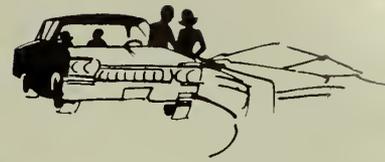


New England Heritage

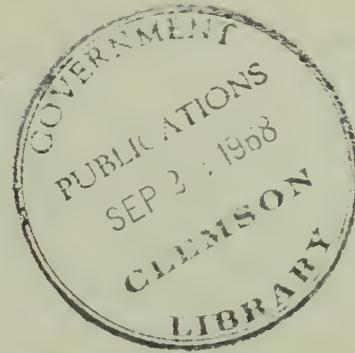
The Connecticut River National Recreation Area Study



Clemson University



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DEPARTMENT OF THE INTERIOR
Stewart L. Udall, Secretary

Bureau of Outdoor Recreation
Washington, D.C. 20240

July 1968

New England Heritage

The Connecticut River
National Recreation Area Study





IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OUTDOOR RECREATION
WASHINGTON, D.C. 20240

August 5, 1968

Hon. Stewart L. Udall
Secretary of the Interior
Washington, D. C. 20240

Dear Mr. Secretary:

I am pleased to transmit to you the findings and recommendations of the Bureau of Outdoor Recreation study of the recreation potential of the Connecticut River Valley. The information contained in this report is the result of nearly two years of investigation, examination, and public hearings.

As you know, Public Law 89-616, approved on October 3, 1966, directed you to

“. . . study, investigate, and formulate recommendations on the feasibility and desirability of establishing all or parts of the Connecticut River Valley from its source to its mouth, in the States of Connecticut, Massachusetts, Vermont, and New Hampshire, as a Connecticut River National Recreation Area.”

You, in turn, directed this Bureau to undertake the study and present our recommendations. I have attempted to follow the letter, and the spirit, of Public Law 89-616. This report is based on an examination of more than 400 river miles, along a corridor which includes the first tier of towns on both sides of the River.

The recommendations for Federal, State, and private action are designed to provide recreation opportunities for several million persons. At the same time, the historical significance, the beauty, and the functional uses of the River and its surrounding areas would be preserved.

These recommendations include: authorization by Congress of a three-unit National Recreation Area, to be administered by the National Park Service, and to be located in the States of Connecticut, Massachusetts, New Hampshire, and Vermont; creation of a 300-mile long hiking trail in New Hampshire and Vermont, to be administered by the Forest Service, the National Park Service, and the States; and designation and marking of a Connecticut River Valley Tourway mainly by the States throughout the length of the River Valley.

The report also recommends, as complementary responses to the Federal actions which the Bureau proposes, creation of four State parks or forests along the River corridor, one in each of the four States. Three additional State parks and one historic riverway are also suggested.

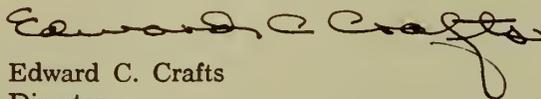
The recommendations in this report emphasize cooperative local, State, and Federal action, as well as execution of private initiative, to establish a comprehensive recreation complex. The recommendations also strive to minimize disruption of land ownership patterns and agriculture in the River valley.

It is my hope that the Legislative and Executive branches will consider the Connecticut River Valley's supreme recreation, scenic, historic, cultural, and educational points of interest when planning is carried out for a Nationwide System of Scenic Roads and Parkways. I believe that this river valley could provide an important motorway for millions of Americans to enjoy under a projected program of specially designed and constructed scenic highways.

In conducting our study, the Bureau has conferred with local, State, and Federal agencies having responsibilities in the study area. At the request of each of the Governors, public hearings were held in the four States through which the Connecticut River flows. Comments received as a result of these hearings were considered in developing the report. The recommendations, however, are those of the Bureau of Outdoor Recreation.

Our recommendations should form a blueprint for long-range development of the vast recreation potential of the beautiful Connecticut River Valley, part of which is in the heart of the eastern megalopolis.

