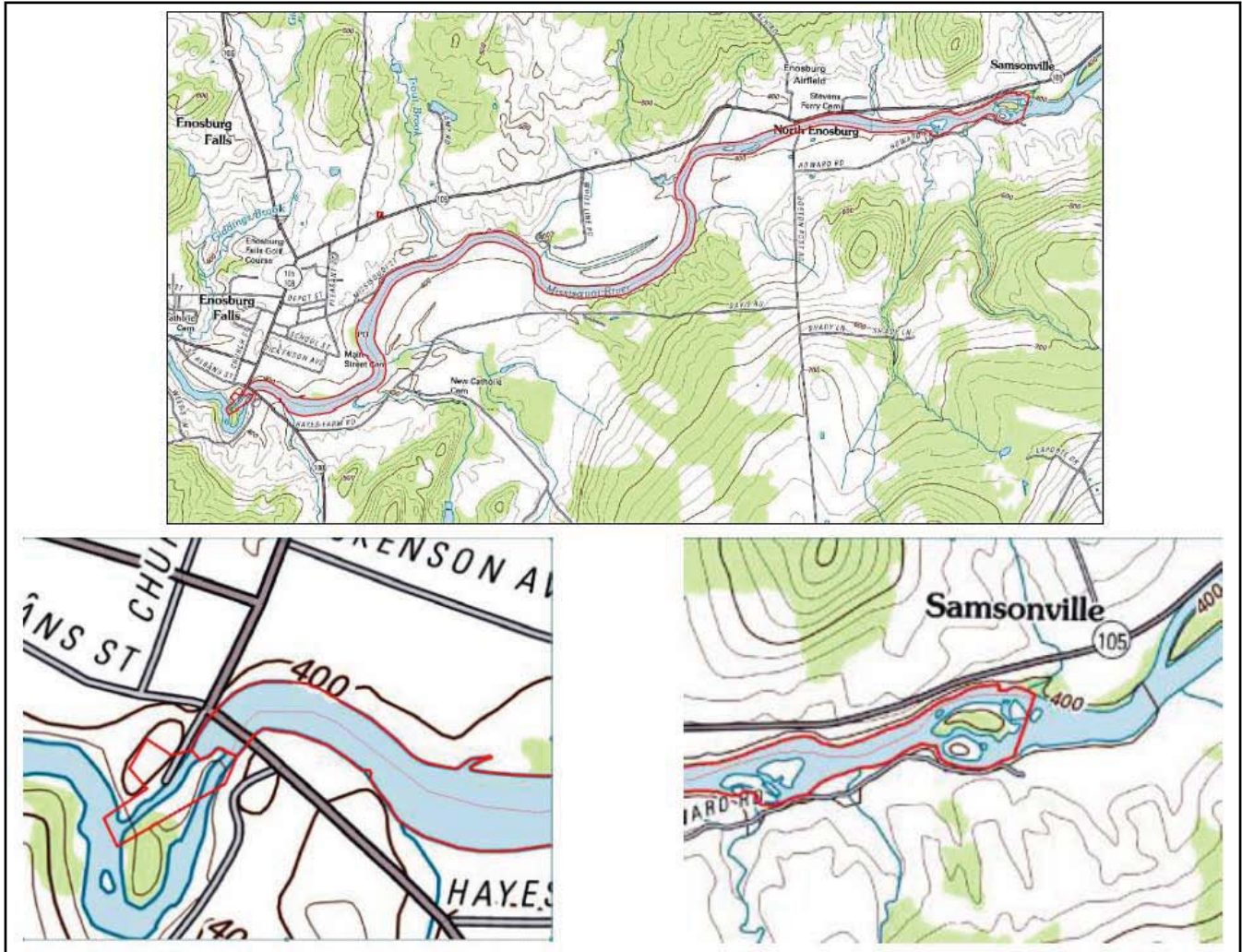
## Appendix 5. Hydroelectric Projects



**Figure 5 & 6.** The numbers in the figure above indicate parcel numbers from the digital landowner parcel data from Enosburgh and Enosburg Falls, Vermont. The yellow line indicates the 4.7 mile river reach ineligible for designation due to its inclusion in the FERC Project boundary. Suitability

