

**VERMONT AGENCY OF NATURAL RESOURCES
MANAGEMENT PLAN**

THE LOWER

POULTNEY RIVER



A VERMONT

OUTSTANDING

RESOURCE WATER

PREPARED BY:

**VERMONT
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
&
THE LOWER POULTNEY RIVER CITIZENS COMMITTEE**

AUGUST 1992



State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council

AGENCY OF NATURAL RESOURCES
103 South Main Street
Center Building
Waterbury, Vermont 05671-0301

OFFICE OF THE SECRETARY

802-244-7347

August 28, 1992

To whom it may concern:

In June, 1991, the Water Resources Board designated the Lower Poultney River as a Vermont Outstanding Resource Water (ORW). The Agency of Natural Resources is pleased to issue this report on the designation to inform the public of those river values deemed exceptional by the Board. Also, Section IV of the report has been adopted as the Agency management plan that articulates the Agency's regulatory responsibilities to preserve and enhance the exceptional values of the Lower Poultney River.

Special recognition is due the towns of Fair Haven and West Haven, Vermont and the Lower Poultney River Citizens Committee for their efforts to designate the river and foster river awareness in their communities. These local actions are essential to the future success of statewide river conservation.

The Vermont Rivers Program of the Department of Environmental Conservation, Water Quality Division (802 244-6951) is available to assist interested citizens and communities in river conservation projects including ORW studies and designations. Thank you for your interest in Vermont rivers.

Sincerely,

Elizabeth A. McLean

Acting Secretary

**VERMONT AGENCY OF NATURAL RESOURCES
MANAGEMENT PLAN**

FOR THE

THE LOWER POULTNEY RIVER

A VERMONT OUTSTANDING RESOURCE WATER

**A REPORT ON THE DESIGNATION
AND THE AGENCY MANAGEMENT PLAN
TO PROTECT AND ENHANCE
THE EXCEPTIONAL USES AND VALUES**

OF

THE LOWER POULTNEY RIVER

VERMONT

AUGUST 1992

THIS REPORT WAS PREPARED BY

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**THE LOWER POULTNEY RIVER:
AN OUTSTANDING RESOURCE WATER**

SECTION I

INTRODUCTION

INTRODUCTION

The Lower Poultney River, an interstate water which forms the border between Vermont and New York from the Poultney/Fair Haven town line to its confluence with Lake Champlain, has been designated as an Outstanding Resource Water (ORW) pursuant to 10 V.S.A. § 1424a by the Vermont Water Resources Board. The Board's designation order, dated June 28, 1991, is presented here as an element of Vermont's comprehensive plan for river conservation.

The towns of Fair Haven and West Haven, Vermont and a river committee, composed of citizens from these communities, documented the unique uses and values of the Lower Poultney River in Vermont and New York and petitioned the Board to find these uses and values exceptional as compared with other rivers in the State of Vermont. On February 14, 1991, the Board conducted a contested case hearing (3 V.S.A. Chapter 25) and subsequently found that all portions of the Lower Poultney River should be designated as an Outstanding Resource Water because of their exceptional natural, cultural, and scenic values.

This report contains the specific river inventory information gathered by the Lower Poultney River Committee from their ORW petition and the testimony provided to the Board from parties of the contested case hearing. The Agency of Natural Resources presented, as testimony before the Board, its regulatory responsibilities in permitting stream alterations, dams, wastewater discharges, aquatic nuisance control, and solid waste disposal projects affecting outstanding resource waters. Actions to achieve the protection and enhancement goals established for the Lower Poultney River ORW values are specified in the Agency management plan which is Section IV of this report.

RIVER JOURNEY

The Poultney River, located in southwestern Vermont in Rutland County, has its origins in Tinmouth, Vermont between the Tinmouth and Spoon mountains, and drains a river basin of 263 square miles as it travels through Middletown Springs, Poultney, Fair Haven and West Haven before draining into Lake Champlain (Figure 1). The total stream length is about 40 miles.

The Lower Poultney River is considered to begin at the Poultney/Fair Haven town line and continues along the Vermont towns of Fair Haven (pop. 2819) and West Haven (pop. 253) to a headwater region of Lake Champlain, referred to as the "elbow". The stream length is approximately 22 miles and forms the Vermont boundary with New York, specifically in the towns of Hampton and Whitehall, New York.

Moving downstream from the Poultney/Fair Haven town line, two tributaries enter the Poultney River from the east within the first few miles: an unnamed tributary and Lewis Brook which drains a large area in the town of Poultney. In addition to these two streams, the Castleton River, Mud Brook, Inman Pond tributary, Hubbardton River, Coggman Creek, Big Hollow Brook and Bumps Brook are all mapped Vermont tributaries of the Poultney River. This

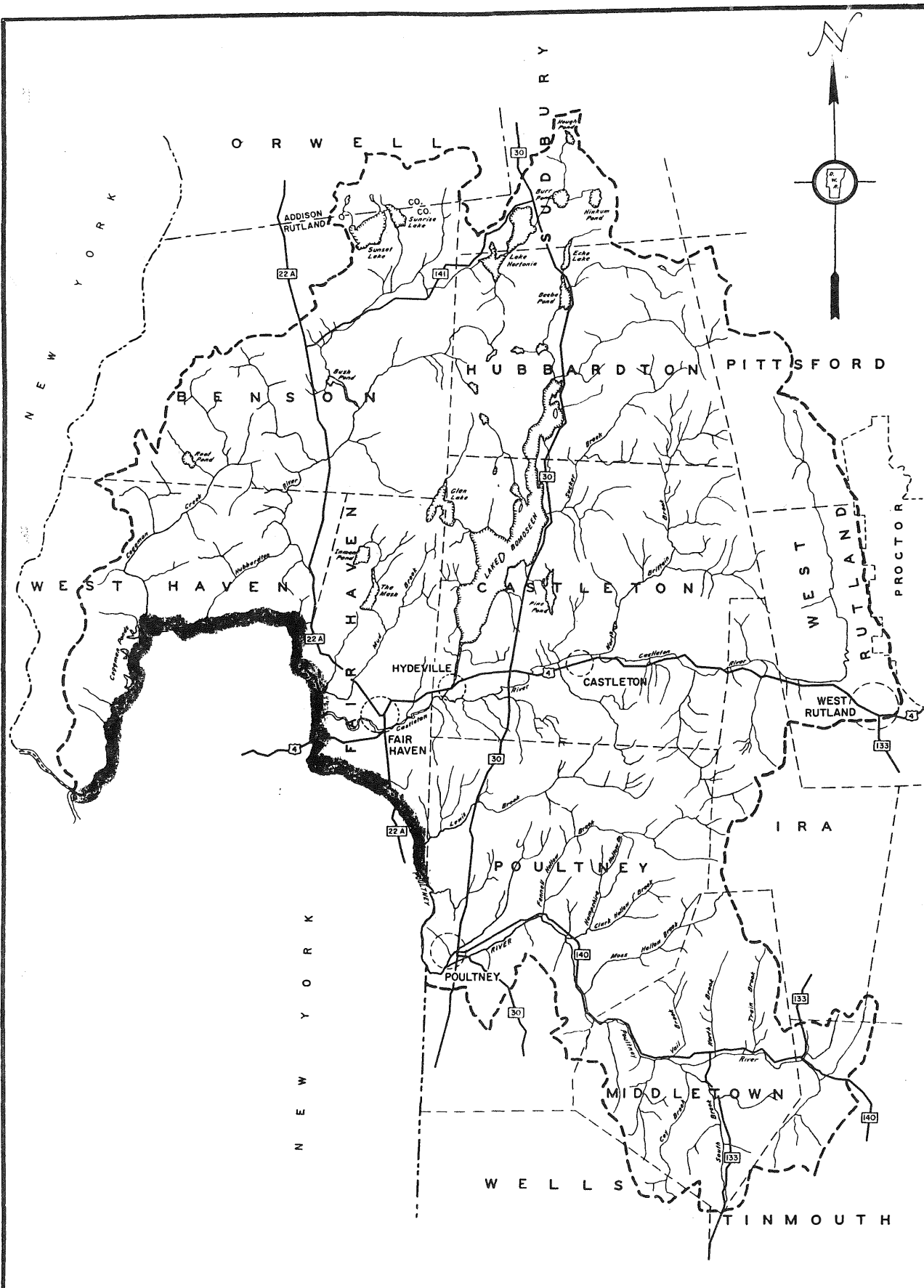



Figure 1. Poultney River Drainage basin

 Lower Poultney River

**POULTNEY RIVER
DRAINAGE BASIN**

SCALE OF MILES
0 1 2 3 4

APPROVED:	1966	SHEET
DRAWN BY <i>CWC</i>	VERMONT STATE WATER RESOURCES BOARD	1
CHECKED BY <i>WJH</i>	MONTPELIER, VERMONT	OF 1

first section of the river is a winding, scenic corridor with undeveloped shorelands. It is an excellent canoeing segment and provides a natural habitat for a diversity of plants and animals.

Continuing downstream in the two miles of the Poultney River between Routes 22A and 4, the river channel becomes deeper and the river corridor becomes wider. It is here the river drains an area in Fair Haven known as Cedar Swamp. The Vermont Natural Heritage Program lists this swamp as one of the largest cedar wetlands in Vermont. It is an example of a forested-swamp type of wetland and adds many species of flora and fauna to that of the river proper.

North of Route 4 the Delaware & Hudson Railroad crosses the river. Directly north of the crossing is an area known locally as "The Slide". It includes outcrops of rock, part of the Taconic Sequence of strata that make up the slates and schists of the Taconic Mountains. This area has had recreational use through the years by water enthusiasts. Many names and dates are carved in the rocks. It is also possible that some of these names are associated with the baptisms which took place here in accordance with the rites of the Seventh Day Adventist Church, formed in 1831 by Prophet William Miller, whose church near the river is on the National Register of Historic Places.

Downstream from "The Slide" is the confluence of the Castleton and Poultney rivers. The Castleton River flows immediately south of Fair Haven village and the lower 3.5 miles is classified as a Class C watercourse (as defined in the Vermont Water Quality Standards) to receive the treated wastewater from the Fair Haven sewage treatment plant. This same Class C zone extends into and includes 0.5 mile of the Poultney River below the confluence. The remainder of the Lower Poultney River is Class B water.

Geologic history is revealed further downstream in three areas. Ranneys Rocks, a scenic area where mud turbidites and folded strata are found, is of interest to geologists. One can encounter large erosional balls around the confluence of Mud Brook. The most important geologic area is the northernmost outcrop on the Morris Farm where strata that once were in a vertical pile of shales and slates are now horizontal because of compression and folding. The glacier stripped the soil off the rocks exposing the strata. Geologists have charted and numbered the slate interbeds which contain dolomite and quartz particles. Middlebury College and Castleton State College geologists use these areas for teaching and research every year.

Somewhere in this part of the river, Hessian soldiers crossed the river in 1777 enroute to Hydeville. The exact site of the bridge is unknown but historical research has found that Hessian troops traveled across the river between the great and little falls and Mud Brook. It is in this area that a tributary from the Inman Pond area enters the Poultney River.

Moving toward Lake Champlain, the river then comes to Carver Falls, the highest major falls in Vermont, containing two falls at the head of a limestone gorge. Hydropower development first constructed in 1893 has altered this site. The river lies in a wooded ravine 100 feet deep above the falls

and 200 feet deep below them. The gorge is very steep-walled with cedar, pine and hardwoods. There is a major dam about 250 feet in length by 20-25 feet in height above the falls. Presently, the summer flow over the falls is meager because of the water diversion. An abandoned penstock detracts from the scenic beauty and aesthetics of the site. Canoeing is possible on all of the river above and below Carver Falls with a few portages.

Carver Falls has been used to generate electricity since 1894. The falls were harnessed to drive mill operations for nearly 100 years prior to their use as a hydroelectric station.

The river makes a turn at the bottom of Carver Falls, changing directions from north to west. About a mile below the falls in the valley of the Poultney River there is a cave, the entrance of which is in a limestone cliff. There is some evidence of previous cave habitation, both in the entrance space and in the interior. Artifacts have been found: Indian arrow heads, a tubular shell bead in perfect condition, small polished bone tools including a small slender awl made from a carved splinter of antler, pot shards, refuse from elk, deer, black bear, fox, otter, and beaver. Artifacts have also been found near Carver Falls at what was previously the Carty Farm, and in the fields by the Hackadam Road.

Fish habitat can be divided into cold water streams above Carver Falls and warm water streams below the falls. Fish surveys show that over 55% of the fish species in Vermont are found in the Poultney River, a fact which makes it unique among rivers of Vermont. The Poultney River is presently the only tributary to Lake Champlain in Vermont that has a walleye population large enough to be used as an egg source for the Lake Champlain Walleye and Fingerling Project.

Moving downstream from the Indian caves there is a corridor which is used by naturalists beginning at the Cogman Bridge and extending six miles to the "Elbow". The Poultney River has a longer and wider natural corridor than other Vermont rivers. There are sections of floodplain forest with productive wetlands including Billings Marsh, Finch Marsh, Schoolhouse Marsh, Reed Marsh and Ward Marsh Wildlife Management Area that protect the river by storing flood waters. The river here looks like it did in colonial times. There is natural riparian vegetation all along this corridor, as there is on about 90% of the Lower Poultney River. Tributaries in this area include Cogman Creek, Big Hollow Brook and Bumps Brook.

The Vermont Institute of Natural Science (VINS) uses this area for birding trips. The bird sightings include some that are uncommon nesters in Vermont. The floodplain along the river in West Haven contains the best population of Blue Gray Gnatcatchers in Vermont, a subject for a doctoral dissertation by Walter Ellison, Research Associate of VINS. This is near the confluence of the Hubbarton River and Poultney River.

The Elbow occurs where the Poultney River curves up to Lake Champlain. According to the history of the region, the Poultney River was wider and deeper in the 1700's and was a bay of the lake called East Bay. The river changed its course after a spring freshet and was filled in with sediment,

limiting the size of boats using the channel. Sunken boats from the War of 1812 can be seen at certain times of the year. These artifacts are on the National Register of Historic Places.

LOCAL ACTION

A River Committee comprised of Fair Haven residents interested in preserving the values of the Lower Poultney River began an inquiry into the possibility of designating the river as an Outstanding Resource Water. The initial stage of their work involved contacting local, regional, and state experts in the fields of biology, geology, recreation, history, and archeology.

The information they gathered did suggest that the Lower Poultney River supports exceptional natural, cultural, scenic, and recreational values. Reports were given by numerous research institutions and field study organizations that over the years have focussed on the Lower Poultney River. In addition, the interest expressed by local residents prompted other experts to complete new assessments that evaluate the Lower Poultney relative to other Vermont Rivers. The following section of this report outlines the conclusions of the studies and testimonies compiled by the Fair Haven River Committee.

Copies of letters, testimonies, and studies submitted to the River Committee and Water Resources Board by riparian landowners and other experts in the fields of biology, geology, recreation, history, and archeology are included in a report addendum available from:

Department of Environmental Conservation
Water Quality Division
Building 10 North
103 South Main Street
Waterbury, Vermont 05671-0408

(802) 244-6951

Appendix D of this report contains a directory of organizations and agencies that may have additional information about the Lower Poultney River and the conservation of outstanding resource waters. This list may be incomplete. If you are aware of additional interested parties that should be added, please contact the Water Quality Division.

**THE LOWER POULTNEY RIVER:
AN OUTSTANDING RESOURCE WATER**

SECTION II

**INVENTORY OF
RIVER USES AND VALUES**

RIVER INVENTORY

LOWER POULTNEY RIVER VALUES

An inventory of natural and cultural values was conducted by the Lower Poultney River Committee with the assistance of the Vermont and New York natural resource agencies, regional experts, and other area residents.

Undeveloped River Corridors

According to the Vermont River Study (1986), undeveloped corridors deserve special recognition in the state of Vermont because they provide essential habitat for fish, wildlife and plants, and solace and inspiration for people.

Most large stream corridors in Vermont are cleared for agriculture or development and have only limited amounts of natural vegetation. The Lower Poultney River (Figure 1) has one of the longest segments of natural stream corridor on any stream in Vermont stretching approximately twenty-two miles including:

1. Remote and Private Corridor - Approximately fifteen miles of this river segment runs through wooded ravines, alluvial forests and extensive marshlands, remote and isolated from human structures and land uses.
2. Extensive Vegetated Buffer - Approximately 90% of both river banks are naturally vegetated. The wooded areas and marshlands provide dense natural buffers. The adjacent lands have naturally vegetated buffers, 50-100 feet wide.
3. Only One Impoundment Area - Carver Falls hydroelectric dam is the only river impoundment and has existed since 1894.
4. Minimal Structures - The only structures within close proximity to the lower river corridor to remind one of the modern world are the power house at Carver Falls, four road crossings and a railroad crossing.