Sincerely,



Edward C. Crafts
Director



Public Law 89-616
89th Congress, S. 3510
October 3, 1966

AN ACT

To authorize the Secretary of the Interior to study the feasibility and desirability of a Connecticut River National Recreation Area, in the States of Connecticut, Massachusetts, Vermont, and New Hampshire, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in order to consider preserving the Connecticut River area and appropriate segments of adjoining land in their natural condition for public outdoor recreation, and preserving the priceless natural beauty and historic heritage of the river valley, the Secretary of the Interior shall study, investigate, and formulate recommendations on the feasibility and desirability of establishing all or parts of the Connecticut River Valley from its source to its mouth, in the States of Connecticut, Massachusetts, Vermont, and New Hampshire, as a Connecticut River National Recreation Area. The Secretary shall consult with other interested Federal agencies, and the State and local bodies and officials involved, and shall coordinate his study with applicable highway plans and other planning activities relating to the region. In conducting the study, the Secretary shall hold public hearings within any State involved, upon the request of the Governor thereof, for the purpose of receiving views and recommendations on the establishment of a national recreation area.

SEC. 2. The Secretary of the Interior shall submit to the President, within two years after the date of this Act, a report of his findings and recommendations. The President

shall submit to the Congress such recommendations, including legislation, as he deems appropriate. The Secretary's report shall contain, but not be limited to, findings with respect to—

(a) the scenic, scientific, historic, outdoor recreation, and the natural values of the water and related land resources involved, including driving for pleasure, walking, hiking, riding, boating, bicycling, swimming, picnicking, camping, forest management, fish and wildlife management, scenic and historic site preservation, hunting, fishing, and winter sports;

(b) the potential alternative beneficial uses of the water and related land resources involved, taking into consideration appropriate uses of the land for residential, commercial, industrial, agricultural, and transportation purposes, and for public services; and

(c) the type of Federal program that is feasible and desirable in the public interest to preserve, develop, and make accessible the values set forth in subsection (a), including the consideration of scenic roads or parkways, and that also will have a minimum impact on other essential operations and activities in the area, and on private property owners.

SEC. 3. There is authorized to be appropriated \$100,000 or such part of said sum as may be necessary to carry out the provisions of this Act.

Approved October 3, 1966.

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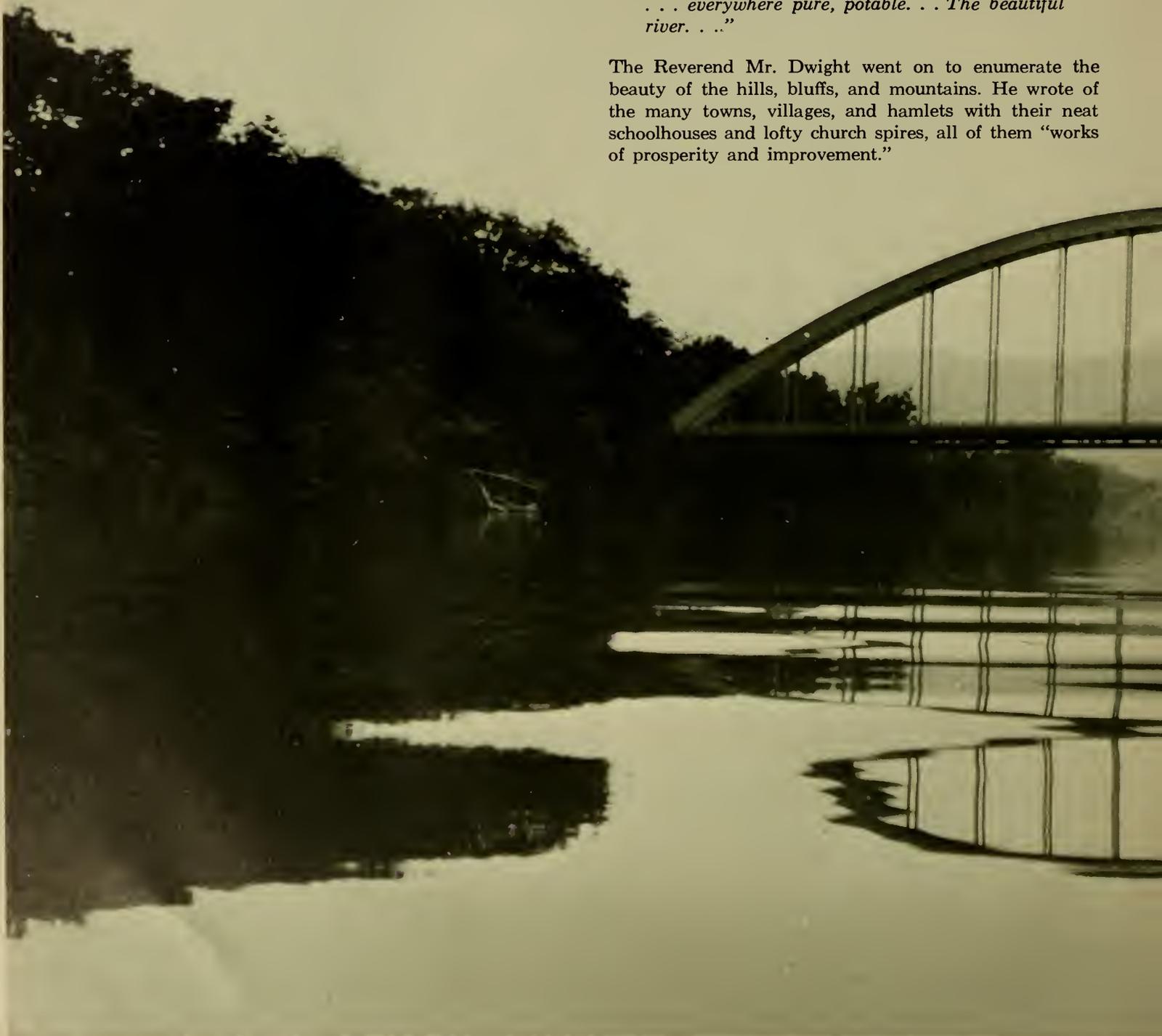
INTRODUCTION