## Appendix 5. Hydroelectric Projects

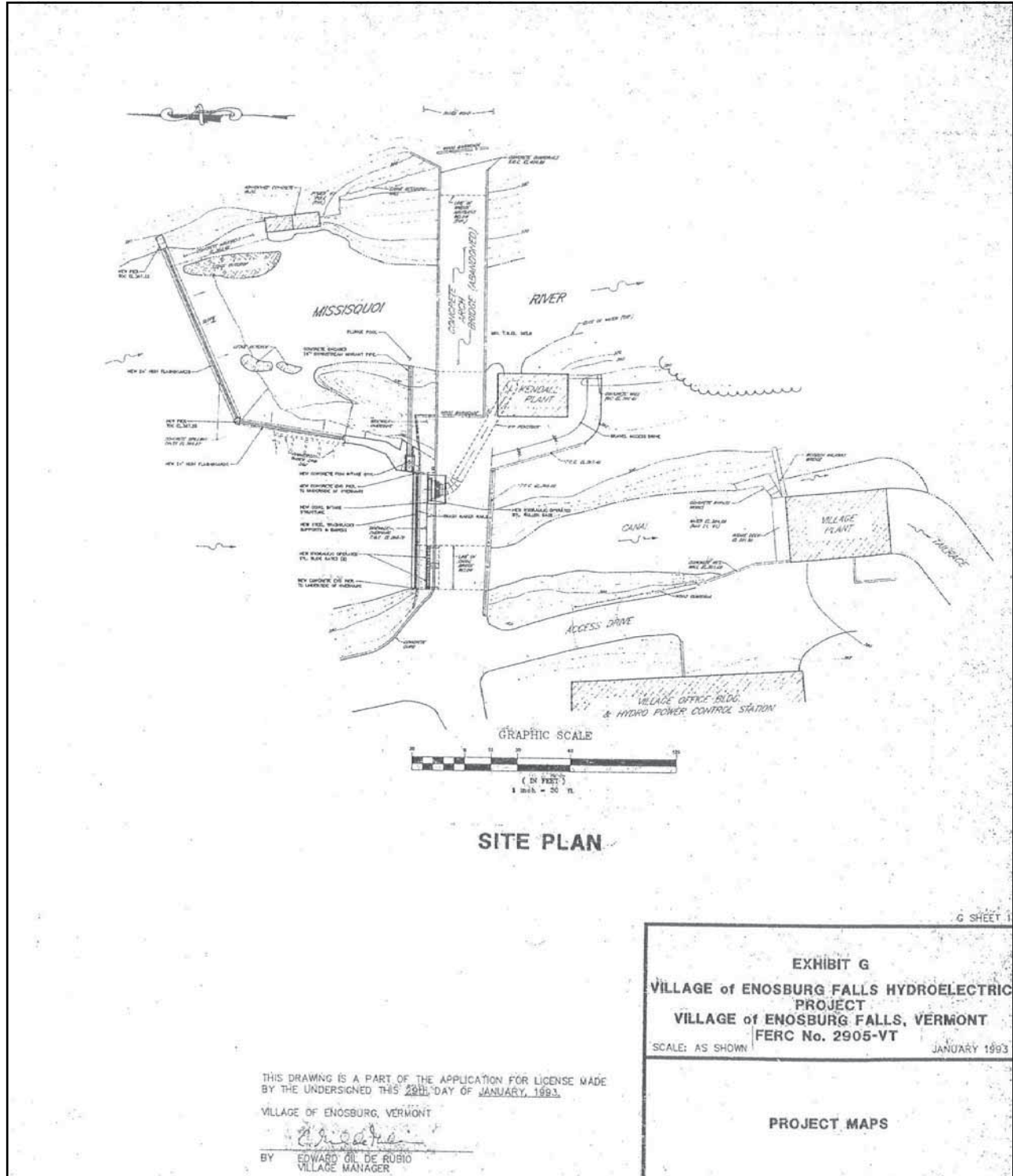
Enosburg Falls Hydroelectric Facility - Missisquoi River, Vermont  
FERC Project Boundary (digitized in red).



# Appendix 5. Hydroelectric Projects

Enosburg Falls Hydroelectric Facility - Missisquoi River, Vermont

FERC Project Number P-2905.



## Appendix 5. Hydroelectric Projects

Troy Hydroelectric, Troy, VT - Missisquoi River

Official Study Committee Letter to FERC, July 16, 2010.

Upper Missisquoi and Trout Rivers  
Wild and Scenic River Study Advisory Committee

July 16, 2010

*VIA ELECTRONIC FILING*

Kimberley Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street N.E.  
Washington, DC 20426

**Troy Hydroelectric Project FERC P-13381**

**Position of the Upper Missisquoi and Trout Rivers Wild and Scenic River Study  
Advisory Committee in support of the Troy Hydroelectric Project and Expedited  
Treatment as requested by Applicant**

Dear Secretary Bose,

The Upper Missisquoi and Trout Rivers Wild and Scenic River Study Advisory Committee (Committee) is an informal advisory body convened by the National Park Service to advise and assist in the conduct of the Wild and Scenic River Study of the upper Missisquoi and Trout Rivers. Our Committee represents the ten communities included in the study area, as well as the Missisquoi River Basin Association and key state and regional agencies.