Wildlife and Natural Areas

Numerous natural areas are a second outstanding feature of the Poultney River. Natural areas are landscape features recognized as excellent examples of Vermont's natural heritage. Examples are river valleys, bogs, marshes, ponds and old growth forests. Others include glacial features, gorges and unique rock out-croppings. Natural areas provide wildlife, ecological, educational, scenic and contemplative values.

Wildlife Habitat and Rare and Irreplaceable Natural Areas

Much of the land bordering the river remains forested or as wetlands. The river corridor has a diversity of flora and fauna. This diversity is sustained by a "healthy" river: unpolluted water and minimal control over and interference in the natural processes which occur. It is this wholeness, this natural complexity, this relationship between land and water and the myriad of living creatures supported by both that makes the Lower Poultney a very special environment.

1. High Diversity of Natural Areas and Wildlife Species - the river-wetland-forest complex provides extensive edge habitat supporting large numbers and diversity of birds (nesting habitat for some birds and migratory stop-over habitat for others), mammals, reptiles, amphibians, and plant communities.

The Poultney River watershed encompasses an impressive array of natural communities--floodplain forests, oak-hickory-forest, rich northern hardwood forest, birch-beech-maple forest, emergent marsh, hardwood-cedar swamp, shrub swamp, calcareous outcrop, talus slope and others. The variety of natural community types and level of species diversity in the Poultney River drainage is outstanding on a statewide basis, and is comparable to, if not greater than, other rivers of similar size in Vermont.

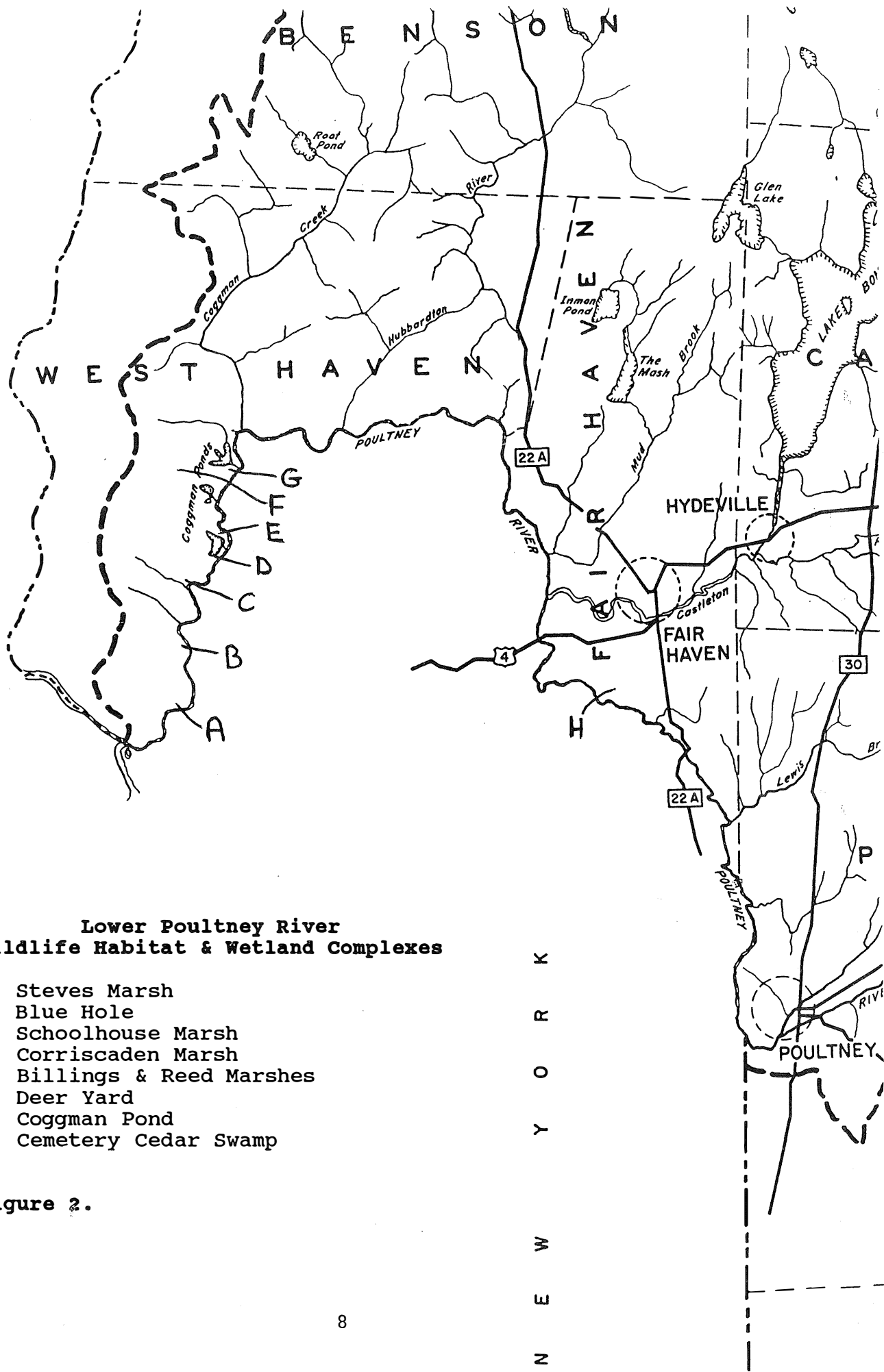
2. Unbroken Wildlife Migration Corridor - An undeveloped corridor and heavily vegetated riparian buffer strip provide the protective cover necessary for wildlife to move freely to feeding, nesting or denning sites.

3. Mapped Deer Wintering Area - A State-identified deer yard is associated with and lies adjacent to the Poultney River in West Haven (Figure 2).

4. Extensive Wetland Complexes - Large and diverse wetland types lie adjacent to and are interdependent with the Poultney River in Fair Haven and West Haven (Figure 2):

- a. Steves Marsh
- b. Blue Hole
- c. Schoolhouse Marsh
- d. Corrisbaden Marsh
- e. Billings & Reed Marshes
- f. Coggman Pond
- g. Cemetery Cedar Swamp

The Billings Marsh in West Haven has been identified by the Vermont Department of Environmental Conservation as a potential Class I wetland under the Vermont Wetland Rules.



Geology

Geologic and hydrologic features demonstrate the process of geologic changes and provide an interpretation of earth's history in Vermont. They often provide specialized habitats and support unusual and often rare plants. They provide visual diversity. According to Jenkins and Zika (1986), large geologic features along rivers are scarce or rare in the state, have intrinsic scientific interest, provide habitat for rare plants and often have great beauty. They are also often recreational sites.

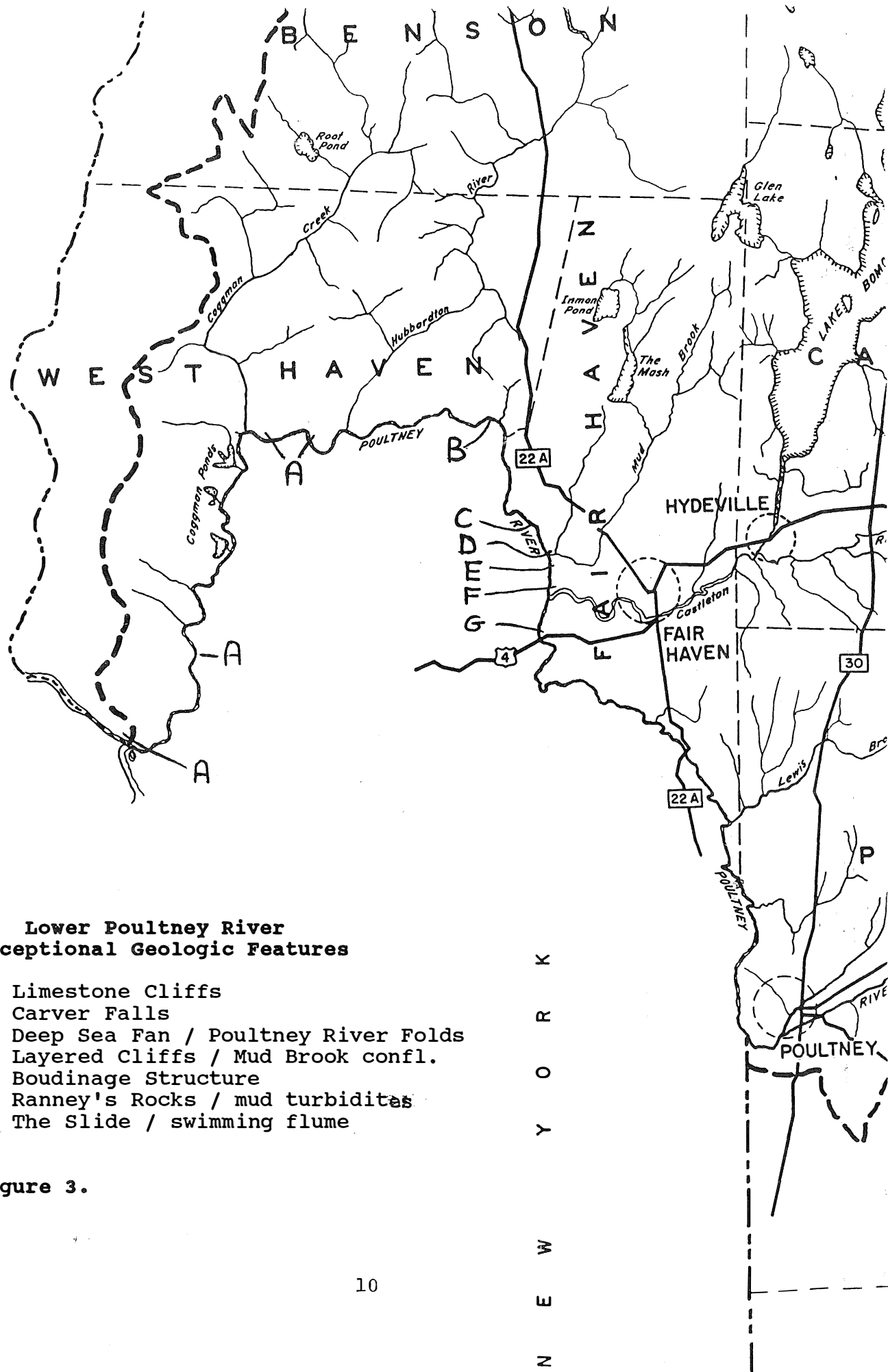
The Poultney River has many geological features that support these statements. The Poultney River is part of the Champlain Basin and is historically part of "Lake Vermont". The area is unique in the state.

The bedrock geology in the Fair Haven area is important in working out the geologic history of Vermont. In particular, the outcrops along the Poultney River, from West Street to Carvers Falls, provide much critical information. There are six exceptional geological features on the Poultney River (Figure 3).

1. The Slide. Slate outcroppings that are smooth and have a drop in elevation over an extensive area. In medium and low water, all of the water is contained in this long chute or slide.
2. Ranneys Rocks Including a) Mud Turbidites and b) Boudinage Structure.
a) Large glaciated outcrop of light gray, greenish gray and reddish tan slate with thin bands of white chert. b) Compacted carbonate mud layers.
3. Layered Cliffs. Layered cliffs at the confluence of Mud Brook have remnants of pebble/cobble glacial till.
4. Poultney River Folds/ Deep-sea Fan. These northernmost outcrops reveal millions of years of geologic history.
5. Carver Falls. The highest major falls in Vermont composed of two large falls at the head of a limestone gorge which is one of the best examples of this kind of gorge in Vermont.
6. Limestone Cliffs. The cliffs in Vermont are part of the Danby and Potsdam formations. These cliffs are some of the richest in Vermont for limestone-loving ferns.

Aquatic Habitat and Fisheries Within the River

There is a wide variety of fish habitats found in this stretch of the Poultney, ranging from high velocity riffles with rubble substrate to slow moving pools with sand substrate to seasonally flooded wetlands. The fish community of the Lower Poultney River is considered to be the most diverse identified in any Vermont river at this time.



**Lower Poultny River
Exceptional Geologic Features**

- A. Limestone Cliffs
- B. Carver Falls
- C. Deep Sea Fan / Poultny River Folds
- D. Layered Cliffs / Mud Brook conflu.
- E. Boudinage Structure
- F. Ranney's Rocks / mud turbidites
- G. The Slide / swimming flume

Figure 3.

1. High Diversity of Aquatic Habitats and Fish Species - The Poultney River contains a highly diverse ecosystem. The richness of the biotic community in the lower river benefits from connection with Lake Champlain. Recent fish surveys below Carver Falls, found 28 of the 87 fish species (32%) known to occur in the state of Vermont. When species found above Carver Falls and in the tributaries are included the list goes to 43 of 87 (49%). If you include historic surveys, the list exceeds 55% of all fish species known to occur in Vermont.

2. High Diversity of Freshwater Mussels - The Poultney River harbors twelve species of freshwater mussels, representing 70% of the total species diversity known to occur in Vermont. It is a highly diverse mollusc community, one of only two of its kind currently known in Vermont.

3. Walleye Spawning Critical to Lake Champlain Fingerling Project - The Poultney River/East Bay is an important spawning area for walleyes from Lake Champlain. It is presently the only tributary to Lake Champlain in Vermont that has a large enough walleye spawning run so that it can be used as an egg source for the Lake Champlain Fry and Fingerling Project.

4. Naturally Reproducing Trout Populations Upstream of Carver Falls - There are naturally sustained brown trout exist above Carver Falls.

Threatened, Endangered and Rare Species In and Along the River

The Poultney River and associated habitats, and the species living there, represents a valuable and irreplaceable part of Vermont's natural heritage.

1. Uncommon/Rare Bird Nesters in Vermont below Carver Falls.

Pied-billed Grebe (rare)	Common Moorhen
American Bittern	Golden-winged Warbler
Least Bittern (rare)	Grasshopper Sparrow (rare)
Blue-gray Gnatcatcher	

2. Rare Birds Known to Utilize Habitat in the Poultney River Corridor.

Bald Eagle (endangered)	Prothonotary Warbler
-------------------------	----------------------

3. Uncommon/Rare Reptiles Found In or Adjacent to the Poultney River.

Stinkpot (Musk Turtle)	Map Turtle (uncommon)
Timber Rattlesnake (endangered)	Black Rat Snake
Five-lined Skink (endangered)	

4. Rare Mussels Found in the Poultney River.

Pink Heelsplitter Fragile Papershell

Black Sandshell - proposed threatened status in Vermont,
may now be restricted to the Poultney River.

5. Uncommon/Rare Fish Below Carver Falls.

Bridal Shiner * Blackshin Shiner *
Silver Redhorse * Eastern Sand Darter **
Channel darter *

*-species of special concern in Vermont
**-threatened in Vermont, endangered in New York State

6. Uncommon/Rare Vermont Plant Species In the Poultney River Corridor.

Wall Rue Aplenium * Slender Cliffbrake *
Branching Bur-reed ** Green Dragon (Threatened)
Yellow Oak * Yellow Pimpernell ** (upland)
Hairy Beardtongue ** (upland) False Pimpernell *
Downy Arrowwood * (upland) Upland Boneset * (upland)
Yellow Water Crowfoot ** Pignut Hickory **

* Uncommon
** Rare

7. Significant Natural Area - Cemetery Cedar Swamp in Fair Haven.
The swamp harbors rare/uncommon plant species and is classified as a
hardwood northern white cedar swamp.

Yellow Bartonnia (rare) False Cyperus (rare)
Thin-flowered Sedge (rare) Showy Lady's-slipper
Small Yellow Lady's-slipper

Well-Preserved Archeological Resources and Historic Sites

Due to the Poultney River corridor's undeveloped character and the
existence of intact archeological sites that relate to many different cultural
groups that lived, invaded or survived in this part of Vermont, the Poultney
River corridor is an unusual and outstanding archeological resource. The
potential for additional prehistoric and historic archeological sites to exist
within the Poultney River corridor is extremely high.