Throughout the recorded history of New England, much has been written about the significance of the Connecticut River, of its importance to the Indian and to the Colonial settler, and to all those who have followed. One theme runs constantly throughout this narrative—the outstanding beauty of the valley.

The Reverend Timothy Dwight, President of Yale College from 1795 to 1817, describing the Connecticut River in the early 19th century wrote:

*“The waters. . . are remarkably pure and light,
. . . everywhere pure, potable. . . The beautiful
river. . .”*

The Reverend Mr. Dwight went on to enumerate the beauty of the hills, bluffs, and mountains. He wrote of the many towns, villages, and hamlets with their neat schoolhouses and lofty church spires, all of them “works of prosperity and improvement.”



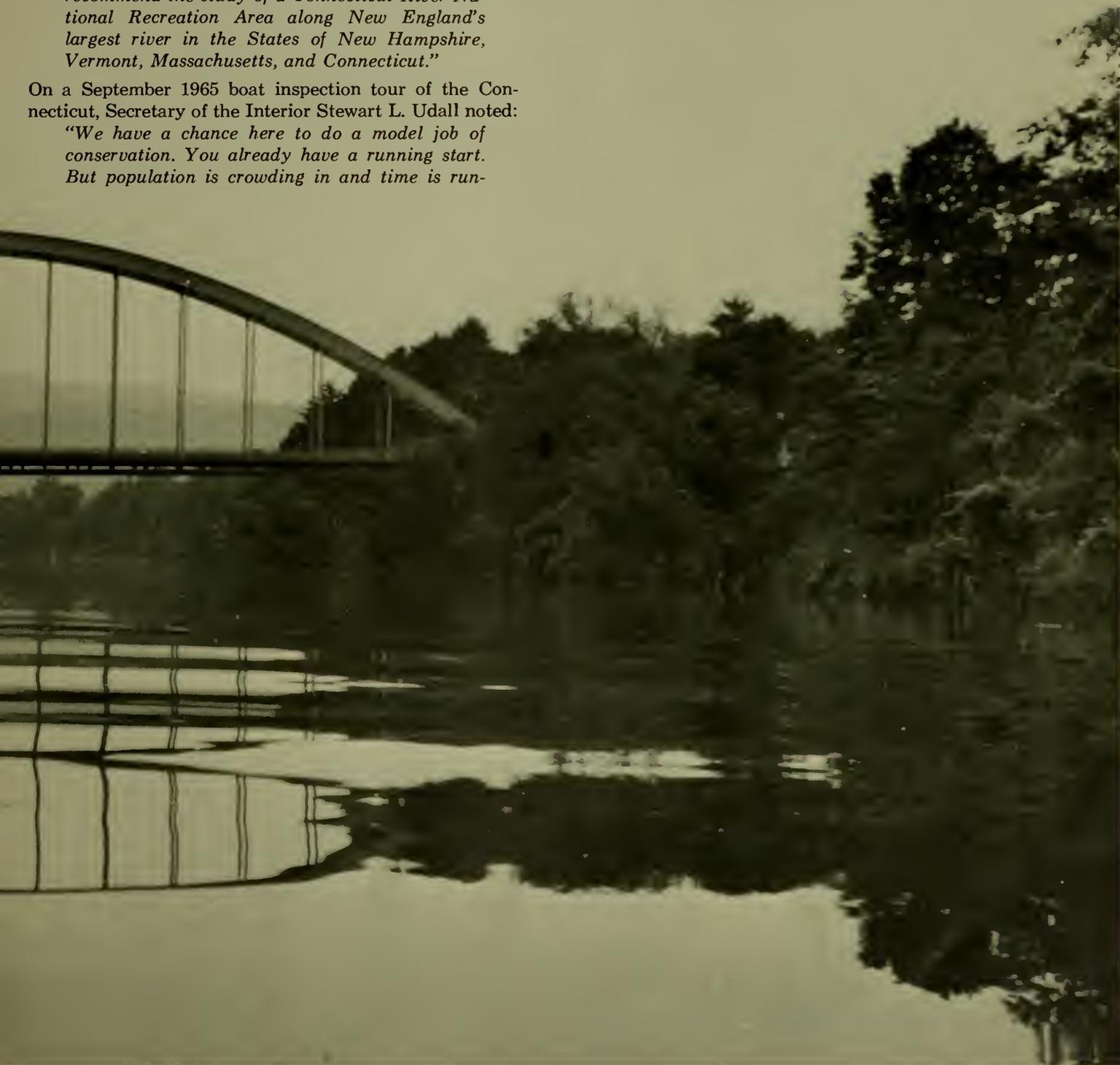
In recent times, equally descriptive observations have pointed up the need for this study. While recognizing the beauty of the river, these contemporary remarks show a deep concern for the encroachments on the once peaceful setting. They sound the call to preserve what is still worth saving, that which may even yet be saved.