At our regular monthly meetings, we have twice had presentations and discussions concerning the proposed re-activation of the Troy Hydroelectric facility. Prior to our meeting July 15 the applicant (Jayne and Jonathan Chase) hosted a site visit which many of our members attended. And, as an agenda item the Committee unanimously passed a motion in support of the National Park Service's letter to FERC dated May 7, 2010 and in support of the proposed, expedited re-activation of the Troy Hydroelectric facility. As such, it is specifically our intent to recommend exclusion of the land and waters associated with the Troy Hydroelectric Project (project boundary) from any eventual river segments recommended for inclusion in the Wild and Scenic Rivers System.

Thank you for your consideration.

Sincerely,

Jacques Couture  
Chairman, Upper Missisquoi and Trout Rivers  
Wild and Scenic River Study Advisory Committee



### Troy Hydroelectric, Troy, VT - Missisquoi River

NPS Letter to FERC, May 7, 2010.



#### United States Department of the Interior

NATIONAL PARK SERVICE  
Northeast Region Office  
15 State Street  
Boston, Massachusetts 02109-3572

IN REPLY REFER TO:

May 7, 2010

Kimberly Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street N.E.  
Washington, DC 20426

Troy Hydroelectric Project, FERC Project Number 13381-000

Dear Secretary Bose:

The National Park Service recently commenced work on a congressionally authorized Wild and Scenic River Study of the Missisquoi and Trout Rivers in Vermont. Public Law 111-11 (March 30, 2009) identified two segments of the Missisquoi River and the entire length of its tributary the Trout River for study. The two Missisquoi segments are:

The approximately 25-mile segment of the upper Missisquoi from its headwaters in Lowell to the Canadian border in North Troy

The approximately 25-mile segment from the Canadian border in East Richford to Enosburg Falls

The National Park Service commenced work on the Study in the Fall of 2009, with the formation of a locally-based advisory committee, the hiring of project staff and related activities. The NPS expects to complete its study and provide a Study Report to Congress by October of 2012.

#### Troy Hydroelectric Project

Upon commencement of Study activities, the NPS was made aware that Jonathan and Jane Chase had applied for (February 2009) and been granted (November 4, 2009) a Preliminary Permit to study re-activation of the Baker's Falls Hydroelectric Project in Troy, VT. This site is within the headwaters segment of the Missisquoi River included for Wild and Scenic River Study in PL 111-11. At this time the NPS informed the Chases that we had no objection to the issuance of the Preliminary Permit, and that the studies and investigations related thereto would be a useful complement to the Wild and Scenic River Study. The Chase's have since participated on a regular basis in the Wild and Scenic River Study and the monthly meetings of the Study Advisory Committee.

As a part of the Chase's participation in the Study they have made presentations to the Study Advisory Committee related to their project proposal, and have requested that the NPS expedite review of their proposal in relation to the Wild and Scenic River potential of the Missisquoi River. To this end we have reviewed the project in the context of the Chase's Initial Consultation Document (January 2010) and have coordinated with the US Fish and Wildlife Service, which has separately filed comments with the applicant on the ICD.

The applicant proposes to re-activate the Baker's Falls Hydroelectric Project in Troy, VT, which was previously owned and operated by Citizens Utilities Company. According to the applicant, these facilities generated power at the site until a flood in 1998 rendered the facility inoperable. All major project works necessary for hydroelectric generation have existed at the site for many decades and continue to exist at the site at this time, including dam, water conduit, powerhouse, transmission lines, and associated infrastructure. The applicant proposes to a rehabilitate and upgrade the site and project works and return the site to active hydroelectric generation as a FERC authorized facility (Exemption is being sought).

#### NPS Determinations Under the Wild and Scenic River Study

**Standard of Review** The NPS believes the proposed Troy Hydroelectric Facility is most appropriately reviewed as an existing hydroelectric facility under the Wild and Scenic Rivers Act. All major project works exist at the site, including dam, water conduit, powerhouse, transmission lines, and associated facilities. Some rehabilitation of existing facilities is envisioned by the applicant, including the potential to replace the existing turbine with a new, more efficient one. For Wild and Scenic River review purposes, this situation is akin to the relicensing of an existing hydroelectric facility, with the principal question before FERC not whether the project should be constructed but how the project should be operated. Therefore, while the first clause of Section 7b of the Wild and Scenic Rivers Act temporarily prevents FERC from licensing the construction of new project works on a congressionally authorized study segment, the NPS is reviewing the Troy Hydroelectric Proposal under the review standard of the second clause of Section 7b of the Act which states, "...no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river might be designated, as determined by the Secretary responsible for its study or approval -". Such review is required for any federally assisted water resource development project with the potential to alter free-flowing conditions within a congressionally authorized study segment.