Known Prehistoric sites on the Poultney River include (Figure 4):

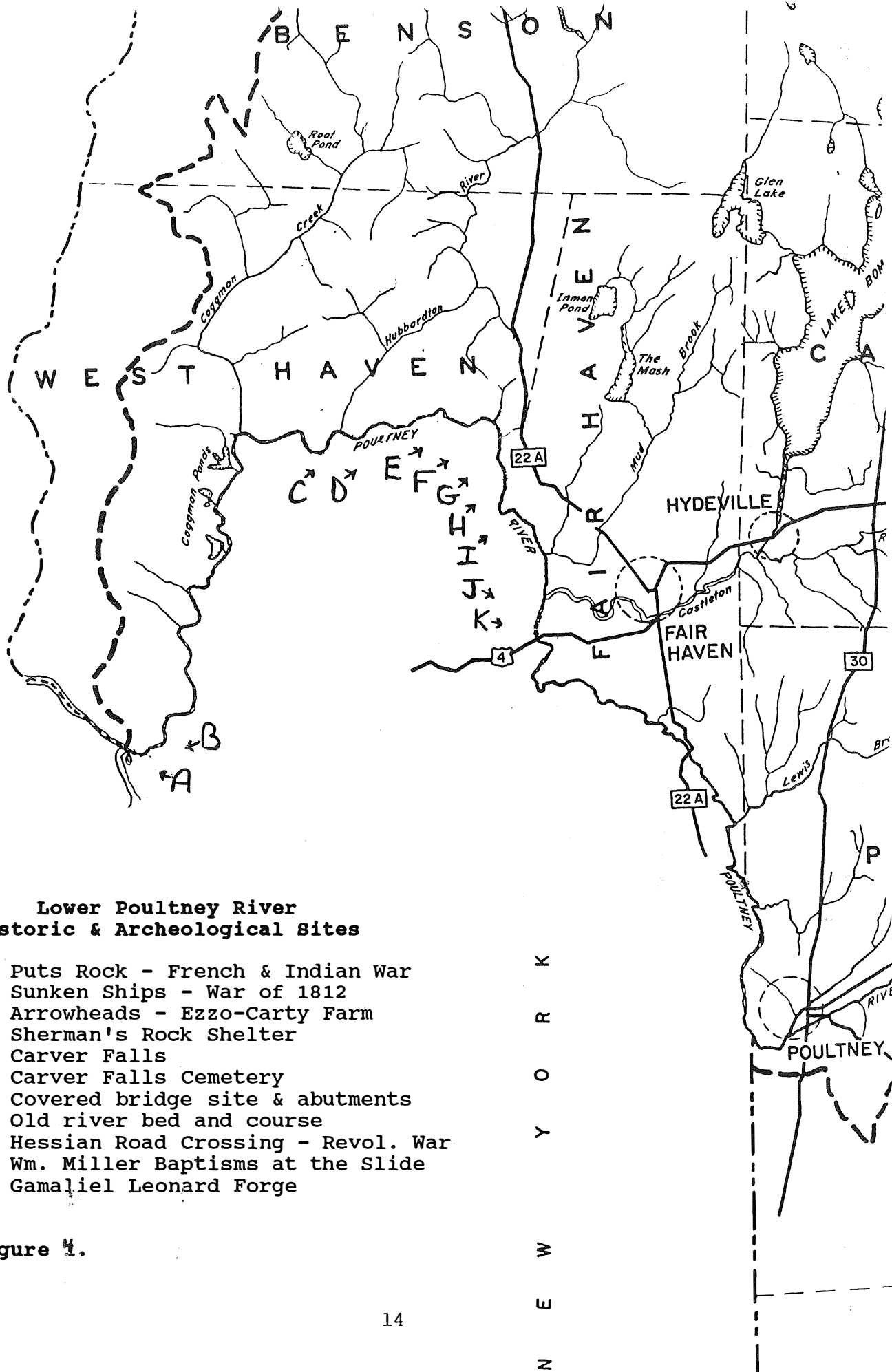
1. Rock Shelters. The Poultney River Cave and the nearby Bunker Farm Rockshelter site were found by Theodore Sherman, described for American Antiquity.
2. Native American Artifacts. Arrowheads and other artifacts have been found on the old Carty Farm and the Ezzo Farm.

Known Historic sites on the Poultney River include (Figure 4):

1. The Shipwreck "Linnet". Evidence that this river was used during the French and Indian War and the War of 1812. A sunken boat is on the National Register of Historic Places.
2. The Hessian Road and Landing Place. Approximately 3000 Hessian soldiers, during the Revolutionary War, crossed the Poultney River and encamped on Hessian Bowl Hill for three weeks (Murtagh, 1985).
3. Original Baptismal Site for Seventh Day Adventist. Prophet William Miller, founder of the Seventh Day Adventist Church, had a home in Hampton, New York, near the Poultney River. His followers were said to be baptized by immersion in the river in the area known as "The Slide".
4. Covered Bridge. Evidence of old covered bridge destroyed in the 1927 flood is still present.
5. Carver Falls Cemetery. Old cemetery with a headstone from 1788. General Jonathan Orme was buried here in 1850.
6. Carver Falls Powerhouse. The stone powerhouse was built in 1894. Originally the Carver Falls area was expected to be the center of town when West Haven and Fair Haven were one town. The town was divided in 1792 and the center of the two towns were located elsewhere.
7. Other Remnants of Vermont's Industrial Past. Mill sites and forges found near the Poultney River.
 - * Gamaliel Leonard Forge - one of the earliest Vermont ironworks.
 - * Colburn Furnace - old blast furnace near Carver Falls, never used.
 - * Carver Falls Mill Sites - before hydroelectric power use.

Vermont historic sites provide an important link to the roots of Vermont culture and help maintain the character of Vermont river corridors.

Figure 4. shows only the general locations of the historical and archeological sites listed above. Several of these sites are very sensitive to over use. For more information on how these cultural resources might be preserved contact the Division of Historic Preservation, 58 East State Street, Montpelier, Vermont 05602 at (802) 828-3226.



**Lower Poultney River
Historic & Archeological Sites**

- A. Puts Rock - French & Indian War
- B. Sunken Ships - War of 1812
- C. Arrowheads - Ezzo-Carty Farm
- D. Sherman's Rock Shelter
- E. Carver Falls
- F. Carver Falls Cemetery
- G. Covered bridge site & abutments
- H. Old river bed and course
- I. Hessian Road Crossing - Revol. War
- J. Wm. Miller Baptisms at the Slide
- K. Gamaliel Leonard Forge

Figure 4.

LOWER POULTNEY RIVER USES

The undeveloped corridors, natural areas, geologic features, wildlife habitat, rare species and fisheries of the Lower Poultney River support human uses of the river and river corridor that are themselves considered outstanding. Boating, fishing, research and educational opportunities, and the predominance of scenic areas contribute to the list of unique experiences offered by visiting the Lower Poultney River.

Research and Educational Resources

The Poultney River corridor, which has been the center of human activity in the past, is now a remote and undisturbed place amidst busy New England towns and cities and offers tremendous opportunities to explore and understand our natural and cultural history.

1. Geologic Features Readily Accessible to the Public and Actively Used and Studied by Universities from throughout New England.

- * Castleton State College
- * Dartmouth University
- * University of Massachusetts
- * University of Vermont
- * State University of New York (SUNY) geology field camp
- * Middlebury College
- * Colgate University
- * Norwich University
- * Bennington College

Professor Ray Coish, Chairman of the Middlebury College Geology Department has said that the outcrops along the Poultney River from West Street to Carver Falls provide much crucial information in working out the geologic history of Vermont. "These exposures have been studied in many ways. Reconnaissance mapping in the early 1960's outlined the main Taconic features. More detailed mapping resulted from the studies by doctoral candidates at SUNY Albany and elsewhere. The area has been a focus for a SUNY field camp, and other geology departments also use the outcrops. Four seniors at Middlebury prepared thesis on various aspects of the Taconic geology. Middlebury College undergraduates study them every year. Brewster Baldwin, who just retired from teaching at Middlebury, published two guide books (1979, with Andrew Raiford of Castleton) and an article on the Poultney River outcrops."

Andrew Raiford, Associate Professor of Geology, Castleton State College, has said, "The two outcrops on the Poultney River are critical to my geology program at Castleton State College. We take several classes each year to work at both places. The northernmost outcrop is extremely important because of the orientation of the exposure and the unique structures present. Geology classes from all over the east come to Fair Haven to study the outcrop. The southernmost outcrop displays unique channel fills and shows an overall folded anticlinal and synclinal structure. This is a rare opportunity to do field mapping in this type of fold."

2. Archeological and Historic Sites Offer Tremendous Research Potential.

- * Cave sites used by Poultney High School social science classes.
- * Hessian road and landing studied extensively by independent historian.
- * State Division for Historic Preservation highly values the research potential of unique Poultney River cultural history sites that are well preserved in the river's undeveloped corridor.

3. Biological Diversity Interests Naturalists from Vermont and New York.

- * Vermont Institute of Natural Science (VINS).
- * Pember Museum, Granville, New York.
- * Vermont and New York Nature Conservancies.
- * Vermont and New York Natural Heritage Programs.
- * University of Vermont graduate studies.
- * Poultney River Watch Program.

Nancy Martin, Naturalist, Vermont Institute of Natural Science has said, "The Vermont Institute of Natural Science is familiar with the stretch of the Poultney River and East Bay in the town of West Haven from the Book Bridge west and south to the area known as the "Elbow". VINS has conducted bird-watching trips for our members to the area several times in the past fourteen years. Our birding trips are not restricted to birds as we also spend time looking at plants, habitats and other wildlife we encounter along the way."

Delight Gartlein, Director, Pember Museum, Granville, New York reports: The Pember Museum in Granville, New York has conducted nature hikes and outings in West Haven on or along the Poultney River.

4. Poultney River Is Part of the Champlain-Adirondack Biosphere Reserve.

The Champlain-Adirondack Biosphere Reserve is the fourth largest such reserve in the world. It is under the auspices of UNESCO's Man and the Biosphere Program and encompasses 10,000,000 acres of land and water in New York and Vermont.

Exceptional Scenic Values

Scenic Areas and Natural Corridor Views

The river corridor is formed by trees and shrubs along the river banks and directs the viewer's eye to the scenic aspects of the river and its immediate environment. The Lower Poultney River is unique among the lowland segments of major Lake Champlain tributaries for the length and width of this undeveloped, naturally vegetated corridor. The canoeist travels long distances through a "tunnel" of maple trees, over-canopied with taller cottonwood trees. Part of the scenic, recreational opportunity is the feeling

of isolation in the natural world that is also unique for visitors along Vermont rivers.

Scenic Views of Natural Areas and Geological Features

Breaks in the trees along the Poultney River provide a dramatic shift in the scenic experience from one of riverine detail and enclosure to one of expansive landscape views outside the river's immediate environment. The lower river from Carver Falls to South Bay is exceptionally scenic. The ravine below Carver Falls has riverside cliffs and is one of the few examples of a recessional limestone gorge in the state. Below the gorge there are fine views of the surrounding hills and valley, and then a spectacular landscape where the river circles Austin Hill and enters South Bay. The surrounding views from the Lower Poultney River are exceptional in the state.

Exceptional Recreational Values

Fishing Experience

Game fish diversity above and below Carver Falls and the isolated setting combine to make the Poultney River a favorite destination of local anglers. The Lower Poultney River is highly recommended by anglers because:

- * Anglers of varying skills can always catch fish below the Falls.
- * Large trout, in the 2-4 lb. range, can be caught above the Falls.
- * Large walleye, catfish, trout, bass, and perch can be caught below the Falls.
- * Bait fish are abundant throughout the Lower Poultney River.
- * The excitement of not knowing what you will catch is thought to be a unique enticement for anglers to fish the Lower Poultney River.

Boating Experience

Most accounts of the Poultney River are from the perspective of the canoeist. While it is not the only way to access the river, it is the method of choice for recreationists and naturalists. The ledges of the upper segment provide challenge to experienced paddlers and the flatwater of the lower segment invites paddlers of all skill levels. The boating experience of the entire Lower Poultney River is outstanding due to the long season, visual interest, and exceptional wildness, privacy and naturalness of the river corridor (Jenkins, 1988)

Wildlife Observation

Naturalists use the Poultney River and corridor for wildlife observation and study of unique natural communities. VINS, The Nature Conservancy, the Pember Museum, and others use the river for group educational/recreational purposes. The great diversity of plants, animals and habitats gives the Lower Poultney River corridor exceptional value for wildlife observation.

Hydroelectric Use

The Carvers Falls hydroelectric project is presently owned and operated by the Central Vermont Public Service Corporation (CVPSC) of Rutland, Vermont. The project features a 34 foot high, 450 foot long dam which creates a 3/4 mile long, 10 acre impoundment. The river is bypassed by a 600 foot penstock and a powerhouse, which contains two turbines with capacities of 600 kW and 1200 kW. The Carvers Falls hydroelectric dam and its access road provide the only public vehicular access to the Carvers Fall gorge area for scenic viewing, fishing or educational purposes. There is a canoe launch to the impoundment and a primitive scenic overlook to the falls. A steep trail from the powerhouse provides access to the river below the project. A more detailed description of the CVPSC facility at Carvers Falls is contained in the project site report prepared by DesMeules and Parks (1988) and included in Appendix B.

Hydroelectric facilities that are located by a navigable waterway and produce electricity for interstate transmission must be licensed with the Federal Energy Regulatory Commission (FERC). On January 25, 1991, FERC issued an order concluding that the Lower Poultney River is a navigable waterway of the United States and requiring CVPSC to apply for a license for the facility by December 1993. A licensing schedule submitted by CVPSC has been included in Appendix B. An environmental review of the Carvers Falls facility and its operation will be a part of the FERC licensing process. Changes in state and federal regulatory responsibilities resulting from the ORW designation of Lower Poultney River are discussed in Section IV of this report.

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**THE LOWER POULTNEY RIVER:
AN OUTSTANDING RESOURCE WATER**

SECTION III

VERMONT ORW DESIGNATION

ORW DESIGNATION PROCESS

The Lower Poultney River Committee, having completed an inventory of exceptional river values and uses, worked for over a year (1989-1990) educating others in the Fair Haven and West Haven communities about the unique characteristics of the Lower Poultney River. River canoe trips and river celebrations on the village green were organized (Appendix A). Landowners were contacted with information about the river studies and outstanding resource waters designations (Appendix A). The purpose of these activities were to build support for the designation and create a greater awareness of the Lower Poultney River.

Members of the Rivers Committee met with the staff of the Vermont Rivers Assistance Program of the Agency of Natural Resources to discuss the ORW designation process and the best ways to develop an effective petition to the Water Resources Board. The group reviewed the following section of 10 V.S.A. Chapter 49 *Protection of Navigable Waters and Shorelands*:

§ 1424a. OUTSTANDING RESOURCE WATERS

(a) The board, on its own motion, or upon petition by a state agency, a municipality, or 30 or more persons who can demonstrate an interest under subsection (c) of this section, shall hold a public hearing, in a timely manner, on the question of whether particular waters would be designated as outstanding resource waters, or whether an existing designation should be amended or repealed. The hearing shall be held convenient to the waters in question, or in a county where the waters are located.

(b) Notice and a copy of the petition or board motion shall be provided to the municipality, the municipal and regional planning commissions where the waters are located, and the secretary of the Agency of Environmental Conservation. The board shall request the clerk of the town or towns where the waters are located to post a copy of the notice. The board may forward the notice and a copy of the petition or motion to any state agency, municipality, organization, or person the board deems appropriate. Notice shall also be published in a newspaper generally circulating in the area where the waters are located not less than 21 days before the date of the hearing. The hearing shall be conducted as a contested case under 3 V.S.A. chapter 25.

(c) In addition to parties in interest, as determined by board rule, the following shall be parties:

- (1) those required to receive notice;
- (2) those owning property adjoining the waters who, within 21 days of the publication of notice, request to be heard;
- (3) those organizations or groups which, within 21 days of the publication of notice, request to be heard and which can establish:
 - (i) that their members have used or enjoyed the waters in question.
 - (ii) that designation clearly is of interest to their membership, or
 - (iii) that they may be affected by a decision on designation.

(d) In making its decision, the board may consider, but shall not be limited to considering the following:

- (1) existing water quality and current water quality classification,
- (2) the presence of aquifer protection areas,
- (3) the waters' value in providing temporary water storage for flood water and storm runoff,

- (4) the waters' value as fish habitat,
- (5) the waters' value in providing or maintaining habitat for threatened or endangered plants or animals,
- (6) the waters' value in providing habitat for wildlife, including stopover habitat for migratory birds,
- (7) the presence of gorges, rapids, waterfalls, or other significant geologic features,
- (8) the presence of scenic areas and sites,
- (9) the presence of rare and irreplaceable natural areas,
- (10) the presence of known archeological sites,
- (11) the presence of historic resources, including those designated as historic districts or structures,
- (12) existing usage and accessibility of the waters for recreational, educational, and research purposes and for other public uses,
- (13) studies, inventories and plans prepared by local, regional, statewide, national, or international groups or agencies, that indicate the waters in question merit protection as outstanding resource waters,
- (14) existing alterations, diversions or impoundments by permit holders under state or federal law.

(e) Upon consideration of the evidence, the board shall designate the waters as outstanding resource waters if it finds that they have exceptional natural, recreational, cultural or scenic values. Designation as outstanding resource waters shall not invalidate the terms of existing permits issued by the state or federal government.

THE ORW PETITION

The towns of Fair Haven and West Haven elected to become the petitioners to the Water Resources Board for an ORW designation of the Lower Poultney River (Appendix A). They both appointed the River Committee to act on their behalf in preparing the petition and gathering the testimony of expert witnesses for the contested case proceedings before the board. The Town of Hampton, New York also wrote a letter of support (Appendix A).

The RIVER JOURNEY and RIVER INVENTORY presented in this report include information that was part of the petition. The entire petition was entered as evidence before the Board at the contested case hearing. Further information concerning the exceptional values and uses of the Lower Poultney River, prepared as prefiled testimony from the petitioners' witnesses, the Agency of Natural Resources, and other parties were also entered as evidence (contained in the Lower Poultney River ORW report addendum, see page 5).