President Johnson in his February 23, 1966 message on preserving our national heritage said:

"For a region which now has no national park, I recommend the study of a Connecticut River National Recreation Area along New England's largest river in the States of New Hampshire, Vermont, Massachusetts, and Connecticut."

On a September 1965 boat inspection tour of the Connecticut, Secretary of the Interior Stewart L. Udall noted:

"We have a chance here to do a model job of conservation. You already have a running start. But population is crowding in and time is run-



ning out. What we do in the next decade will be decisive for the river's future."

Before the Subcommittee on Parks and Recreation of the House Interior and Insular Affairs Committee on May 20, 1966, Senator Abraham Ribicoff summed up these recent observations when he remarked:

"It took eons to build the beauty of the Connecticut River Valley. The slash of bulldozers can rapidly take it away. Only constant vigilance safeguards our natural heritage—only far-sighted planning will make sure that future generations will enjoy the precious aspects we still retain today. We must act now to safeguard the future."

Congress, alert to this need and interest, enacted legislation (P.L. 89-616) on October 3, 1966, authorizing the Secretary of the Interior to study "the feasibility and desirability of establishing all or parts of the Connecticut River Valley from its source to its mouth, in the States of Connecticut, Massachusetts, Vermont, and New Hampshire, as a Connecticut River National Recreation Area." The Act also required the Secretary to submit to the President a report of his findings and recommendations by October 3, 1968. The President will then submit to the Congress such recommendations, including legislation, as he deems appropriate.

Secretary Udall directed the Bureau of Outdoor Recreation to conduct the Connecticut River National Recreation Area Feasibility Study in consultation with other interested Federal agencies, and the State and local bodies and officials involved. He also informed the Governors of the four States and requested their cooperation in carrying out the study. At the request of the Governors, the Bureau held public hearings in 1968 in each of the four States of the study area.

When authorizing this study, Congress defined the subject area in general terms as "the Connecticut River Valley from its source to its mouth." The Bureau of Outdoor Recreation has further defined the basic study area as the first tier of towns bordering the Connecticut River. This delineates a corridor some 400 river miles in length—from the river's source in northernmost New Hampshire to its terminus in Long Island Sound—varying in width up to 26 miles. The corridor so defined includes 92 towns: 28 in New Hampshire, 27 in Vermont, 14 in Massachusetts, and 23 in Connecticut (see Map 1).