#### Values under Consideration for Potential Wild and Scenic River Designation

**Free-Flow** The NPS has concluded, in consultation with our Study Advisory Committee, that the project infrastructure currently existing at the Baker's Falls site (including dam, reservoir, powerhouse, transmission lines and other project works) create a pre-existing impact to the free-flowing resources within the immediate project area that will likely result in a recommendation to exclude the project area from potential Wild and Scenic designation. This absence of free-flowing character as defined in the Wild and Scenic Rivers Act includes the entire area proposed by the Chase's for inclusion in the Troy Hydroelectric Facility project boundary.

## Appendix 5. Hydroelectric Projects

There are, however, substantial free-flowing river areas both upstream and downstream of the Baker's Falls site that have potential for Wild and Scenic River designation. Given this situation, the NPS could not support project conditions that would allow for the raising of the existing dam's height (addition of flashboards), since such action would inundate presently free-flowing river areas. Similarly, the NPS can only support instantaneous run-of-river operations since any other operational scheme would almost certainly constitute an adverse impact to downstream free-flowing conditions.

The Chase's ICD is supportive of the project constraints noted above, as they are not proposing to raise the height of the dam through flashboards or otherwise, and are specifically proposing to operate the Troy Hydroelectric Facility in an instantaneous run-of-river manner.

### Impacts to Potential Outstandingly Remarkable Values

The NPS is in the beginning stages of identifying and assessing potential outstandingly remarkable values that may warrant recognition and protection on the two segments of the Missisquoi. While such values have not been firmly identified, without doubt, the most important factor related to the proposed development is the preservation of free-flowing character as noted above.

Additional resource values under investigations include: fish and wildlife values; scenic and geologic resources including falls and gorges; recreational fishing (notably Brown Trout); recreational boating (canoeing); and historic and archaeological values. Features of particular note on headwaters segment of the Missisquoi (where the proposed project is located) include numerous gorges and waterfalls with significance as geologic resources and as recreational attractions. The applicant has documented some of these in their Appendix C Resource Reports. Trout fishing is also a popular activity and could contribute to Wild and Scenic River eligibility. We do not believe that operation of the project as presently proposed would have any negative impact upon such resources.

The applicant notes that, due to multiple impassible Falls in the vicinity, that little recreational boating occurs in the project vicinity, and any such users would necessarily portage the Bakers Falls site in any case. Similarly, fish passage through the project area would have been blocked by the presence of the Falls whether in a natural condition or given the pre-existing dam presently at the site.

To this end we conclude that human and fish movement through the project area is essentially unaffected by the proposed operation of the Troy Hydroelectric Facility.

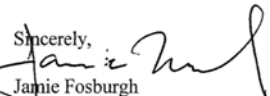
Areas downstream of the Baker's Falls project area are potentially impacted by stream flow and water quality issues. However, we are satisfied that instantaneous run-of-river operation will avoid potential flow related downstream impacts. Additionally, we are satisfied that water quality issues are being successfully addressed through the appropriate state and federal resource agencies.

### **Conclusions**

In consideration of the above analysis, the NPS specifically supports instantaneous run-of-river operation for the proposed facility, as proposed by the applicant. We additionally support the broader set of *Preliminary Terms and Conditions* contained in the US Fish and Wildlife Service's letter dated April 15, 2010.

Based upon these findings, the National Park Service has no objection under the Wild and Scenic Rivers Act to the FERC's continued processing of Jonathan and Jayne Chase's proposed re-activation of the Baker's Falls (now Troy Hydroelectric) facility, nor to the expedited treatment requested by the Chase's. We will continue to coordinate with the Chases, the US Fish and Wildlife Service and local and state partners as this project moves forward.