Following the contested case hearing, the petitioners and the Agency of Natural Resources filed proposed "findings of fact" jointly with the Board. Central Vermont Public Service Corporation also submitted proposed findings (Appendix B).

The Water Resources Board did designate the Lower Poultney River as an Outstanding Resource Water (10 V.S.A. Section 1424a). The Board's Findings of Fact, Conclusions of Law and Order are presented on the following pages.

State of Vermont
Water Resources Board

RE: Poultney River Authority 10 V.S.A. § 1424a
Outstanding Resource Water
Docket No. 90-01

Finding of Fact, Conclusions of Law and Order

On February 14, 1991, the Water Resources Board (Board) conducted a hearing on the petition to have the Poultney River, from the Poultney/Fair Haven town line to Lake Champlain (Lower Poultney River), designated as an Outstanding Resource Water (ORW). The evidence in the record convincingly demonstrates that all portions of the Lower Poultney River should be designated as ORWs, pursuant to 10 V.S.A. § 1424a, because they have exceptional natural, cultural, and scenic values.

Findings of Fact

1. The waters for which designation is sought are the mainstem of the Poultney River beginning at the Poultney/Fair Haven town line and continuing to the headwaters of Lake Champlain, referred to as the "elbow" (Lower Poultney River).
2. The petition itself, was submitted by the Poultney River Citizens Committee (River Committee) and the Agency of Natural Resources (ANR), was admitted into the record without rebuttal or challenge.
3. No party opposed designation of the Lower Poultney River as an ORW. Two parties gave oral and/or written testimony describing existing uses of the Lower Poultney River for hydropower generation and irrigation but did not take issue with the evidence that the Lower Poultney River has exceptional values. All other testimony supported the designation.

Natural Values

4. The Lower Poultney River has exceptional natural values that merit designation. Many of the species, identified below, are protected under State and/or Federal law. Unless otherwise noted, "endangered" or "threatened," in these findings of fact, refers to its State status.
5. Approximately fifteen miles of this river segment runs through wood ravines, alluvial forests and extensive wetlands.
6. The Poultney River has an extensive vegetated buffer. Approximately 90% of both river banks are naturally vegetated. The wooded areas and marshlands associated with the river provide dense natural buffers.

7. Carver Falls hydroelectric dam is the only river impoundment on the Poultney River and it has existed since 1894. (See Exhibit #2). Over the years, the generating facilities at the Carver Falls site have been upgraded and currently tie into Central Vermont Public Service Corporation's subtransmission grid, to the benefit of all its electrical consumers. The only structure within close proximity to the lower river corridor is the power house at Carver Falls. Four roads and a railroad track cross the river.
8. The Poultney River provides exceptional aquatic habitat. There is a wide variety of fish habitat found in the Poultney River, ranging from high velocity riffles with rubble substrate to slow moving pools with sand substrate, to seasonally inundated wetlands. The Poultney River's fish community is the most diverse identified in a river in Vermont at this time.
9. The Poultney River contains a highly diverse ecosystem. The richness of the biotic community in the lower river benefits from the river's connection with Lake Champlain. Recent fish surveys below Carver Falls found 28 of the 87 fish species (32%) known to occur in the state of Vermont. When species found above Carver Falls and in the tributaries are included, the list goes to 43 of 87 (49.4%). If historic surveys are included, the list exceeds 55% of all fish species known to occur in Vermont.
10. The Poultney River harbors twelve species of fresh water mussels, representing 70% of the total species diversity known to occur in Vermont. This mollusc community is highly diverse and is one of only two of its kind currently known in Vermont. Some of the rare mussels found in the Poultney River include the pink heelsplitter, the fragile papershell, and the black sandshell.
11. The Poultney River/East Bay is an important spawning area for walleyes from Lake Champlain. It is presently the only tributary to Lake Champlain in Vermont that has a walleye spawning run which is large enough to be used as an egg source for the Lake Champlain Fry and Fingerling Project. There is a naturally reproducing population of brown trout which exists above Carver Falls.
12. The Poultney River has exceptional wildlife habitat. Much of the land bordering the river remains in woods or wetlands. The river corridor has an inherent balance and a healthy diversity of flora and fauna. The river-wetland-forest complex provides extensive "edge" habitat supporting large numbers and diversity of birds (including nesting and migratory), mammals, reptiles, amphibians, and plant communities.

13. The Poultney River watershed encompasses an array of natural communities, including floodplain forest, oak-hickory-forest, rich northern hardwood forest, birch-beech-maple forest, emergent marsh, hardwood-cedar swamp, shrub swamp, calcareous outcrop, and talus slope. The variety of natural community types and level of species diversity in the Poultney River drainage is exceptional on a statewide basis, and is comparable to, if not greater than, other rivers of similar size in Vermont.
14. A heavily vegetated riparian buffer strip provide the protective cover necessary for wildlife to move freely to feeding, nesting or denning sites. A state-identified deer yard is associated with and lies adjacent to the Poultney River in West Haven.
15. Large and diverse wetland types lie adjacent to and are interdependent with the Poultney River in Fair Haven and West Haven, including Cemetery Cedar Swamp, Coggman Pond, Billings and Reed Marsh, Corriscaden Marsh, Schoolhouse Marsh, Blue Hole, and Steves Marsh.
16. Below Carver Falls there are several types of uncommon or rare bird species known to nest within the riparian zone of the river. These include, the Pied-billed Grebe (rare), the Common Moorhen, the American Bittern, the Golden-winged Warbler, the Least Bittern (rare), the Grasshopper Sparrow (rare), and the Blue-gray Gnatcatcher. The following rare birds are known to utilize the habitat in the Poultney River corridor: the bald eagle (endangered), and the prothonotary warbler.
17. The stinkpot (musk turtle), map turtle (uncommon), timber rattlesnake (endangered), black rat snake, and five-lined skink (endangered), represent uncommon or rare reptiles which have been found in or adjacent to the Poultney River.
18. The following uncommon or rare fish have been identified below Carver Falls: bridal shiner, blackshin shiner; silver redhorse; eastern sand darter (threatened); and channel darter.
19. The Poultney River corridor contains the following rare or uncommon Vermont plant species: Wall Rue *Asplenium*; Slender Cliffbrake; Branching Bur-reed (rare); Green Dragon (threatened); Yellow oak; False pimpernell; Yellow water crowfoot (rare); and Pignut hickory.
20. A number of rare or uncommon plant species grow in the cedar swamp located in Fair Haven which is classified as a hardwood northern white cedar swamp. The rare or uncommon plant species include the following: Yellow *Bartonia* (rare); False *Cyperus* (rare); Thin-flowered sedge (rare); Showy Lady's slipper; and Small yellow Lady's slipper.

21. The Poultney River has unique geologic features. The bedrock geology in the Fair Haven area provides important insight into the geologic history of Vermont. In particular, the outcrops along the Poultney River, from West Street to Carvers Falls, provide critical information on the geologic history of Vermont. There are six exceptional geological features on the Poultney River.
- a. the "slide:" Slate outcroppings that are smooth and have a drop in elevation over an extensive area. In medium and low water, all of the water is contained in this long chute or slide.
 - b. "ranneys rocks" including (1) mud turbidities and (2) boudinage structures; (a) Large glaciated outcrop of light gray, greenish gray and reddish tan slate with thin bands of white chert; (b) Compacted carbonate mud layers.
 - c. "layered cliffs." Layered cliffs at the confluence of Mud Brook have remnants of pebble/cobble glacial till.
 - d. "Poultney River folds/deep sea fan." These northernmost outcrops reveal millions of years of geologic history.
 - e. "Carver Falls." Carver falls is the highest major falls in Vermont and is composed of two large falls at the head of a limestone gorge. The falls is one of the best examples of this kind of gorge in Vermont.
 - f. "Limestone-type Cliffs." The cliffs in Vermont are part of the Danby and Potsdam formations. These cliffs are some of the richest in Vermont for limestone loving ferns.

Cultural Values

22. The Lower Poultney River has exceptional cultural values which merit designation.
23. Due to the existence of the intact archeological sites along the Poultney River that relate to many different cultural groups that lived, invaded or survived in this part of Vermont, the Poultney River is an unusual and outstanding archeological resource. The potential for additional prehistoric and historic archeological sites to exist on the Poultney River is extremely high. There are a number of known prehistoric sites on the Poultney River, including the following:
- a. Rock Shelters. The Poultney River Cave and the nearby Bunker Farm Rockshelter site were found by Theodore Sherman, and were described for American Antiquity.

- b. Native American Artifacts. Arrowheads and other artifacts have been found on the old Carty farm and the Ezzo farm.
24. Known historic sites on the Poultney River include:
- a. The Shipwreck "Linnet" is evidence that this river was used during the French and Indian War and the War of 1812. This sunken boat is on the National Register of Historic Places.
 - b. The Hessian Road and Landing Place. Approximately 3000 Hessian soldiers, during the Revolutionary War, crossed the Poultney River and encamped on Hessian Bowl Hill for three weeks.
 - c. Covered Bridge. Evidence of an old covered bridge destroyed in the 1927 flood is still present.
 - d. Carver Falls Cemetery. This old cemetery has a headstone from 1788, and General Jonathan Orme was buried here in 1850.
 - e. Carver Falls Powerhouse. This stone powerhouse was built in 1894. Originally the Carver Falls area was expected to be the center of town when West Haven and Fair Haven were one town. The town was divided in 1792 and the center of the two towns were located elsewhere.
25. Other remnants of Vermont's industrial past have been found near the Poultney River, including the Gamaliel Leonard Forge (one of the earliest Vermont ironworks), an unused Colburn furnace and the Carver Falls mill sites.
26. The Poultney River which has been the center of human activity in the past, offers tremendous opportunities to explore and understand our natural and cultural history.
27. The geologic features of the river are readily accessible to the public and actively used and studied by universities from throughout New England including Middlebury College Geology Department, and Castleton State College.
28. The archeological and historic sites associated with the Poultney River offer tremendous research potential. Cave sites associated with the Poultney River have been used by Poultney High School social science classes. The Hessian road and landing have been studied extensively by an independent historian. Also, the State Division of Historic Preservation highly values the research potential of unique Poultney River cultural history sites that are well-preserved.

29. Poultney River is part of the Champlain-Adirondack Biosphere Reserve. The Champlain-Adirondack Biosphere Reserve is the fourth largest such reserve in the world. It is under the auspices of UNESCO's Man and the Biosphere Program and encompasses 10,000,000 acres of land and water in New York and Vermont.

Scenic Values

30. The Lower Poultney River has exceptional scenic values which merit designation.
31. The river corridor is formed by trees and shrubs along the river banks and directs the viewer's eye to the scenic aspects of the river and its immediate environment. The Lower Poultney River is unique among the lowland segments of major Lake Champlain tributaries for the length and width of this undeveloped, naturally vegetated corridor. The canoeist travels long distances through a "tunnel" of maple trees, over-canopied with taller cottonwood trees. Part of the scenic, recreational opportunity is the feeling of isolation in the natural world that is also unique for visitors along Vermont rivers.
32. Breaks in the trees along the Poultney River provide a dramatic shift in the scenic experience from one of riverine detail and enclosure to one of expansive landscape views outside the river's immediate environment. The lower river from Carver Falls to South Bay is exceptionally scenic. The ravine below Carver Falls has riverside cliffs and is one of the few examples of a recessional limestone gorge in the state. Below the gorge there are fine viewsheds of the surrounding hills and valley, and the spectacular landscape where the river circles Austin Hill and enters South Bay.

Recreational Values

33. Game fish diversity below Carver Falls and the isolated setting combine to make the Poultney River a favorite destination of local anglers. It is enjoyable for anglers of varying skills.
34. Most accounts of the Poultney River are from the perspective of the canoeist. While it is not the only way to access the river, it is the method of choice for recreationists and naturalists. The ledges of the upper segment are a challenge to experience paddlers and the flatwater of the lower segment invites paddlers of all skill levels. The boating experience of the entire Lower Poultney River is outstanding due to the long season, visual interest, and exceptional privacy and naturalness of the river.

35. Naturalists and school groups use the Poultney River for wildlife observation and study of unique natural communities. VINS, The Nature Conservancy, the Pember Museum, and others use the river for group educational and recreational purposes. The great diversity of plants, animals and habitats associated with the Lower Poultney River provide for exceptional wildlife observation.
36. Although the Poultney River provides for exceptional canoeing for those seeking privacy and wildlife observation, and the river is important for its diversity of game fish, especially below Carver Falls, the evidence before the Board is insufficient to conclude that the Poultney River has exceptional recreational values that merit designation.
37. The Poultney River, as described in the petition, has exceptional natural, cultural and scenic values.

Conclusions of Law

Under 10 V.S.A. § 1424a the Board is vested with the authority of determining whether particular waters should be designated as outstanding resource waters. 10 V.S.A. § 1424a (a). The Board is required to designate the waters as outstanding resource waters if the Board finds that the waters "have exceptional natural, recreational, cultural or scenic values." 10 V.S.A. § 1424a (e) (emphasis added). After a public hearing and upon consideration of the evidence, the Board must designate the waters as outstanding resource waters if the Board finds that the waters in question are exceptional for any one of the four values listed in subsection "e."

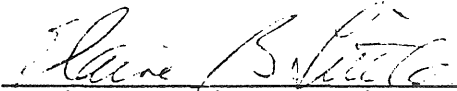
The statute also provides a series of fourteen items that the Board may consider in making its decision. 10 V.S.A. § 1424a (d). This list of fourteen factors is not intended to be exhaustive. The statute directs that the Board "may consider, but shall not be limited to considering the following" fourteen items. Id. However, the inquiry is not limitless. The Board can not consider irrelevant or immaterial evidence. 3 V.S.A. § 810. There is no indication that the Legislature intended the Board to make findings under these considerations as if they were criteria, rather they provide guidance as to the nature and breadth of the inquiry intended by the legislature. Therefore, the findings have been organized under the hearings of the four values listed in § 1424a (e) - natural, recreational, cultural, and scenic. Findings relating to the fourteen considerations, if applicable, have been subsumed under the four more general headings.

Order

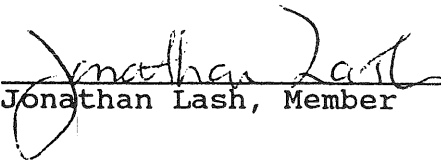
The waters of the Poultney River are exceptional for their natural, cultural, and scenic values, and are accordingly outstanding resource waters.

Dated at Montpelier, Vermont, this 28th, day of June, 1991.

Water Resources Board


Elaine B. Little, Vice-Chair


Mark DesMeules, Member


Jonathan Lash, Member

**THE LOWER POULTNEY RIVER:
AN OUTSTANDING RESOURCE WATER**

SECTION IV

**AGENCY OF NATURAL RESOURCES
MANAGEMENT PLAN**

AGENCY OF NATURAL RESOURCES MANAGEMENT PLAN FOR THE LOWER POULTNEY RIVER

In 1987, the Vermont Legislature passed Act 67, "An Act Relating to Establishing a Comprehensive State Rivers Policy". A part of the new law provides a mechanism for designating and protecting those rivers and streams that have "exceptional natural, cultural, recreational or scenic values." A designation will affect a wide range of Agency of Natural Resource responsibilities with respect to conservation of ORW rivers.

STATE WATER QUALITY & BASIN PLANNING POLICY

It is 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 (10 V.S.A. § 1250). It is also the water quality policy of the State of Vermont to:

- ☛ protect and enhance the quality, character and usefulness of its surface waters and to assure the public health;
- ☛ maintain the purity of the drinking water;
- ☛ control the discharge of wastes to the waters of the state, prevent the degradation of high quality waters and prevent, abate or control all activities harmful to water quality;
- ☛ assure the maintenance of water quality necessary to sustain existing aquatic communities;
- ☛ provide clear, consistent and enforceable standards for the permitting and management of discharges;
- ☛ protect from risk and preserve in their natural state certain high quality waters including fragile high-altitude waters, and the ecosystems they sustain;
- ☛ manage the waters of the state to promote a healthy and prosperous agricultural community, to increase the opportunities for the use of the state's forest, parks and recreational facilities and environmentally sound development.

Outstanding resource waters, so designated, shall constitute state protected waterways that are constitutionally recognized by federal regulatory agencies (PURPA § 10(a), 16 U.S.C. 800). ORW designations shall also constitute one element of the Vermont comprehensive plan for rivers conservation (Legislative policy and intent. 1987, No. 67, Section 1).

MANAGEMENT GOAL

For that portion of the Lower Poultney River within Vermont borders, the State will seek to manage certain activities affecting the water quality, flows, course, current, and cross-section of the Lower Poultney River to preserve and enhance the exceptional natural, cultural, scenic, and recreational values of the river and river corridor (i.e., those uses and values described in Section III of this report: Findings 4-37).