In November 1966 a field team began collecting data and met with State and local officials, planning agencies, private organizations, and others. Many factors relating to the present and future uses of the Connecticut Valley were reviewed, including land use, geology, current and anticipated recreation participation, socioeconomic characteristics, water quality, and transportation. Reports of previous studies were also reviewed. In the determination of the most appropriate type of Federal program to preserve and develop the scenic, scientific, historic, and recreational values of the river valley, potential alternative beneficial uses of the water and related land resources were considered. After field work, reviews, and analysis by the Bureau of Outdoor Recreation, the recommendations contained in this report were formulated.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

This study revealed that the Connecticut River Valley contains the resources, potentials, and needs which meet the criteria for a National Recreation Area as set forth in *Policy Circular #1* of the Recreation Advisory Council (now the President's Council on Recreation and Natural Beauty). The study area contains:

A variety of high quality scenic resources and recreation potential.

An outstanding array of historic, educational, and cultural heritages dating from the early 17th century.

A population of over 40 million persons within 250 miles of the river.

Less than 4 percent of the area in publicly-owned recreation lands.

A corridor served by seven Interstate or turnpike highways and 20 airports.

This study found conditions, both natural and man-made, which temporarily limit the area's recreation use:

Water quality covering the entire pollution class scale and only 7 percent of the river's length presently suitable for primary contact recreation use.

Severely depleted fish and wildlife populations, and much of the river incapable of supporting a productive sports fishery.



Boating limited by natural and artificial obstructions. Virtually no public swimming areas on the river.

A lack of public picnic facilities along the river, especially near urban concentrations.

Foot, bicycling, and horseback trail mileage inadequate for present needs, with the greatest deficiencies near urban areas.

Public camping opportunities limited to a few, small, scattered areas.

The study shows that the need for protection and enhancement of the outstanding natural resources and

recreation potentials of the Connecticut River Valley is a matter of regional and national concern. Implementation of the recommendations contained in this report would require a coordinated and interrelated program of public and private action.

The study's action plan envisions no radically new resource management techniques. It proposes the blending of a small amount of land acquisition with scenic easements, conservation zones, and cooperation at every level of government and private responsibility, to preserve and enhance the outstanding character of the river and to take maximum advantage of the recreation potential of the river for the future.



RECOMMENDATIONS

FEDERAL ACTION

NATIONAL RECREATION AREA - A PROPOSAL

This report recommends establishment of a 56,700-acre Connecticut River National Recreation Area to be administered by the National Park Service. This would serve as the nucleus of a revitalized conservation and recreation program for the entire river valley. The National Recreation Area would be composed of three units. They are described as follows:

Gateway Unit Composed of 23,500 acres of river frontage and adjacent upland area along the Connecticut River estuary, this unit would serve principally to preserve the scenic character and considerable charm of the lower river. A total of 4,100 acres would be acquired by the Federal Government in fee. An additional 1,900 acres could be a requested donation from the State of Connecticut. The balance, some 17,500 acres, would be protected within a Conservation Zone whereby locally-enacted zoning ordinances meeting standards prescribed by the Secretary of the Interior would shield the area from incompatible uses and further preserve the present environmental quality of the lower Connecticut River.

Mount Holyoke Unit This unit would include the heavily forested and scenic Mt. Holyoke Range which abuts the eastern shore of the Connecticut River near Northampton, Mass. The unit would be designed to preserve a major scenic resource, and to provide high quality recreation, balanced by a Mt. Tom-Northampton State Park to provide intensive recreation specifically directed to the needs of this portion of the river valley. A total of 12,000 acres could be acquired for the Federal area.

Coos Scenic River Unit This unit, taking its name from the Indian word *coos* (pronounced Kō'öss) for the meanders which characterize this segment of the river, would include an 82-mile section of the upper Connecticut River nestled between the White Mountains of New Hampshire and the Green Mountains of Vermont, from

Lake Francis in northern New Hampshire to Moore Reservoir near Littleton, N.H. This superb resource for the trout fisherman, the canoeist, and the hiker could become a part of the National Scenic Rivers System. It would consist of 21,200 acres. About 1,000 acres along the river would be acquired in fee simple, with the remaining acreage controlled by scenic and access easements. The easements would preserve scenic and geologic qualities, protect the land from incompatible utilization, permit continuation of the existing agricultural pattern, retain the land on the local tax rolls, and allow limited access along the river.

OTHER FEDERAL ACTION

Establishment of the Connecticut River National Recreation Area is only a part of direct Federal participation. Further Federal effort will involve cooperation with State, local, and private interests in creating a Connecticut Valley Trail for hikers and a Connecticut Valley Tourway for motorists, as well as strengthening such programs as pollution abatement, the restoration of anadromous fisheries, and stream improvement.