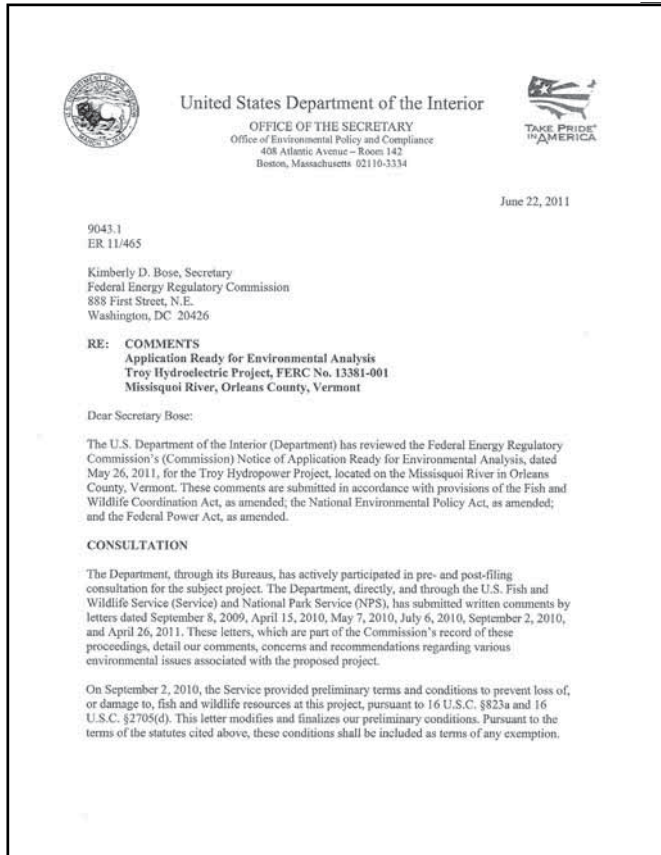
If you have any questions related to this letter or need additional information, please contact me at your convenience.

Sincerely,  
  
Jamie Fosburgh  
Northeast Region Rivers Program  
New England Team Leader  
(617) 223-5191  
[Jamie\\_fosburgh@nps.gov](mailto:Jamie_fosburgh@nps.gov)

Copy:

Jonathan and Jayne Chase  
Jacques Couture, Chair, Wild and Scenic River Study Advisory Committee

## Troy Hydroelectric, Troy, VT - Missisquoi River NPS Letter to FERC, June 22, 2011.



### RESPONSE TO COMMENTS

The Service's September 2, 2010, letter contained preliminary terms and conditions for the Troy Hydropower Project. To date, the Applicants (Jonathan and Jayne Chase) have provided no objections to the draft conditions.

### FISH AND WILDLIFE RESOURCES

The proposed project would be located on the Missisquoi River. In the vicinity of the proposed project, the Missisquoi River supports an extensive coldwater fishery, including brook, brown and rainbow trout, white sucker, tessellated darter, and minnow species. In addition, the Vermont Fish and Wildlife Department stocks the Missisquoi River downstream of the dam with brown trout and stocks tributaries upstream of the Bakers Falls Dam with brook trout.

Currently, there are no migratory fish species present in the vicinity of the project and no active migratory fish restoration program on the Missisquoi River. Below we discuss fish passage in more detail.

### PUBLIC ACCESS AND RECREATION

The Department, through the NPS, is currently studying natural, cultural and recreational resources of the upper Missisquoi River as a part of the ongoing Wild and Scenic River Study. Although the area included in the Project Boundary will not be included in the proposed Wild and Scenic River segment, the falls (upper or lower) are recognized an important scenic and recreational feature of the upper Missisquoi. As such, the ability of the public to access the site for scenic viewing, as well as to pass through the site via canoe and fishing portage, is important to the overall context of the upper Missisquoi. Therefore, the Department supports the findings and recommendations regarding public access and recreation contained in the State of Vermont's draft 401 certificate. Specifically, we support the importance of providing a fishing and canoe/kayak portage trail (either in the location of the existing informal trail or at another suitable location), and developing public access to view the Falls. The NPS is willing to assist the applicant in the design and location of both a portage trail and falls viewing area. For more information, please contact Jamie Fosburgh, National Park Service, at 617-223-5191.

### IMPACTS AND MITIGATION

#### Project Operation

The Applicants propose to operate the project in a true run-of-river mode, with inflow equal to outflow on an instantaneous basis. Maintaining natural flow through the project will protect the existing habitat which benefits riparian wildlife and instream aquatic species. Accordingly, we support the Applicants' proposal to operate in run-of-river mode, and provide herein a condition to require this mode of operation at the Troy Hydropower Project.

#### Below-Project Flows

The Applicants propose to operate the project run-of-river, with inflow equal to outflow on an instantaneous basis. We support the Applicants' proposal, as it will result in stable habitat, benefiting the riverine assemblage in the river below the dam.

#### Impoundment Fluctuations

The Applicants propose to operate the project run-of-river, as described above, eliminating concerns regarding the impact daily water level fluctuations may have on aquatic resources within the headpond.