MANAGEMENT ACTIONS

A. STREAM ALTERATIONS

An Outstanding Resource Waters (ORW) designation changes the Agency of Natural Resources' specific regulatory responsibilities with respect to stream alteration projects involving the Lower Poultney River.

10 V.S.A. Chapter 41 - Regulation of Stream Flow - statute applies to all rivers regardless of their ORW status or the values sought to be protected by an ORW designation.

1. Stream Alterations Prohibited; exceptions (10 V.S.A. Sec.1021)

All Watercourses: A person shall not change, alter or modify the course, current or cross-section of any watercourse with a drainage area greater than ten square miles at the location of the proposed change, alteration or modification, within or along the boundaries of this state either by movement, fill, or by excavation of ten cubic yards or more in any year, unless authorized by the Secretary of the Agency of Natural Resources (10 V.S.A. Sec.1021(a)).

Lower Poultney River (ORW): The drainage area at any point along the Lower Poultney River is greater than ten square miles. Therefore, the notification requirements are unaffected by the Lower Poultney River's ORW status.

2. Emergency Actions;

All Watercourses: This subchapter shall not apply to emergency protective measures necessary to preserve life or to prevent severe imminent damage to public or private property, or both. The protective measures shall be limited to the minimum amount necessary to remove imminent threats to life or property, shall have prior approval from a member of the municipal legislative body and shall be reported to the secretary by the legislative body within 72 hours after the onset of the emergency (10 V.S.A. Sec.1021(b)).

Lower Poultney River: The Agency's interpretation of the circumstances which justify emergency protective measures are unaffected by the Lower Poultney River's ORW status.

3. Limitation on Gravel Removal;

All Watercourses: No person shall remove gravel from any watercourse primarily for construction or for sale (10 V.S.A. Sec. 1021(c)).

Lower Poultney River: This prohibition is not changed by the ORW status.

4. Riparian Owner Use of Gravel;

All Watercourses: A riparian owner may remove up to 50 cubic yards of gravel per year from that portion of a watercourse running through or bordering on the owner's property, provided:

- (1) the material shall be removed only for the owner's use on the owner's property;

- (2) the material removed shall be above the water line; and
- (3) at least 72 hours prior to the removal of 10 cubic yards, or more, the landowner shall notify the secretary (10 V.S.A. Sec.1021(d)).

Lower Poultney River: The riparian owner may remove no more than 10 cubic yards of gravel per year, and must notify the secretary at least 72 hours prior to the removal of any gravel (10 V.S.A. Sec.1021(d)).

5. Exempted Activities;

All Watercourses: The Alteration of Streams statute shall not:

- (1) apply to dams subject to chapter 43 of Title 10 nor to highways or bridges subject to section 5 of Title 19 (10 V.S.A. Sec.1021(e));
- (2) apply to accepted agricultural or silvicultural practices, as defined by the commissioner of agriculture, or the commissioner of forests, parks and recreation, respectively (10 V.S.A. Sec.1021(f)); and
- (3) prohibit, in the normal use of land, the fording of or access to a watercourse by a person with the right or privilege to use the land (10 V.S.A. Sec.1021(g)).

Lower Poultney River: These exemptions are not affected by an ORW designation, except;

- (1) the Agency of Natural Resources may elect to make consideration of Lower Poultney River ORW values part of ANR's review of Agency of Transportation projects under Title 19;
- (2) the Agency of Natural Resources' reporting requirements under the Memoranda of Agreement with the Soil Conservation Service and Agriculture Department, which cover agricultural activities involving alteration of watercourses with drainages greater than 10 square miles may consider impacts to Lower Poultney River ORW values.

6. Investigation, Permit;

All Watercourses: A stream alteration permit shall be granted by the Secretary, subject to such conditions determined to be warranted, if it appears that the change:

- (1) will not adversely affect the public safety by increasing flood hazards,
- (2) will not significantly damage fish life or wildlife, and
- (3) will not significantly damage the rights of riparian owners (10 V.S.A. Sec.1023(a)).

Lower Poultney River: In addition to the above criteria being met, an alteration will be granted a permit if it will not adversely affect Lower Poultney River ORW designated values (10 V.S.A. Sec.1023(a)(4)). The Board's specific findings of fact concerning the exceptional ORW values will guide and assist the Agency of Natural Resources in permitting only those activities within the Vermont portion of the watercourse (from the top of the right bank to the mid-channel point) that will not adversely

affect ORW values. The determination of adverse effects may be different from one case to another depending on the values potentially affected. Allowing no adverse affects may mean allowing no change in certain cases and allowing up to some small amount of change in other cases. The legislature intended this test to allow change (as in the extraction of up to 10 square yards of gravel) but stricter than the "no undue adverse effect" test that is applied to stream alteration projects on other non-ORW watercourses. The following examples are provided as illustrations of how the Agency would protect Lower Poultney River ORW values within the watercourse, impacted by a stream alteration project:

(1) **Fish, waterfowl, wildlife and aquatic life habitat values** - projects having the potential to adversely affect Lower Poultney River habitat would receive a permit only after consideration of evidence, including input from a district biologist, persuading the Secretary that the activity will not adversely affect the habitat value. In the case of trout habitat, present throughout the Lower Poultney River, a small amount of change would be permitted. In the case of habitat presently supporting rare mussel species, no physical habitat removal would be permitted.

(2) **Exceptional scenic areas** - a proposal for an stream alteration in the vicinity of any unique geologic feature (those listed in Finding 21, in Section III of this report) may be provided a permit with conditions so that the project will not detract from the qualities which contribute to the scenic beauty of the geologic feature.

For waters not designated as ORW, the Stream Alteration Statute only allows the Agency to regulate activities occurring within the actual watercourse. An ORW designation changes and enlarges the statute's coverage. When a stream alteration permit is sought for a project, part of which includes activities located outside the watercourse with the potential to impact ORW designated values outside of the watercourse, those activities will not have adverse affects to ORW designated values. The Agency of Natural Resources will make the developer aware of Lower Poultney River designated values, explain the public interest in protecting those values, and work with the developer to make sure there will be no adverse affects.

B. DAMS

State Government: An Outstanding Resource Waters designation changes the Agency of Natural Resources and Public Service Department's specific regulatory responsibilities with respect to dam projects.

10 V.S.A. Chapter 43. - Dams - Statute applies to all rivers regardless of their ORW status or the values sought to be protected by ORW designation.

1. Authorization.

All Watercourses: No person shall construct, enlarge, raise, lower, remodel, reconstruct, or otherwise alter any dam, pond or impoundment or other structure which is capable of impounding more than 500,000 cubic feet of water or other liquid after construction or alteration, or remove, breach or otherwise lessen the capacity of an existing dam that is or was capable of impounding more than 500,000 cubic feet within or along the borders of this state, unless authorized by the state agency

having jurisdiction to do so (10 V.S.A. Sec.1082(a)). (Unless otherwise provided, the powers and duties authorized by this chapter shall be exercised by the Department of Environmental Conservation, except that the Public Service Board shall exercise those powers and duties over dams and projects that relate to or are incident to the generation of electric energy for public use or as a part of a public utility system (10 V.S.A. Sec.1081(a)).

Lower Poultney River: Jurisdiction is not changed by the river's ORW status. The 500,000 cubic foot jurisdictional threshold also applies to the Lower Poultney River.

2. Review of Application.

All Watercourses: For any project subject to its jurisdiction under this chapter:

(1) The Department of Environmental Conservation, on petition of 25 or more persons shall, or on its own motion may, hold a public information meeting in a municipality in the vicinity of the proposed project to hear comments on whether the proposed project serves the public good and provides adequately for the public safety (10 V.S.A. Sec.1085(1)).

(2) The Public Service Board shall hold a hearing to determine whether the project serves the public good as defined in Section 1086 and provides adequately for the public safety (10 V.S.A. Sec.1085(2)).

Lower Poultney River: The notice requirement is not changed by the river's ORW status.

3. Determination of public good;

All Watercourses: The state agency having jurisdiction shall issue its order approving the dam application if the project will serve the public good. "Public Good" means the greatest benefit of the people of the state. In determining whether the public good is served, the state agency shall give due consideration, among other things, to the effect the proposed project will have on:

- (1) the quantity, kind and extent of cultivated agricultural land that may be rendered unfit for use by the project, including both the immediate and long range agricultural land use impacts;
 - (2) scenic and recreational values;
 - (3) fish and wildlife;
 - (4) forests and forest programs;
 - (5) the need for a minimum water discharge flow rate schedule to protect the natural rate of flow and the water quality of the affected waters;
 - (6) the existing use of the waters by the public for boating, fishing, swimming and other recreational uses;
 - (7) the creation of any hazard to navigation, fishing, swimming or other public uses;
 - (8) the need for cutting clean and removal of all timber or tree growth from all or part of the flowage area;
 - (9) the creation of any public benefits;
 - (10) the classification, if any, of the affected waters under Chapter 47 of this title;
 - (11) any applicable state, regional or municipal plans;
 - (12) municipal grand lists and revenues; and
 - (13) public safety
- (10 V.S.A. Sec.1086(a)).

Lower Poultney River:

Dams not used for the generation of electricity; the Department shall issue its order approving the application if it finds that the proposed project will serve the public good, and, will preserve or enhance the ORW values and activities described in the Board's Findings of Fact (10 V.S.A. Sec.1086(b)). The specific ORW findings made by the Board will assist the Department in making a determination of whether a dam project will preserve or improve upon specific ORW values.

Dams used for the generation of electricity; for dams under its jurisdiction the Public Service Board will not grant a Certificate of Public Good (CPG) if the facility will affect or be located on the Lower Poultney River, except that a CPG shall be issued with respect to a natural gas or electric transmission facility if the facility does not have an undue adverse affect on those outstanding resource waters (30 V.S.A. Sec.248(b)(8)). Technically, new hydropower-related dams that would be subject to the dam statute are prohibited on the Lower Poultney River. However, virtually any hydroelectric project proposed for the Lower Poultney River would be under Federal jurisdiction, removing Public Service Board authority.

Federal Government: The Outstanding Resource Water designation changes the regulatory responsibilities of the Federal Energy Regulatory Commission (FERC) with respect to the licensing and relicensing of hydroelectric facilities under its jurisdiction.

All Watercourses: In deciding whether to issue any license for any project, FERC, in addition to the power and development purposes for which the licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damages to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities and the preservation of other aspects of environmental quality [Section 4(e), Federal Power Act (FPA)].

FERC must consider the extent to which the project is consistent with a comprehensive plan (where one exists) for improving, developing, or conserving a waterway or waterways affected by the project that is prepared by the state in which the project is located (§ 10(a)(2), FPA).

Lower Poultney River: The amendments to the Federal Powers Act brought about by the Electric Consumers Protection Act (ECPA, 1986), strengthened the ability of states to plan for the protection of unique river attributes. ECPA prompted action by the Vermont Legislature to create an ORW designation for rivers, which when made, would give "state protected waterway" status to the designated waters and the Board's Findings of Fact would automatically constitute an element of Vermont's comprehensive plan for river conservation.

PURPA Benefits: The Public Utilities Regulatory Policies Act (PURPA, 1978) provides incentives to non-utility developers of small hydroelectric projects (<40 MW) by guaranteeing a market for the electricity produced, at higher avoided cost rates for qualifying projects. As amended, § 210(j)(2) of PURPA states that a new dam or diversion seeking PURPA benefits is eligible for consideration if the project meets the requirements:

"(2) Protected Rivers - At the time the application for a license or exemption for the project is accepted by the Commission (in accordance with the Commission's regulations and procedures in effect on January 1, 1986, including those relating to environmental consultation), such project is not located on either of the following:

"(A) Any segment of a natural watercourse which is included in (or designated for potential inclusion in) a State or national wild and scenic river system.

"(B) Any segment of a natural watercourse which the state has determined, in accordance with applicable State law, to possess unique natural, recreational, cultural, or scenic attributes which would be adversely affected by hydroelectric development.

Developers of new dams applying for a FERC license to generate power on the Lower Poultney River can not receive the higher PURPA rates for electricity produced. This may affect the feasibility of small projects; however, new dams are not automatically precluded from receiving a FERC license to generate electricity on the Lower Poultney River.

Comprehensive Plans: FERC's statutory responsibility to determine a hydro project's consistency with state comprehensive plans is unchanged. The Lower Poultney River ORW designation is an element of the state's comprehensive plan for its conservation.

The Vermont Water Resources Board, after a contested case proceeding to hear substantial evidence on the broadest range of river attributes, designated certain Lower Poultney River uses and values as exceptional on a statewide basis. The Vermont Legislature in "An Act Relating to Establishing a Comprehensive State Rivers Policy" determined that when balancing exceptional natural, cultural, scenic, and recreational values with a river's use for dams and power generation, the Agency of Natural Resources will preserve or enhance ORW river attributes and the Public Service Board will not grant a Certificate of Public Good for a hydropower facility that will affect or be located on an ORW.

In its final rule implementing ECPA, FERC stated that the intent of Congress was that a state (comprehensive) plan would fall within the scope of Section 10(a)(2)(A) of the FPA only if the plan were prepared and adopted pursuant to a specific act of the state legislature and were developed, implemented, and managed by the appropriate state agency. The Water Resources Board's findings and the applicable ORW statutes and management goals now in affect (as presented in this report), represent Vermont's comprehensive plan for the balance of Lower Poultney River uses and values. FERC in the licensing or relicensing of hydropower facilities on the Lower Poultney River must make formal findings as to the project's consistency with this plan to preserve and enhance the ORW uses and values described in the Board's findings (in Section III of this report: Findings 4-37).

Carvers Falls hydroelectric project: FERC must give equal consideration to nonpower uses in balancing the use of the Lower Poultney River for the generation of electricity (described in the WRB Finding 7). The State of Vermont's comprehensive plan for establishing a balance between uses of the Lower Poultney River is to preserve and enhance the exceptional uses and values designated by the Water Resources Board. FERC must determine the consistency of CVPSC's Carver Falls project with Vermont's comprehensive plan for Lower Poultney River ORW values affected by the facility and regulation of natural river flows, including:

- a. Wildlife habitat and rare & irreplaceable natural areas.
 1. Extensive wetland complexes (WRB Findings 13 and 15).
 2. Geologic Features - Carvers Falls and the gorge immediately below the falls (WRB Finding 21).
- b. Aquatic habitat and fisheries within the river.
 1. High diversity of fish species (WRB Findings 8 and 9).
 2. High diversity of freshwater mussels (WRB Finding 10).
 3. Walleye spawning habitat (WRB Finding 11).
- c. Threatened, endangered & rare species in and along the river.
 1. Uncommon/rare reptiles (WRB Finding 17).
 2. Rare mussel species (WRB Finding 10).
 3. Uncommon/rare fish species (WRB Finding 18).
 4. Uncommon/rare Vermont plant species (WRB Finding 19).
- d. Well-preserved archeological resources and historic sites (WRB Findings 23, 24, and 25).
- e. Exceptional scenic views of natural areas and geological features (WRB Finding 32).

During the FERC licensing process for CVPSC's Carver Falls Hydroelectric Project, the Agency of Natural Resources will seek to establish river flows and identify those actions necessary to preserve and enhance the exceptional uses and values of the Lower Poultney River.

C. WASTEWATER DISCHARGES

The regulatory implications of the Lower Poultney River ORW designation on wastewater discharge permits, 401 water quality certifications, and on pollution abatement and enforcement actions are determined by the specific river uses and values designated by the Board as outstanding.

The State non-degradation provision for outstanding resource waters (Vermont Water Quality Standards, Sec. 1-03D) applies when the Water Resources Board designates an ORW because of its high quality water [i.e., the pristine physical/chemical water quality values referred to in 10 V.S.A. Sec. 1424a(d)(1)]. Implementation of a water quality non-degradation provision would require a state management prescription exceeding the state standards set for Class A waters. Allowing no change to water quality would translate into severe limits on human activity in the watershed. The Water Resources Board designated the Lower Poultney River as an Outstanding Resource Water for values other than water quality, therefore, the state ORW non-degradation provision does not apply.

The State anti-degradation and discharge policies of the Vermont Water Quality Standards (Sections 1-03A-C and 1-04) guide the implementation of water quality regulations and the issuing of discharge permits and 401 certifications to protect the existing uses, values, and high quality of Vermont surface waters. The exceptional values of the Lower Poultney River described in the Board's findings 4-37 are protected as existing uses defined in Sec. 1-03B of the Standards. The ORW designation does not trigger new state water quality protections, it specifies what uses and values the Agency should protect and maintain when regulating a discharge to the Lower Poultney River. Those same existing uses were protected prior to the designation,

however, full knowledge of the exceptional values and the public interest in protecting them would have to be documented during the public hearings requested for a draft state discharge permit. The ORW designation of the Lower Poultney River is a notification of existing uses and the public interest that is available to both the state and the applicant prior to the drafting of discharge permits.

