

## 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

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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								
	YEAR	1790	1900	1950	1990	2000	Population change from:	
							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

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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.

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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;
- 2) maintain the purity of drinking water;

**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')



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/html/pl\\_missisquoi.htm](http://www.anr.state.vt.us/dec/waterq/planning/html/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.

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**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.

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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

## Chapter 4. Suitability

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

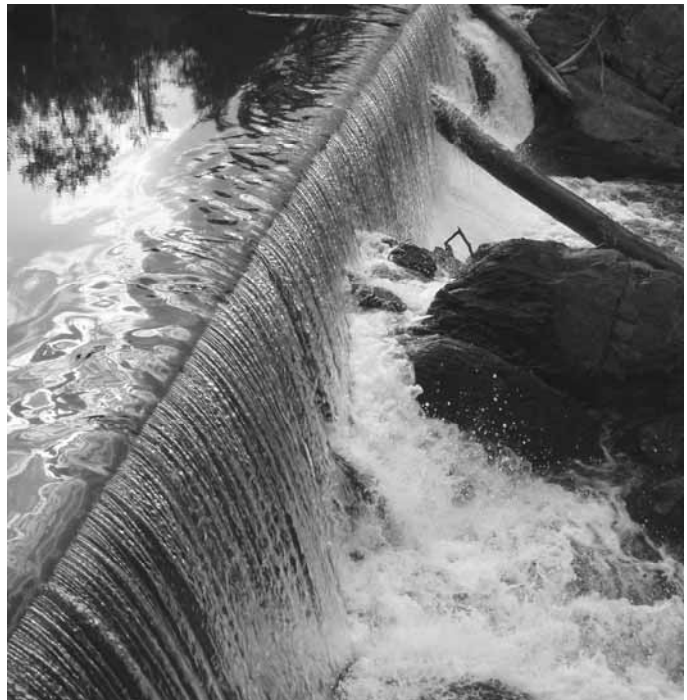


information on these dams). This gave an exclusion of 0.27 miles (1,408 feet). Wild and Scenic Rivers designation will have no effect on this facility provided that any changes proposed for its operation are consistent with the purposes of the proposed designation. The upstream influence of this dam, 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.