#### Bypass Flows

Under the proposed project configuration, there will be a bypass reach approximately 250 feet long. The Applicants propose to release 44 cfs, or inflow (whichever is less), at the dam to maintain habitat and water quality within the bypass reach. The proposed discharge is based on the median monthly flow for August from the nearby North Troy U.S. Geological Survey Gage 04293000, prorated to the drainage area at the project. We support the Applicants' proposal, and provide herein a condition to require this bypass release at the Troy Hydropower Project.

#### Trashrack Design

The Applicants propose to utilize Osberger crossflow turbines. This type of unit, while very efficient to generate power, has proven to be quite lethal to fish.<sup>1</sup> Research indicates that mortality increases with size of fish. In its April 15, 2010, letter to the Applicants, the Service raised the issue of impacts to fish entrained by this type of unit, and discussed the need to minimize impingement and entrainment by designing the racks to be angled, have narrow spacing, and maintain a low intake velocity.

In response, the Applicants propose to construct a full-depth, angled trashrack with one-inch clear spacing. The dimensions of the rack will result in a wetted area of at least 120 square feet, to ensure that approach velocities do not exceed two feet per second. These rack specifications meet Service design criteria for anadromous fish, and should protect most resident species from impingement and/or entrainment. In this case, there are no anadromous species present in the project area, therefore the primary concern is protecting resident riverine species from impingement and entrainment.

The design of the proposed trashracks should physically exclude larger fish that are more likely to be injured or die from turbine entrainment. Angled racks help guide fish away from the intake, if velocities do not exceed their swimming capabilities. While trashracks that meet our anadromous design criteria should protect many riverine fish, there are some species and sizes of fish that still will be susceptible to entrainment. If future fish surveys by the Vermont Fish and Wildlife Department indicate a change in community structure within the project area that can reasonably be attributed to entrainment/impingement mortality at the Troy Hydropower Project, these specifications may be modified.

<sup>1</sup> Literature citations supporting this statement were provided to the Applicants in a Service letter, dated April 15, 2010.

# Appendix 5. Hydroelectric Projects

4

## Water Quality

The Service's letter of April 15, 2010, details the Department's concerns regarding how the Troy Hydropower Project may impact water quality; specifically, because the majority of inflow would pass through the project's turbine rather than over the spillway, dissolved oxygen (DO) levels could be reduced below the dam. Due to the lack of site-specific water quality information, the Service requested that the Applicants conduct a pre-operational survey to document existing water quality.

The Applicants undertook the water quality study in the summer of 2010. The results of the study were provided to the Service on November 18, 2010. Based on the study results, the Service agreed with the report's conclusion that Class B cold-water quality standards currently are being met at the project site.

These pre-operational data represent baseline conditions at the site, and will be used to establish non-degradation standards for the project. In the event that project operations lower DO, mitigation measures would need to be implemented to maintain pre-project water quality conditions.

The Applicants have acknowledged and agreed to perform water quality monitoring of project operations, and to provide measures to improve river DO, if necessary. Accordingly, we provide herein a condition that directs the Exemptee to conduct a post-operational water quality monitoring survey, in consultation with the Service.

## Monitoring Plan

The Applicants' proposal contains impoundment fluctuation limits, spillway discharges, and below-project flows that will need to be monitored to ensure compliance. The Applicants will be required to develop a formal plan that details the equipment, systems, etc., that will monitor and record the information needed to verify compliance with the various operational constraints at the project.

## Refill Procedure

The exemption application does not contain a description of the procedure that will be used to refill the impoundment after dam maintenance or emergency drawdown. Because the project will operate run-of-river and maintain a stable headpond, a refill procedure needs to be developed to ensure that flows below the project are maintained while refilling the impoundment after authorized drawdowns.

We require herein that the Exemptee adopt a refill procedure under which, during refilling of the reservoir after dam maintenance or emergency drawdowns, the Exemptee shall operate the project such that 90% of the inflow is released to the Missisquoi River downstream of the dam until reservoir refilling is complete and run-of-river operation is restored.

5

## Fish Passage

While there are no anadromous fish species present in the Lake Champlain watershed, there are a number of native and introduced adfluvial<sup>2</sup> species, such as lake sturgeon, walleye, steelhead and landlocked salmon. With the exception of the salmonids, these species historically did not ascend tributaries beyond the fall-line (typically marked by the first set of rapids or waterfalls). The catadromous American eel also inhabits Lake Champlain and its tributaries, and there was a commercial fishery for eels in the lake until 1998, when it was closed due to a dramatic decline in harvest. Because of the dramatic decline in young eels (elvers) returning to the St. Lawrence River, a stocking program was initiated in 2005, whereby elvers are transplanted into the Upper Richelieu River<sup>3</sup> and Lake Champlain.<sup>4</sup>

Presently, there are no migratory fish in the vicinity of the project, and no active migratory fish restoration program on the Missisquoi River.<sup>5</sup> Further, there are five dams downstream of the Bakers Falls Dam that would need fish passage before it would be required at the Troy Hydropower Project. However, since the Commission exemptions are issued in perpetuity and it is possible that passage for migratory fish will be required at some future date, the Service includes a future fish passage provision in the terms and conditions it prescribes for the project.