The issuance of a discharge permit or 401 water quality certification requires public notice and public hearings upon request, to ascertain the public interest. When the Department is investigating a discharge permit application where the Lower Poultney River is the receiving water, the Department will be immediately aware of the existing uses and the broad public interest evidenced by the Board's ORW designation and findings. The Department's charge to issue the permit if the project design is expected to be adequate and sufficiently reliable to protect instream values and uses is unchanged. However, the broad public interest in resource value protection, as demonstrated by a Board ORW designation, will undoubtedly increase Department scrutiny and caution in reviewing an application. When granting a discharge permit or 401 certification in accordance with the Water Pollution Control Statutes (10 V.S.A. Ch.47) and the Water Quality Standards, the Department may issue a permit with conditions necessary to preserve and enhance existing Lower Poultney River uses designated as outstanding resource waters.

D. AQUATIC NUISANCE CONTROL

An Outstanding Resource Waters designation creates no specific statutory changes to Agency regulatory responsibilities with respect to aquatic nuisance control projects, pursuant to 10 V.S.A. Sec.921.

The aquatic nuisance control permit criteria require the Department of Environmental Conservation to consider the public interest and instream uses and values and issue a permit only when it has determined that: the nontarget environment is not subject to an unacceptable risk, no reasonable nonchemical alternatives are available and there is a public benefit achieved. These determinations must be made regardless of the ORW designation for instream values. Where the Lower Poultney River is involved, the Department is alerted to the existing uses and values found to be exceptional by the Water Resources Board (Section III: Findings 4-37) and the broad public interest in their protection. Increased department scrutiny and caution in the issuance of an aquatic nuisance control permit for the Lower Poultney River should be expected.

E. SOLID WASTE DISPOSAL

An Outstanding Resource Waters designation changes the Agency's regulatory responsibilities with respect to the siting of solid waste disposal facilities, pursuant to the Solid Waste Management Rules promulgated under 10 V.S.A. Chapter 159.

Solid Waste Management Rules - apply to all solid waste management facilities located near streams and waterbodies regardless of their ORW status. More restrictive provisions to protect outstanding resource waters apply only if the designation is made on the basis of high quality water values.

Solid Waste Facility Siting Standards (Subchapter 5)

All Watercourses: Section 6-503(b)(4) - states that discrete solid waste management disposal facilities and activities (e.g., landfills) must be a minimum distance of 300 feet to waters of the state, including intermittent streams and larger bodies of water. Diffuse facilities and activities have different setback requirements: sludge injection sites must be a minimum of 50 feet, other diffuse facilities (e.g., land application sites for sludge disposal) must be a minimum of 100 feet.

Lower Poultney River: (with an ORW status on the basis of exceptional values other than Criterion (1), water quality) The minimum 300 foot setback standard for discrete facilities and the minimum 50 and 100 setbacks for diffuse facilities required for all watercourses still apply.

F. ACT 250

The Outstanding Resource Waters legislation made no specific statutory changes to Act 250.

Technical recommendations to the District Commissions and Environmental Board are provided by the Agency on project conformance with Act 250's ten criteria, 10 V.S.A. Sec.6086(a). The Agency typically recommends water withdrawal minimum conservation flows and stream buffer zones to prevent undue adverse affects to water quality, aquatic habitat, wildlife habitat, floodways, scenic areas, aesthetics, historic sites and rare and irreplaceable natural areas. As broad public interest is demonstrated through a Water Resource Board ORW designation for exceptional Lower Poultney River values, the Agency will increase its scrutiny and caution in reviewing the Act 250 application and in making technical recommendations to the Environmental Board or District 1 Environmental Commission so that the project is designed and constructed to preserve and enhance the Lower Poultney River values described in the Board's Findings of Fact (#4-37).

LOCAL ORGANIZATIONS AND COMMISSIONS

Lower Poultney River Watershed Association
Joanne Calvi
20 Washington Street
Fair Haven, VT 05743
Tel: 802-265-8032

Central Vermont Public Service Corporation
John Mullen
77 Grove Street
Rutland, VT 05743
Tel: 802-773-2711

Fair Haven Planning Commission
David Calvi
Municipal Building
3 No. Park Place
Fair Haven, VT 05743
Tel: 802-265-8032

West Haven Planning Commission
Bill & Sandy Kuehn
Fair Haven, VT 05743
Tel: 802-265-8866

FEDERAL AGENCIES AND NATIONAL ORGANIZATIONS

U.S. Soil Conservation Service

69 Union Street
winooski, VT 05404
Tel: 802-951-6795

U.S. Fish & Wildlife Service

400 Ralph Pill Marketplace
22 Bridge St., Jct. I-93
Concord, NH 03301-4901
Tel: 603-225-1411

U.S. Environmental Protection Agency, Region I

JFK Federal Building
Boston, MA 02203-2211
Tel: 617-565-3478

National Park Service

North Atlantic Regional Office
P.O. Box 1277
Charlestown, NH 03603
Tel: 603-826-5152

New England Interstate Water Pollution Control Commission

85 Merrimac Street
Boston, MA 02114
Tel: 617-367-8522

American River Management Society

Ohio Dept. of Natural Resources
Division of Natural Areas
889 Fountain Sq., Bldg. F1
Columbus, Ohio 43224
Tel: 614-265-6460

National Assoc. for State and Local River Conservation Programs

c/o So. Carolina Water Res. Comm.
1201 Main St., Suite 1100
Columbia, SC 29201
Tel: 803-737-0800

American Rivers, Inc.

Suzi Wilkins
801 Pennsylvania, S.E., Suite 400
Washington, DC 20003
Tel: 202-457-6900

National Wildlife Federation
1400 Sixteenth St., N.W.
Washington, DC 20036
Tel: 202-797-6800

River Network
Philip Wallin
P.O. Box 887
Portland, OR 97204
Tel: 503-236-8011

APPENDIX A

ORW AWARENESS ACTIVITIES

AND

TOWN LETTERS OF SUPPORT

THE POULTNEY RIVER A Citizen Involvement Success Story

Sylvia Plumb

"The end result is not only a petition which we hope will protect a 22-mile stretch of the Poultney, but also an informed, educated and interested citizenry."

*Joanne Calvi
Friends of the
Poultney River*

When Joanne Calvi, a Public Health Nurse, and other members of Friends of the Poultney River started working on a petition to reclassify the Poultney River as an Outstanding Resource Water (ORW), they had no idea how large their project would turn out to be.

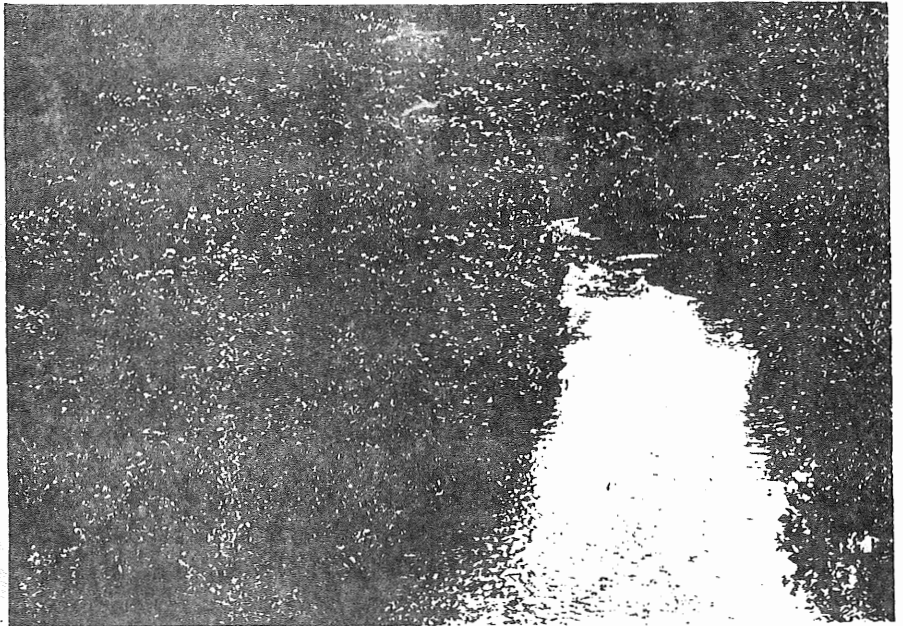
"We have spent a great deal of time educating ourselves — and the citizens of Fair Haven and West Haven — about the resources of the Poultney River," says Calvi. "The end result

is not only a petition which we hope will help protect a 22-mile stretch of the Poultney, but also an informed, educated and interested citizenry."

The Poultney river originates in Tinmouth, Vermont, and flows through the towns of Middletown, Poultney, Fair Haven and West Haven before emptying into Lake Champlain, some 40 miles from its point of origin.

In preparing the petition Calvi and her group learned about many different characteristics of the river corridor, including the archaeological and geological importance, the natural resource areas, and the uses of the Poultney River. They found what they had known by instinct all along: the Poultney River and the corridor which surrounds it are truly an outstanding natural resource worthy of their conservation efforts.

"I was amazed at how much we learned," said Calvi. "The river harbors 55% of the known fish species in Vermont — five species of which are rare — as well as all 14 of the known species of fresh water mollusks in Vermont. The 22-mile corridor is



unique because 95% of it is undeveloped."

The corridor hosts a number of natural areas such as important wetlands like Cemetery Cedar Swamp, Schoolhouse Marsh, and geological areas such as Limestone Cliffs and Carver's Falls — the largest falls in Vermont.

The corridor is also home to the Poultney River Folds. These folds are rock ledges which fell over; the river has since washed away the topsoil, revealing 500 million years of history horizontally — that can be walked upon.

The river is used on a yearly basis for research by Middlebury College, Castleton State College and the State University of New York. Historians are also interested in the corridor's role in the Revolutionary War — this section was a crossing for the Hessian soldiers. Other uses include boating, canoeing, fishing and swimming.

The ORW petition began as a direct result of a possible landfill siting along the banks of the river. After a public meeting held by the town, concerned citizens including members of the Research Com-

CITIZEN ACTION

mittee of the Fairhaven Historical Society, got together and began to look into possible avenues of protection. They found reference to the ORW — a classification created in Vermont law in 1986. No Vermont river is yet classified as an ORW. ORW status can protect a waterway from some hydro and stream bed development, as well as emphasize community support for the river's protection.

"At this point we asked ourselves, 'well, are there values to the river other than historical and geological values that we already know about?'" says Calvi.

Their next step was to go to the Vermont Agency of Natural Resources. "The ANR was very encouraging," says Calvi. "We discovered early on that an ORW might not even be able to prevent a landfill siting on the river, but we decided to go on for other reasons. The information we gathered through the ORW petition process will help others acknowledge and recognize the importance of the river.

"A study that was important to our petition process was a fish inventory of the the Poultney River. It was funded by a grant from the Department of Fish and Wildlife's Non-Game fund," says Calvi.

The Friends of the Poultney River are already seeing the affects of their work. The application of lampricide to the river was postponed until further study because of the effects the chemical might have upon the fresh water mollusks found in the river. The river has been labeled a high-diversity mollusk habitat.

Calvi claims the success they have had with the petition is a result of the level of citizen involvement they achieved. "From the start we tried to get a group of local people involved. We went to the land owners along the river in order to let them know what we were trying to do. We gave them a packet of information explaining the ORW classification. It was important to keep them informed so that everyone knew what was going on," notes Calvi.

"We gathered information from the users of the river such as fishermen and trappers. We also had canoe trips — people from the Agency of Natural Resources, The Nature Conservancy and the Vermont Heritage program, led them. Citizens interested in one aspect of the river could learn about and become interested in other aspects. It was fun, and really a source of pride," exclaims Calvi.

"In natural areas protection work," Calvi notes, "You need to inventory every discipline. If you only look at the flowers in a field then you are missing out on everything else. It is really interesting to take a small area such as a stream, a pond or a farm, and

find out everything about it that you can," says Calvi. "Contact centers of expertise on the history, the archaeology, the geology, the natural areas, the fish and wildlife and the uses of the land."

The Friends of the Poultney River group is now waiting for a hearing date on the ORW petition. In the meantime, they are interested in starting a town Conservation Commission. Calvi mentions that there is another river in town which they would like to take a look at.

Calvi cautions that "it's a lot of work. It is good to



Volunteers gather data as part of the Poultney River fish inventory.

have a core group working on the project — such as a Conservation Commission, or the Planning Commission or the town historical society. We are also trying to get the school involved. This project has just been so exciting." •

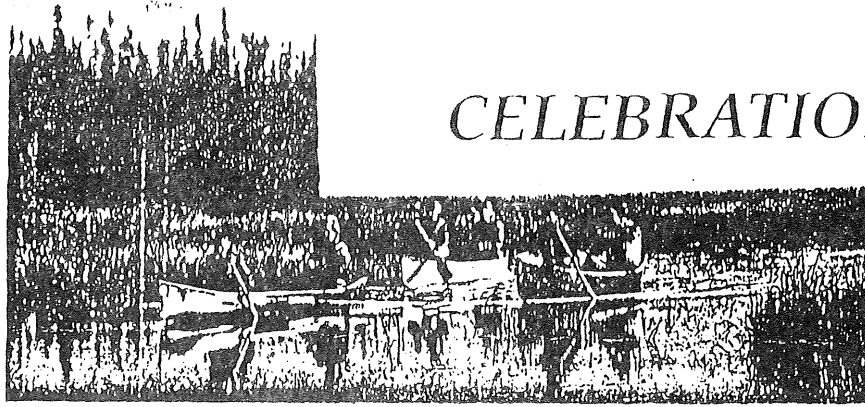
River Resources: Anyone interested in rivers protection can get more information from Michael Kline at the Vermont Rivers Assistance Program, Water Quality Division, Agency of Natural Resources in Waterbury at 244-6951 or VNRC at 9 Bailey Avenue, Montpelier, Vermont 06302 or phone (802) 223-2328. If you are interested in preparing an ORW petition, a copy of the Poultney River petition is available from Joanne Calvi at 265-8032 or Betty Allen Barnell at 265-3231. Copies of the Battenkill petition as well as other petitions are available from the Southern Vermont Office of VNRC, 362-3113.

"In natural areas protection work you need to inventory every discipline. If you only look at the flowers in a field then you are missing out on everything else."

Joanne Calvi

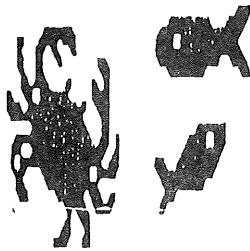
POULTNEY RIVER / EAST BAY

CELEBRATION



JUNE 11, 1989

10 AM - 2 PM Guided Boat Tour



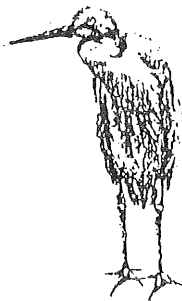
by Nature Conservancy.

Meet at the Grand Union Parking Lot (Rt. 22A) in Fair Haven.

Tour will begin at the Cogman Bridge in West Haven.

Bring Your Canoe and a picnic lunch.

4 PM - 6 PM Information Booths & Displays

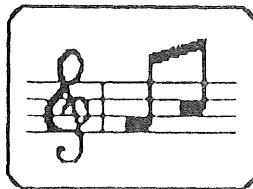


of outstanding features of the Poultney River and East Bay at the Fair Haven Historic Green.

Historical, Geological, Fisheries, Wetlands, and Wildlife: Endangered and Rare Species.

6:00 PM

Diane Merrill Jazz Band



at Fair Haven Historic Green

Sponsored by the Fair Haven Recreation Committee

in celebration of our Natural Resources and National Rivers Month.

*Organized by the Fair Haven and West Haven Committee to Designate the Poultney River and East Bay as "Outstanding Resource Waters" in the State of Vermont

Town of Fair Haven

THE SLATE CENTER OF THE NATION • CHARTERED OCT. 27, 1779

TOWN OFFICE • MUNICIPAL BUILDING • NORTH PARK PLACE • FAIR HAVEN, VERMONT 05743 • TELEPHONE (802) 265-3010

March 14, 1990

William Bartlett
Executive Officer
State of Vermont
Water Resource Board
Montpelier, VT 05602

Dear Mr. Bartlett:

The Town of Fair Haven, Vermont is submitting this petition to designate the Poultney River, bordering this Town, an "Outstanding Resource Water" in the State of Vermont pursuant to 10 V.S.A. § 1424a.

Any questions regarding this petition can be addressed to Mrs. Joanne Calvi, or Mrs. Betty Allen Barnouw of Fair Haven, Vermont.

Sincerely,



William A. Kelly
Town Manager

cc: Joanne Calvi

WK/sm

Mr. William Bartlett
Executive Officer
Water Resource Board
Montpelier, VT. 05602

Dear Mr. Bartlett,

We the members of the Board of Selectmen in the town of West Haven Vermont, would like to petition to make the Poultney River which runs through our town an outstanding water resource. We will designate Joanne Calvi of Fair Haven as our representative. Her address and phone number are 20 Washington st. Fair Haven, VT. 05743. Phone: (802) 265-8032.

Signed

Date

3/14/88

Ray W. Bishop
Thomas F. Finkle
Charles Book

TOWN OF HAMPTON

Washington County

HAMPTON, NEW YORK 12837

Town Supervisor

June 14, 1989

Joanne Calvi
20 Washington St.
Fair Haven, Vt. 05743

Dear Joanne;

We the Town Board for the Town of Hampton, New York wish to write a letter of support to the Towns of Fair Haven and West Haven Vt. in their attempt to have the waters bordering these Towns, specifically the Poultney River, and East Bay and our Town of Hampton, New York be designated as an "Outstanding resource waters" in the State of Vermont.

You may present this letter with your petition to the Vermont Water Resource Board and we will have a Councilman present at the Public Hearing if possible.

We hope that this is helpful.

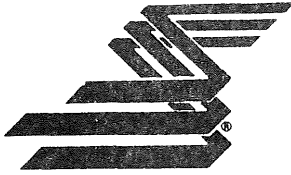
Sincerely,

Walter C. Perry Jr.
Walter C. Perry Jr.

Hampton NY. Town Supervisor

APPENDIX B

**PROPOSED FINDINGS OF FACT
SUBMITTED BY
CENTRAL VERMONT PUBLIC SERVICE CORPORATION,
ANR ASSESSMENT OF ENVIRONMENTAL PROBLEMS AND OPPORTUNITIES
FOR THE CVPSC
CARVERS FALLS HYDROELECTRIC FACILITY,
AND
CARVERS FALLS: UL-88-12-002 - LICENSING SCHEDULE**



LEGAL DEPARTMENT

Central Vermont Public Service Corporation

Donald L. Rushford
Vice President and
General Counsel

Joseph M. Kraus
Secretary and
Senior Corporate Counsel

Morris L. Silver
Corporate Counsel

Kenneth L. Picton
Associate Corporate Counsel

Mary C. Marzec
Legal Assistant

Bonnie L. Livak
Executive Secretary

March 4, 1991

William A. Bartlett, Executive Director
State of Vermont
Water Resources Board
58 East State Street
4th Floor
Montpelier, VT 05602

Re: Petition to designate a portion of the Poultney River
as an Outstanding Resource Water pursuant to
10 V.S.A. 1424a

Dear Mr. Bartlett,

Enclosed for filing please find one original and five
(5) copies of the Brief and Proposed Findings of Central
Vermont Public Service Corporation. This filing is made one
business day late pursuant to my request to Shiela Stahley
on Friday, March 1, 1991. I respectfully request that this
late filing be accepted, and I believe that such acceptance
prejudices no party in this proceeding.

Thank you for your attention to this matter, and if you
have any questions, please do not hesitate to call me.

Respectfully submitted,

Kenneth C. Picton

KCP/k
cc: Parties of Record

STATE OF VERMONT
WATER RESOURCES BOARD

Petition to designate a)
portion of the Poultney)
River as an Outstanding)
Resource Water Pursuant)
to 10 V.S.A. 1424a)

BRIEF AND PROPOSED FINDINGS
OF
CENTRAL VERMONT PUBLIC SERVICE CORPORATION

I. INTRODUCTION

On February 14, 1991, the Water Resources Board (the "Board") conducted a hearing regarding the above-referenced petition. During the course of this hearing, Central Vermont Public Service Corporation ("Central Vermont") presented the prefiled testimony of John J. Mullen containing, in part, testimony relating to the impact upon Central Vermont's Carvers Fall hydroelectric dam which may result from the designation of the Poultney River as an outstanding Water Resource. Mr. Mullen also testified regarding the resulting rate impact upon Central Vermont's customers, should such designation be determined.

The Agency of Natural Resources (the "Agency") objected to admission of the portions of Mr. Mullen's testimony which related to such impacts. The Agency argued that 10 V.S.A. 1424a does not list impacts as one of the particular criteria enumerated therein for consideration.

The Board admitted Mr. Mullen's testimony in its entirety, subject to consideration of the Agency's objections.

Central Vermont believes that it is appropriate for the Board to consider evidence relating to the impacts of its decision upon Central Vermont's project as well as upon the citizens of the State, and to make findings based upon its consideration.

II. THE BOARD SHOULD CONSIDER TESTIMONY
REGARDING IMPACTS UNDER
10 V.S.A. 1424a

- A. The criteria under 10 V.S.A. 1424a are not exclusive, and the Board is expected to consider additional criteria.

10 V.S.A. 1424a clearly provides that the Board may consider criteria outside of those enumerated in the statute. 10 V.S.A. 1424a(d) provides : "In making its decision, the board may consider, but shall not be limited to considering the following: ..." (emphasis added). As such, the Legislature expressly intended that the list of criteria which follow should not be the exclusive scope of investigation, but should only be a listing of suggested areas, among others, which the Board may consider.

If the Legislature had intended the Board to be strictly limited to considering only those criteria expressly listed in the statute, to the exclusion of all other factors, as the Agency contends, the statute would have so stated. In addition, had the Legislature intended

that the scope of additional information for the Board's consideration be strictly limited, such limitation would have been expressed.

As is clear from the statute's express language, the Agency's argument that the statute provides exclusive considerations is untenable. The Legislature clearly intended the Board to be able to consider all evidence relating to the designation of a river as an Outstanding Resource Water. Such evidence should necessarily include impacts of such a designation if an affected party offers testimony of that nature.

10 V.S.A. 1424a clearly permits the Board to consider evidence outside of the specifically enumerated criteria listed in 10 V.S.A. 1424a(d)(1)-(14), and pursuant to 3 V.S.A. 810(1), the Board should admit all evidence which is not "irrelevant, immaterial, or unduly repetitious." In addition, the Vermont Supreme Court has recognized that evidence which serves to "illuminate the case" in an agency proceeding is proper for consideration in such proceeding, under 3 V.S.A. 810(1). In Re Central Vermont Public Service Corporation, 141 Vt. 284, 292 (1982).

Mr. Mullen's testimony discusses impacts which could arise as a direct and logical result of the Board's actions through the petition at hand. Such testimony relates directly to the issue before the Board, is offered by an affected party in the proceedings, "illuminates the case," and clearly is not excluded by the controlling statute,

contrary to the Agency's objection. As such, Mr. Mullen's uncontradicted testimony, including those portions regarding impacts which are the subject of the Agency's objections, should be admitted in its entirety, and the subject matter thereof should be given due consideration by the Board.

B. 10 V.S.A. 1424a(d) expressly permits consideration of factors such as impacts upon Central Vermont's hydroelectric project.

10 V.S.A. 1424a(d)(14) expressly allows the Board to consider "existing alterations, diversions or impoundments by permit holders under state or federal law." Central Vermont's hydroelectric project has existed since 1894, and, as such, is clearly an "existing alteration, diversion or impoundment" for purposes of the statute. In addition, Central Vermont has received Section 401 certification under the federal Clean Water Act of 1972 (Public Law 92-500), and has recently been ordered by the Federal Energy Regulatory Commission ("FERC") to obtain a license for the Carvers Falls project pursuant to Section 23(b)(1) of the Federal Power Act. (Testimony of J. Mullen, 2/14/91; Exhibit CVPS-1). These factors satisfy the criteria of 10 V.S.A. 1424a(d)(14), and thus specifically enable, and arguably charge, the Board to consider all evidence relating to Central Vermont's Carvers Falls project, including evidence regarding impacts, in its deliberations in this docket.

As Central Vermont's project qualifies as a proper subject for consideration in this docket under the express

terms of 10 V.S.A. 1424a(d)(14), and as 10 V.S.A. 1424a does not limit the scope of the Board's consideration to exclude evidence regarding potential impacts, it is clear that all of Mr. Mullen's testimony regards proper and relevant subjects for the Board's review, and should not be excluded.

C. The Legislative intent of 10 V.S.A. 1424a includes consideration of impacts.

A central purpose of 10 V.S.A. 1424a, and of designating a river an Outstanding Resource Water thereunder, is to create an impact upon the licensing procedures for FERC-regulated projects, such as Central Vermont's Carver's Falls project. As such, as the purpose of the statute is impact, it is entirely relevant and sensible for the Board to consider the results of such impact upon an affected party and upon the citizens of the State.

Section 10 of the Federal Power Act requires FERC to consider, during relicensing procedures, "the extent to which the project is consistent with a comprehensive plan ... prepared by ... the State in which the facility is or will be located." (16 U.S.C. 800, et seq.) The annotations to 10 V.S.A. 1424a state, in part: "Legislative Policy and Intent. ... The designation of outstanding resource waters shall constitute one element of the state comprehensive plan for rivers conservation, for the purposes of the Federal Power Act amendments of 1986. ... Outstanding resource waters, so designated, shall also constitute state protected

waterways with respect to the provisions of PURPA under section 10(a) of 16 U.S.C. 800."

Clearly, the Legislature enacted 10 V.S.A. 1424a to enable the State's comprehensive plan to be considered during FERC proceedings. As such, because the Carvers Falls project will be subject to such licensing procedures, the actions of the Board in this proceeding could also necessarily impact upon Central Vermont's licensing costs, conditions and restraints. Such an impact also necessarily impacts upon Central Vermont's productivity at the Carvers Falls project and, therefore, has a direct economic impact upon the citizens of the State, who will be required to bear any financial costs directly resulting from the Board's decision in this docket.

As such, testimony provided by Central Vermont which discusses these impacts is relevant to the Board's consideration. The Legislature enacted 10 V.S.A. 1424a specifically to cause significant impact upon FERC-licensed projects such as Central Vermont's Carvers Falls dam, and expressly permitted the Board to go beyond the enumerated criteria in the statute in its deliberations. To deny the admission of testimony discussing the impacts directly resulting from the Board's decision would unnecessarily limit the Board's review of relevant and material evidence. Accordingly, Mr. Mullen's testimony, in its entirety, should be admitted and considered.

III. CONCLUSION

Mr. Mullen's testimony is relevant and material, is not excluded under the criteria in 10 V.S.A 1424a, is correctly a subject for consideration under 10 V.S.A. 1424a(d)(14), and should be admitted in full.

PROPOSED FINDINGS

1. Central Vermont and its predecessor companies have operated hydroelectric generating facilities at the Carvers Falls site on the Poultney River in Low Hampton, New York, since 1894. Mullen pf. at 3.

2. Over the years, the generating facilities at the Carvers Falls site have been upgraded and evolved from a plant supplying electricity to one which currently ties in to Central Vermont's subtransmission grid to the benefit of all its electrical consumers. Mullen pf. at 3,4.

3. Energy produced at its hydroelectric plants is currently the cheapest source of power available to Central Vermont and its ratepayers. Mullen pf. at 4.

4. The Carvers Fall plant plays a role in achieving independence from reliance on foreign oil. Mullen pf. at 4.

5. The output of the Carvers Falls site alone equates to a savings of 12,000 barrels of imported oil per year. Mullen pf. at 5.

6. If the Carvers Falls output were to be replaced from other sources, such replacement would add approximately \$325,000 annually to Central Vermont's expenses and ultimately to the ratepayers' bills. Mullen pf. at 5.

7. The designation of the Poultney River as an outstanding resource water could have implications that would impact in a negative fashion on Central Vermont's ability to improve or expand the hydroelectric generation at the Carvers Falls site. Mullen pf. at 6.

8. The Carvers Falls site has been determined to be under the jurisdiction of the Federal Energy Regulatory Commission. Mullen test. 2/14/91; Exhibit CVPS-1.

9. Central Vermont must apply to the Federal Energy Regulatory Commission for an operating license. Exhibit CVPS-1.

10. The Carvers Falls hydroelectric dam and its access road provide the only public vehicular access to the Carvers Fall gorge area for scenic viewing, fishing or educational purposes. Mullen pf. at 9.

11. If the dam and Central Vermont's plant were not at the Carvers Falls gorge, it is questionable whether the gorge would be accessible from either Vermont or New York. Mullen pf. at 9; Exhibit JJM-1.

12. The Poultney River has an above average diversity of fish below the falls. The Carvers Falls hydroelectric site has had no adverse effect on this diversity. Langdon test. 2/14/91.

13. The Poultney River has excellent fish diversity even though the Carvers Falls dam has been present for years. McKenzie test. 2/14/91.

14. Designation of the Poultney River as an outstanding resource water could preclude the utilization of improved efficiencies or innovative technologies at the Carvers Falls site. This result would not be in concert with the State's energy policy and, in particular, with ex-Governor Kunin's Executive Order recommending utilization of renewable resources in both private and public sectors. Mullen pf. at 11.

15. Given the current volatility of the energy picture, it is important to keep the State of Vermont's options open where there may be opportunities to use indigenous renewable resources for production of energy. Mullen pf. at 11, 12.

Respectfully Submitted,



Kenneth C. Picton, Esq.
77 Grove Street
Rutland, Vermont 05701

BASIN 2

STREAM: Poultney River

PROJECT: Carvers Falls

UTILITY: Central Vermont Public Service Corporation (CVPSC)

LICENSE STATUS: Unlicensed; Water Quality Certification issued
May 7, 1981

CLASSIFICATION: B

FISH HABITAT DESIGNATION: Warm water

IMPACT: Significant

Project Features

The Carvers Falls project is located on the Poultney River in the Town of West Haven (Figure 1). The project has a drainage area of 187 square miles. Project features include a concrete dam 34 feet high and 450 feet long with a total spillway length of 340 feet. The Vermont side of the dam is fitted with 5.5 foot flashboards, with 1.5 foot flashboards on the New York side. The main section of the project's penstock is 200 feet long with each header being 132 feet long. The project bypasses about 600 feet of streambed. The powerhouse contains two turbines with capacities of 600 kW and 1200 kW under an operating head of 112 feet. The impoundment extends upstream about three-eighths mile and has a surface area of 10 acres. Department records do not indicate if these impoundment features are with or without flashboards.

Operating Mode

Carvers Falls is reported by the utility to be a run-of-the-river project, however, the operator has stated that the facility often stops generating at 4:00 p.m. and ponds until the next morning and that whether the project generates or not depends on system load. During a site visit by the Department on August 4, 1982, the facility was not generating and the pond level was drawn down 2 to 3 feet. On this same date the Department measured a leakage flow of 6.7 cfs at a point just below the tailrace. The source of this flow was leakage through the dam and a small amount of flow which runs through the powerhouse to keep the turbines wet.

In 1983 the Department found that the 6.7 cfs measured in 1982 was not the actual leakage flow but instead the natural low flow in the river the day the measurement was taken. The Department made this finding when reviewing CVPSC's compliance

with Condition D of a Water Quality Certification issued May 7, 1981, for dam repair and desilting work which required an Army Corps of Engineers (ACOE) 404 permit. Condition D of this certification is as follows:

"D. The amount of reduction in leakage resulting from this project shall be restored by alternate means by CVPSC. CVPSC shall submit a proposal to the Department of Water Resources and Environmental Engineering for maintaining flows equivalent to those previously experienced through leakage at full pool. Included shall be the previous leakage rate and the release method used to supplement future leakage. The leakage flows shall be determined using USGS gage 42800. The proposal shall be submitted prior to June 30, 1981, implementation to be completed as soon as possible."

In reference to this condition, the Department contacted CVPSC by letter dated June 1, 1983. To summarize this letter, the Department reviewed flow records from USGS gage 04280000 on the Poultney River in Fair Haven and found that average leakage flows for the period August to November, 1980, ranged from 15 to 17 cfs. Records from July, 1982, indicated leakage was on the order of 29 cfs. This higher flow bore out the utility's conclusion that leakage rates at the site are increasing as erosion between the dam and the adjacent bedrock continues. Based on this analysis, the Department concluded that the 6.7 cfs measurement on August 4, 1982, was probably the natural low flow in the Poultney and could not be attributed to the dam. The Department also stated in this letter that they realized CVPSC may wish to make further repairs at the dam and required, therefore, "that no repairs be undertaken such that they would result in the leakage flow downstream of the dam being reduced below 16 cfs."

The Department finds that the 16 cfs leakage flow may not be maintained as required. Reviewing flow records from the USGS gage for summer 1985, the Department found that during cycling operations in September, the flow releases were commonly depressed to 8.3 cfs, about half of the 16 cfs requirement. This flow is less than the 7Q10 (9.0 cfs) for the river.

On three separate occasions, the Department has requested that CVPSC provide us with a proposal for a fail-safe measure to pass the required 16 cfs at the dam. To date, the Department has received no response.

Environmental Review

a. Water Quality

The Poultney STP is located eight miles upstream and has a permitted total discharge of .350 mgd. Also, the Fair Haven STP and the Castleton STP are located on the Castleton River whose

confluence with the Poultney River is 2.8 miles upstream of the dam. The design flows for these two projects are .750 mgd for the Fair Haven plant and .360 mgd for the Castleton plant.

Water quality conditions of the Poultney River are described in the Department's 1984 Water Quality Assessment 305(b) Report. The Poultney River from Poultney to the confluence with the Castleton River is a water quality limited segment for D.O. concentrations because of municipal wastes. The actual miles of water quality standards violated is unknown pending an assimilative capacity study by the Department. From the Castleton River downstream to Lake Champlain, the Poultney is an effluent limited segment which is presently meeting water quality standards.