## Agency Notification

As-built drawings should be provided to the Service so that we may verify the project was constructed as proposed. We provide herein a condition that requires the Exemptee to furnish the Service with a copy of as-built designs. We also provide herein a condition that requires the Exemptee to notify the Service in writing when the project commences operation.

## MODIFIED TERMS AND CONDITIONS

Under Section 30(c) of the Federal Power Act (16 U.S.C. § 823a), state and federal fish and wildlife agencies have the opportunity to prescribe terms and conditions for exemptions to prevent loss of, or damage to fish and wildlife resources, and to otherwise carry out the purposes of the Fish and Wildlife Coordination Act.

Consistent with our responsibilities, we have determined that the following terms and conditions, to be included in their entirety, shall apply to any exemption which the Federal Energy Regulatory Commission issues for the Troy Hydropower Project.

1. The Exemptee shall operate the project in an instantaneous run-of-river mode, whereby inflow to the project will equal outflow from the project at all times and water levels above

<sup>2</sup> Fish that live in lakes and migrate into rivers or streams to spawn.

<sup>3</sup> Strategic Plan for Lake Champlain Fisheries, July 2009, Fisheries Technical Committee of the Lake Champlain Fish and Wildlife Management Cooperative.

<sup>4</sup> [http://www.mnr.gov.nv.ca/en/New-News/LatestNews/MNR\\_E004285.html](http://www.mnr.gov.nv.ca/en/New-News/LatestNews/MNR_E004285.html)

<sup>5</sup> While there is no restoration plan *per se* for the Missisquoi River, the Strategic Plan for Lake Champlain Fisheries identifies the need to increase numbers of American eels "consistent with global efforts for their rehabilitation" and the State's Wildlife Action Plan denotes the American eel as a Species of Greatest Conservation Need in Lake Champlain tributaries, noting that reconnecting these fish with this habitat would likely be beneficial to their long-term survival.

6

the dam are not drawn down for the purpose of generating power. Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the Exemptee, or for short periods upon mutual agreement between the Exemptee, the U.S. Fish and Wildlife Service, and the Vermont Agency of Natural Resources.

2. The Exemptee shall discharge a continuous flow of 44 cfs, or inflow, if less, over the dam at all times for the protection of instream habitat, water quality and aesthetics.
3. The Exemptee shall install trashracks that meet the following criteria: (1) have an approach velocity  $\leq 2.0$  fps (as measured six inches in front of the racks); (2) have clear spacing of one inch or less; and (3) extend full depth. The trashracks shall be installed and operational concurrent with project start-up. The racks shall be required to be kept free of debris and maintained to design specifications.
4. The Exemptee shall conduct a post-operation water quality monitoring survey. The survey protocol shall be identical to the pre-operation survey that was conducted in the summer of 2010, and shall be developed with consultation with, and require approval by, the U.S. Fish and Wildlife Service. Data shall be collected over a minimum of three (3) years, and shall be initiated the first low-flow season after project start-up. Results of the post-operation survey will be compared to the pre-operation data. If results indicate that the project is causing depletion of dissolved oxygen, mitigation measures may be required (e.g., releasing additional flow over the dam for reaeration).
5. The Exemptee shall, within three (3) months of the date of issuance of an exemption from licensing, prepare and file for approval by the U.S. Fish and Wildlife Service a plan for maintaining and monitoring run-of-river operation and bypass flows at the project. The plan shall include a description of the mechanisms and structures that will be used, the level of manual and automatic operation, the methods to be used for recording data on run-of-river operation and bypass flows, an implementation schedule, and a plan for maintaining the data for inspection by the U.S. Fish and Wildlife Service, the Federal Energy Regulatory Commission, and the Vermont Agency of Natural Resources.
6. The Exemptee shall implement a refill procedure whereby, during impoundment refilling after drawdowns for maintenance or emergency purposes, 90% of inflow is passed downstream, and the headpond is refilled on the remaining 10% of inflow to the project. This refill procedure may be modified on a case-by-case basis with the prior approval of both the U.S. Fish and Wildlife Service and the Vermont Agency of Natural Resources.
7. The Exemptee shall be responsible for constructing, operating, maintaining and evaluating upstream and downstream fish passage facilities at this project when notified by the U.S. Fish and Wildlife Service and/or the Vermont Agency of Natural Resources that such fishways are needed. All plans and schedules associated with the design, construction, and evaluation of any prescribed fishways shall be developed by the Exemptee in consultation with, and require approval by, the U.S. Fish and Wildlife Service. The fishways shall be operated and maintained in accordance with the schedule identified by the agencies.