In August, 1982, the Department collected temperature and D.O. data from two stations, one just below the project's tailrace and the other further downstream beyond an island. The data was collected during the daylight hours when flow was 6.7 cfs which is 74% of the estimated 7Q10 flow of 9 cfs. Supersaturated conditions were found, which is evidence of algal activity. Violations of D.O. standards may occur during the early morning, pre-dawn hours, particularly if the project is ponding overnight.

b. Fisheries

The Poultney River upstream of the Carvers Falls Dam supports a cold water fishery, the principal species being brown trout. Below the dam is a warm water fishery which is influenced by Lake Champlain. Spawning, nursery and adult habitat is present above the project's impoundment. The tailrace provides spawning habitat for walleyes. Nursery and adult habitat is found downstream of the tailrace. There is no information on the project's bypass.

Vermont Fish & Wildlife reports that the project could impair fisheries, in particular spawning walleyes, if during periods of low flows in the spring, downstream flows were interrupted by the project.

The Vermont Field Office of The Nature Conservancy (TNC) has also reported to the Department by letter dated April 11, 1985, that the Poultney River from Coggman Bridge (three miles downstream of Carvers Falls) to a point about .8 mile downstream has been found to support populations of three species of fish uncommon to rare in Vermont. These species are the Eastern Sand Darter, Black Chin Shiner, and the Channel Darter. According to the information provided, "it is not apparent at this time that this dam poses a threat to these species."

Increased turbidity and siltation have been identified as threats to these uncommon to rare species by limiting visibility for feeding and siltation of feeding areas and spawning grounds.

TNC plans to contact CVPSC regarding these fish and their sensitivity to silt. Any desilting of the Carvers Falls impoundment should, therefore, be done with the utmost caution to prevent the discharge of excessive silt levels downstream.

c. Recreation/Aesthetics

Department representatives report that the Carvers Falls impoundment may be used for swimming but the water is quite turbid and water levels fluctuate. The Poultney River upstream of the dam is used for flat water boating. Downstream recreational use includes flat water canoeing.

Access to the impoundment is via a public road. There is a canoe launch to the impoundment as well as a primitive scenic overlook to the falls. Downstream access is via a private road to the project's powerhouse, and a trail from the powerhouse to the river. This trail is quite steep, however.

The lack of adequate flow releases both at the dam and downstream of the powerhouse impair the recreational and aesthetic value of the stream.

d. Natural Area/Wildlife Habitat

The Agency's Waterfalls, Cascades and Gorges Study identifies Carvers Falls as being of high statewide importance. The falls are the largest and highest in the state and discharge into a limestone gorge which is one of the best examples of this kind of gorge in Vermont. One rare plant species was also found in the gorge and others are expected. The study recommends that the Carvers Falls site "be restored" by removing an abandoned penstock which crosses the falls just below the dam and providing adequate summer flows.

e. Erosion/Siltation

As previously stated, the Department issued a Water Quality Certification to CVPSC in 1981 to perform some desilting and dam repair work. In June/July of 1982 while CVPSC was doing some repairs to the dam, there was a substantial silt release from the project. This release silted in the control section for the USGS gage in Fair Haven. USGS reports that a new rating had to be established for the gage and that it took at least a year for the silt to wash out of the control section.

Silt releases from the project pose a threat to the uncommon to rare fish species found downstream in the Poultney River.

Recommendations for Further Study

a. A water quality sampling program should be conducted to determine the project's impact on water quality, particularly on D.O. concentrations. The critical time to collect this data would be during the early morning hours and periods when the project is impounding in the warmer, low flow months. This study could possibly be incorporated into the assimilative capacity study the Department has scheduled for the Poultney River.

b. The project's bypass should be evaluated for potential fish habitat.

c. The site should be reviewed for recommendations regarding recreational development.

Recommendations

a. Minimum flow should be required at the site for water quality, fisheries, aesthetics and recreation. Flow should be released both over the dam and below the powerhouse.

b. The old penstock at the top of the falls should be removed.

c. Silt releases should be avoided, in particular, to protect the uncommon to rare fish species identified below the project.

CARVERS FALLS: UL-88-12-002 - LICENSING SCHEDULE

January 15, 1992	Submittal of Initial Stage Consultation Document (ICD) to designated resource agencies
Late February - mid March 1992	Public meetings, including appropriate federal and state resource agencies
April - May 1992	Receive Agency comments
May - June 1992	Develop scope of studies
July - Sept. 1992	Conduct field studies
February 1993	Submit draft application
May 1993	Receive agency comments; schedule joint meeting
June - Sept. 1993	Prepare final application including agency comments (June through September 1993 time frame can be used to perform additional field work if not completed summer 1992 due to unacceptable precipitation, meteorological conditions)
November 1993	Submit 401 application
December 1993	Submit license application

Revised Nov. 1991 to conform to FERC Order No. 533

APPENDIX C

PUBLIC HEARING

RESPONSIVENESS SUMMARY

PUBLIC HEARING
RESPONSIVENESS SUMMARY

The following comments were made as part of the formal public hearing process on the draft report The Lower Poultney River: A Vermont Outstanding Resource Water initiated July 1, 1992 in Fair Haven, Vermont.

1. Comment: Please highlight and enumerate Regulation of Stream Flow, and comment on possible considerations given to issuance of permits, such as: "(A)ctivities located outside the watercourse with the potential to impact ORW designated values outside of the watercourse, ... will not have adverse effects to ORW designated values." (Darlene Palola, Stratton Area Citizens Committee)

Response: The amount of change, if any, permitted to an ORW value, whether in the watercourse or not, depends on the type of activity and the value potentially affected. Determinations will be made by the stream alteration engineer on a case-by-case basis. Further definition of "adverse effects" and examples of how the Agency will act to protect natural and scenic values is provided in Section IV. A.6.

2. Comment: Re: non-degradation policy; Would no-adverse effect" standard apply to ORW designation because of its high water quality? (Darlene Palola, SACC)

Response: Where a waterbody is designated ORW because of its high quality water [i.e., the pristine physical/chemical water quality values referred to in 10 V.S.A. Sec. 1424a(d)(1)] a non-degradation standard would apply, meaning no change which is more strict than the "no-adverse effect" standard described under stream alteration permits.

3. Comment: Re: Act 250; Guidelines for dealing with ORW designated values would be helpful in recognizing what activities located outside the watercourse have the potential to impact ORW designated values. For example, water withdrawals could decrease quantity of water required for ORW values for swimming and fish habitat and have an adverse effect. (Darlene Palola, SACC)

Response: The Agency is following legislative intent to provide greater protection for ORW values by applying a no adverse effects standard rather than a no undue adverse effects standard. In Vermont statute this is given specific meaning in: 10 V.S.A. Section 1021 where the gravel removal limit to meet the "undue adverse" standard is 50 cu. yds. and the limit to meet the "no adverse" standard is 10 cu. yds; and 30 V.S.A. Section 248 where new hydroelectric facilities, not under Federal jurisdiction, would be prohibited. In making recommendations for water withdrawal minimum conservation flows and stream buffer zones to the District Environmental Commissions, the Agency will seek to apply a consistent "no adverse effects" standard equating to little or no change in order to preserve and enhance ORW values.

4. **Comment:** A section on municipal responsibilities is badly needed to assist towns in protecting designated ORW values. (Darlene Palola, SACC)

Response: At this time, municipalities have no regulatory responsibilities specific to outstanding resource waters mandated by statute. For this reason, the Agency is not including a section on municipal responsibilities. During the July 1, 1992 public hearing in Fair Haven, Vermont a discussion with town and regional planners resulted in several suggestions for local initiatives to protect ORW values. One idea mentioned was that regional and town plans should include parts or all of this plan as an appendix, especially recognizing the inventory of exceptional values in need of protection (Sections II and III). A separate document suggesting ways in which towns, landowners, and community organizations might exercise their discretion to protect ORW values is needed. The Rivers Program would welcome input on this project.

5. **Comment:** How can state and local highway crews be encouraged to reduce sand and salt deposits in all waterways, but especially waters that impact designated ORW values? (Darlene Palola, SACC)

Response: Future inter-agency management agreements may be possible in many problem areas, however, some will be more difficult than others. Society is learning to place high value on exceptional natural resources. It has long placed high value on clear, safe winter roads. Discussions on these issues must continue so that people can eventually come to the table to find at least compromises to their differing objectives.

6. **Comment:** If the Agency's goal is preserve and enhance exceptional values, how will the Agency seek to enhance recreational values during the FERC licensing of the CVPSC Carver Falls facility. (Jeff Wallen, CVPSC consultant)

Response: The Agency will work with the Towns of Fair Haven and West Haven and the Poultney River Citizens Committee to preserve all ORW when seeking recreational enhancement. (David Calvi, Fair Haven Planning Commission, responded to this comment at the hearing by saying that any enhancements should protect the "remoteness" aspects of the recreational experience on the Lower Poultney River.)

7. **Comment:** Increased water releases below the Carver Falls powerhouse would not create a whitewater boating experience because of the small impoundment size. (John Mullen, Director of Hydro Relicensing, CVPSC).

Response: Whitewater boating is not recognized here or anywhere else that the Agency is aware as a use or value of the Lower Poultney River. Attracting crowds of boaters to a scheduled whitewater release would not likely preserve and enhance the exceptional recreational river with remote qualities such as the Lower Poultney River.

8. **Comment:** Many more people participated as witnesses in the designation of the Lower Poultney River than those listed as members of The Lower Poultney River Citizens Committee. There should be a comprehensive list of all witnesses.

Response: The Lower Poultney River ORW report addendum contains the correspondence, testimonies, and studies provided as evidence to the Water Resources Board in the designation proceeding. A list of witnesses serves as a table of contents for each section of the addendum report for natural, cultural, scenic, and recreational values.

**Agency of Natural Resources
Department of Environmental Conservation**

Water Quality Division

**103 South Main Street
Waterbury, VT 05671-0408
802-244-6951**

MEMORANDUM

To: RECORD
From: *RL* Rich Langdon, Aquatic Biologist, DEC
Date: April 20, 1992
Subject: Testimony for the Lower Poultney River ORW

Please note that the reference in the Lower Poultney River ORW report to my testimony in the CVPS Proposed Findings (Appendix B, page 53, no. 12) is in error. The reference states that I testified that I did not believe the Carver Falls facility had an adverse effect on the fish population diversity. The tapes of the hearing show rather, that my response to a question on the effects of Carver Falls on the fish diversity was "I have no information on that".

APPENDIX D

ORW DIRECTORY

OF

ORGANIZATIONS AND AGENCIES

**LOWER POULTNEY RIVER
OUTSTANDING RESOURCE WATER
DIRECTORY**

STATEWIDE ORGANIZATIONS AND AGENCIES

Vermont Geological Survey
Diane Conrad, Director
Center Building, 103 So. Main Street
Waterbury, VT 05671-0301
Tel: 802-244-5164

Vermont Fish & Wildlife Department
Pittsford District Office
Scott Darling, F & W Coordinator
RR 2, Box 2161
Pittsford, VT 05763-9713
Tel: 802-483-2172

Nongame & Natural Heritage Program
Chris Fichtel
Center Building, 103 So. Main Street
Waterbury, VT 05671-0301
Tel: 802-244-7340

Conservation Education
VT Forests, Parks, & Recreation Dept.
Ginger Anderson
10 South, 103 So. Main Street
Waterbury, VT 05671-0501
Tel: 802-244-8715

Recreation Section
VT Forests, Parks & Recreation Dept.
Susan Bulmer
9 South, 103 So. Main Street
Waterbury, VT 05671-0601
Tel: 244-8715

Vermont Youth Conservation Corps
Thomas Hark, Program Chief
9 South, 103 So. Main Street
Waterbury, VT 05671-0601
Tel: 802-244-5045

Rutland County Forester
Dept. Forest, Parks, & Recreation
Jim Philbrook
RR 2, Box 2161
Pittsford, VT 05763
Tel: 802-483-2314

Land & Water Conservation Fund Project
Dept. Forest, Parks & Recreation
Michael Frasier
9 South, 103 So. Main Street
Waterbury, VT 05671-0601
Tel: 802-244-8713

Rivers Program
VT Dept. of Environmental Conservation
Michael Kline
10 North, 103 So. Main Street
Waterbury, VT 05671-0408
Tel: 802-244-6951

Wetlands Program
VT Dept. of Environmental Conservation
Carl Pagel
10 North, 103 So. Main Street
Waterbury, VT 05676-0408
Tel: 802-244-6951

Aquatic Biomonitoring
VT Dept. of Environmental Conservation
Steve Fisk
10 North, 103 So. Main Street
Waterbury, VT 05676-0408
Tel: 802-244-5638

Environmental Enforcement
Paul Cummings
33 Washington Street
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VT Department of Agriculture
116 State Street
Montpelier, Vt 05602
Tel: 802-828-2500

**VT Department of Housing
and Community Affairs**
109 State Street
Montpelier, VT 05602
Tel: 802-828-3217

Division of Historic Preservation
109 State Street
Montpelier, VT 05609-1201
Tel: 802-828-3226

Vermont Housing and Conservation Board
136 1/2 Main Street
Montpelier, VT 05602
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Vermont Department of Public Service
120 State Street
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Sierra Club-Vermont Chapter
Ray Gonda
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Sporting Alliance for Vermont's Environment
George McNeill, President
RR 1, P.O. Box 117-C
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Statewide Environmental Education Programs (SWEEP)
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Trout Unlimited
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VT Association of Conservation Districts, Inc.
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League of Cities and Towns

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VT Institute of Natural Sciences

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Vermont Land Trust

8 Bailey Ave.
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Vermont Trails & Greenways Council

c/o Forest, Parks, & Recreation
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9 South, 103 So. Main Street
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Vermont Natural Resources Council (VNRC)

Chris Killian
9 Bailey Ave.
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River Watch Network

Jack Byrne
153 State Street
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Atlantic Center for the Environment

Tom Horn
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Ducks Unlimited

c/o Dr. Michael Billing
56 Portland Street
St. Johnsbury, VT 05819
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The Nature Conservancy

27 State Street
Montpelier, Vt 05602
Tel: 802-229-4425

Vermont Historical Society
109 State Street
Montpelier, VT 05602
Tel: 802-828-2291

UVM Extension Service
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Water Resources Research Center
UVM School of Natural Resources
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White Creek Field Naturalist School
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REGIONAL ORGANIZATIONS AND AGENCIES

Poultney-Mettawee Natural Resources Conservation District
RD #2
Poultney, VT 05764
Tel: 802-287-9240

Citizens Advisory Committee on Lake Champlain's Future
Lisa Borre
c/o Agency of Natural Resources
103 So. Main Street
Waterbury, VT 05671-0301
Tel: 802-244-1137

Rutland Regional Planning Commission
Merchants Row-Opera House
P.O. Box 965
Rutland, VT 05702
Tel: 802-775-0871

District 1 Environmental Commission (Act 250)
Anthony Stout
RR #2, Box 2161
Pittsford, VT 05763-9713
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Audubon Society Chapter
Rutland County
Linda Krasner, President
Star Route
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Tel:

Lake Champlain Committee
Lori Fisher
14 So. Williams Street
Burlington, VT 05401-3400
Tel: 802-658-1414

Lake Champlain Basin Program
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LOCAL ORGANIZATIONS AND COMMISSIONS

Lower Poultney River Watershed Association

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Central Vermont Public Service Corporation

John Mullen
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Tel: 802-773-2711

Fair Haven Planning Commission

David Calvi
Municipal Building
3 No. Park Place
Fair Haven, VT 05743
Tel: 802-265-8032

West Haven Planning Commission

Bill & Sandy Kuehn
Fair Haven, VT 05743
Tel: 802-265-8866

FEDERAL AGENCIES AND NATIONAL ORGANIZATIONS

U.S. Soil Conservation Service

69 Union Street
winooski, VT 05404
Tel: 802-951-6795

U.S. Fish & Wildlife Service

400 Ralph Pili Marketplace
22 Bridge St., Jct. I-93
Concord, NH 03301-4901
Tel: 603-225-1411

U.S. Environmental Protection Agency, Region I

JFK Federal Building
Boston, MA 02203-2211
Tel: 617-565-3478

National Park Service

North Atlantic Regional Office
P.O. Box 1277
Charlestown, NH 03603
Tel: 603-826-5152

New England Interstate Water Pollution Control Commission

85 Merrimac Street
Boston, MA 02114
Tel: 617-367-8522

American River Management Society

Ohio Dept. of Natural Resources
Division of Natural Areas
889 Fountain Sq., Bldg. F1
Columbus, Ohio 43224
Tel: 614-265-6460

National Assoc. for State and Local River Conservation Programs

c/o So. Carolina Water Res. Comm.
1201 Main St., Suite 1100
Columbia, SC 29201
Tel: 803-737-0800

American Rivers, Inc.

Suzi Wilkins
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National Wildlife Federation

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Washington, DC 20036

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River Network

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