7

8. The Exemptee shall notify the U.S. Fish and Wildlife Service in writing when the project commences operation. Such notice shall be sent within 30 days of start-up to Supervisor, New England Field Office, 70 Commercial Street, Suite 300, Concord, New Hampshire 03301. The Exemptee shall furnish the U.S. Fish and Wildlife Service with a set of as-built drawings concurrent with filing said plans with the Federal Energy Regulatory Commission.
9. The Exemptee shall allow the U.S. Fish and Wildlife Service to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions.
10. The U.S. Fish and Wildlife Service reserves the right to add to and alter terms and conditions for this exemption as appropriate to carry out its responsibilities with respect to fish and wildlife resources. The Exemptee shall, within thirty (30) days of receipt, file with the Federal Energy Regulatory Commission any additional terms and conditions imposed by the U.S. Fish and Wildlife Service.

11. The Exemptee shall incorporate the aforementioned terms and conditions in any conveyance—by lease, sale or otherwise—of its interests so as to legally assure compliance with said conditions for as long as the project operates under an exemption from licensing.

These conditions are required with the understanding that the Commission likely will want to retain concurrent approval authority over some or all of the plans and actions described above, and the above conditions should not be read as preventing this.

## RECOMMENDATIONS

The Department recommends that the Exemptee permit access to the project area wherever possible to allow for public utilization of fish and wildlife resources, taking into consideration any necessary restrictions to maintain public safety and protect project civil works.

Thank you for the opportunity to review and comment on this application. For more information, please contact Melissa Grader at (413) 548-8002, extension 124. Please contact me at (617) 223-8565 if I can be of further assistance.

Sincerely,

  
Andrew L. Raddant  
Regional Environmental Officer

cc: FERC Service List

### Enosburg Falls Hydroelectric Facility - Missisquoi River, Vermont

NPS Letter to the Village of Enosburg Falls, February 4, 2013.



#### United States Department of the Interior

NATIONAL PARK SERVICE  
Northeast Region Office  
15 State Street  
Boston, Massachusetts 02109-3572

IN REPLY REFER TO:

2-04-13

Mr. Jon Elwell  
Village Manager, Enosburg Falls  
42 Village Drive  
Enosburg Falls, VT 05450

Dear Mr. Elwell:

It was good speaking with you the other day regarding the potential Wild and Scenic River designation of the Missisquoi River and that designation's relationship to the Village's municipally owned/operated Enosburg Falls hydroelectric facility.

The conversation confirmed several important understandings, including:

- The National Park Service concurs with the Study Committee's proposal to end the proposed Wild and Scenic River designation upstream of the project boundary of the Enosburg Falls hydroelectric project. As we discussed, if the upstream extent of the project boundary is not well defined in the FERC documents, then we will work with you to choose an endpoint that achieves the goal of avoiding overlap with the project and its impoundment.
- The NPS believes that existing FERC and State regulatory review processes are adequate, and is aware of no reason NPS involvement is warranted or necessary regarding existing operation, maintenance, or potential future renovations or upgrades. The intent of avoiding any overlap between the Wild and Scenic designation and the hydroelectric project is to avoid unnecessary consultations or approvals that might otherwise be required by FERC (if there were overlap).
- In addition to the language that is in the Draft Management Plan, the National Park Service will describe this intent in its report to Congress, and we will review that language with you in draft form prior to Report submittal.

In sum, we do not foresee having any impact or involvement with your project and its ability to continue to provide low cost, renewable energy for the citizens of Enosburg Falls.

Let me know if there is anything else that I can do to assist you. Please continue to stay in touch with Shana, and I know that she will do likewise.

Thanks again for your interest and assistance.

Sincerely,

Jamie Fosburgh  
New England Team Leader  
Northeast Region Rivers Program  
617 223-5191  
Jamie\_fosburgh@nps.gov





National Park Service  
U.S. Department of the Interior



**Upper Missisquoi and Trout Rivers Wild and Scenic River Study**

2839 Vermont Route 105  
East Berkshire, VT 05447  
info@vtwsr.org  
www.vtwsr.org

**National Park Service**  
Northeast Region  
15 State Street  
Boston, MA 02109-3572