The Connecticut Valley Trail, which would be some 300 miles in length, would branch northward from the Appalachian Trail near Hanover, N.H. and extend northward along the river. It would loop through the Connecticut Lakes area and return south along the ridges of the White Mountains to rejoin the Appalachian Trail south-east of Lancaster, N.H. Such a trail would be a valuable addition to the Nationwide system of trails.

The Connecticut Valley Tourway, a network of existing roads on both sides of the river, would connect many points of outstanding scenic, historic, and cultural interest within the four-State area.

SUMMARY - FEDERAL ACTION

The financial involvement of the Federal Government in establishing the multi-unit Connecticut River National Recreation Area and the Connecticut Valley Trail is estimated at \$58 million.

Establishment of the three units involves about 56,700 acres of land. The lands and interests therein to be acquired in fee title and less-than-fee would cost an esti-

mated \$45 million. The cost of proposed development is estimated at \$12 million.

A major portion of the Connecticut Valley Trail would be acquired through scenic and access easements. The estimated cost of Federal land acquisition and development for the trail is calculated to be \$770,000.

STATE ACTION

This report recommends the following complementary State actions to be undertaken in conjunction with each of the National Recreation Area units.

GATEWAY UNIT

The State of Connecticut is urged to expand the contiguous Cockaponset State Forest through acquisition of an additional 10,100 acres. This addition would round out the State Forest ownership and enhance large scale recreation opportunities. An expanded Cockaponset State Forest will become even more necessary with the completion of Connecticut Route 9. Because the City of Hartford is located a short drive from Cockaponset, the State Forest could receive an estimated annual visitation of 3 million persons.

MT. HOLYOKE UNIT

To complement Federal action at the Mt. Holyoke Unit, it is recommended that the Commonwealth of Massachusetts consider enlarging the existing Mt. Tom Reservation through the acquisition of an additional 3,000 acres of land to create a State park. This acquisition would include the Great Oxbow and the Northampton flood plain, and would provide intensive recreation opportunities for the Springfield-Chicopee-Holyoke metropolitan area.

COOS SCENIC RIVER UNIT

At the northern end of the Coos Scenic River Unit, it is suggested that the State of New Hampshire acquire 14,000 acres of land in fee as well as obtain easements on an additional 33,000 acres in the Connecticut Lakes area to provide both land and water-oriented activities. As a further complement to Federal action at this unit,

it is recommended that the States of Vermont and New Hampshire jointly undertake a recreation program with the New England Power Company for optimum utilization of the recreation potential of the Moore and Comerford Reservoirs, located at the southern end of the Coos Scenic River Unit.

Further recommendations for consideration by the four States include:

1. That the State of Connecticut establish two State parks on the river—at Glastonbury—Wethersfield-Rocky Hill Meadows and at Windsor Locks-King's Island to serve the Hartford metropolitan area.
2. That the proposed master plan for cooperation between the Commonwealth of Massachusetts and private utility companies be implemented in creation of recreation opportunities at Turners Falls.
3. That the States of New Hampshire and Vermont, drawing on all levels of responsibility, jointly create a Rogers' Rangers Historic Riverway to commemorate the exploits of Colonial hero Robert Rogers against marauding Indians, and to preserve the scenic and historic values in this stretch of the river. This area could extend south, from Comerford Dam, 100 miles to Fort Number Four, Charlestown, N.H.

LOCAL PUBLIC ACTION

Recommendations for action at the local level:

The 92 towns within the study area should take immediate action to maintain scenic control of their river frontage so that it remains in agriculture, open space, or recreation land use.

Municipalities should place the highest priority on acquisition of riverfront lands for recreation purposes.

Municipalities should actively engage in comprehensive local and regional planning aimed at assuring adequate recreation and open space opportunities.

Urban renewal programs should place due emphasis on recreation and open space needs.

PRIVATE ACTION

Recommendations:

There should be greater realization of the recreation potential at privately operated or controlled water storage areas on the river.

Programs for the preservation of the scenic qualities of private lands should be initiated through legal means. This would include creation of land trusts, transfers of development rights, and sale or donation of scenic easements.

WATER QUALITY

In view of the high recreation potential of the Connecticut River Valley, and the rising pressure of urban populations seeking water-oriented recreation, the goal of all water pollution abatement programs should be water of a quality suitable for swimming.

COORDINATION

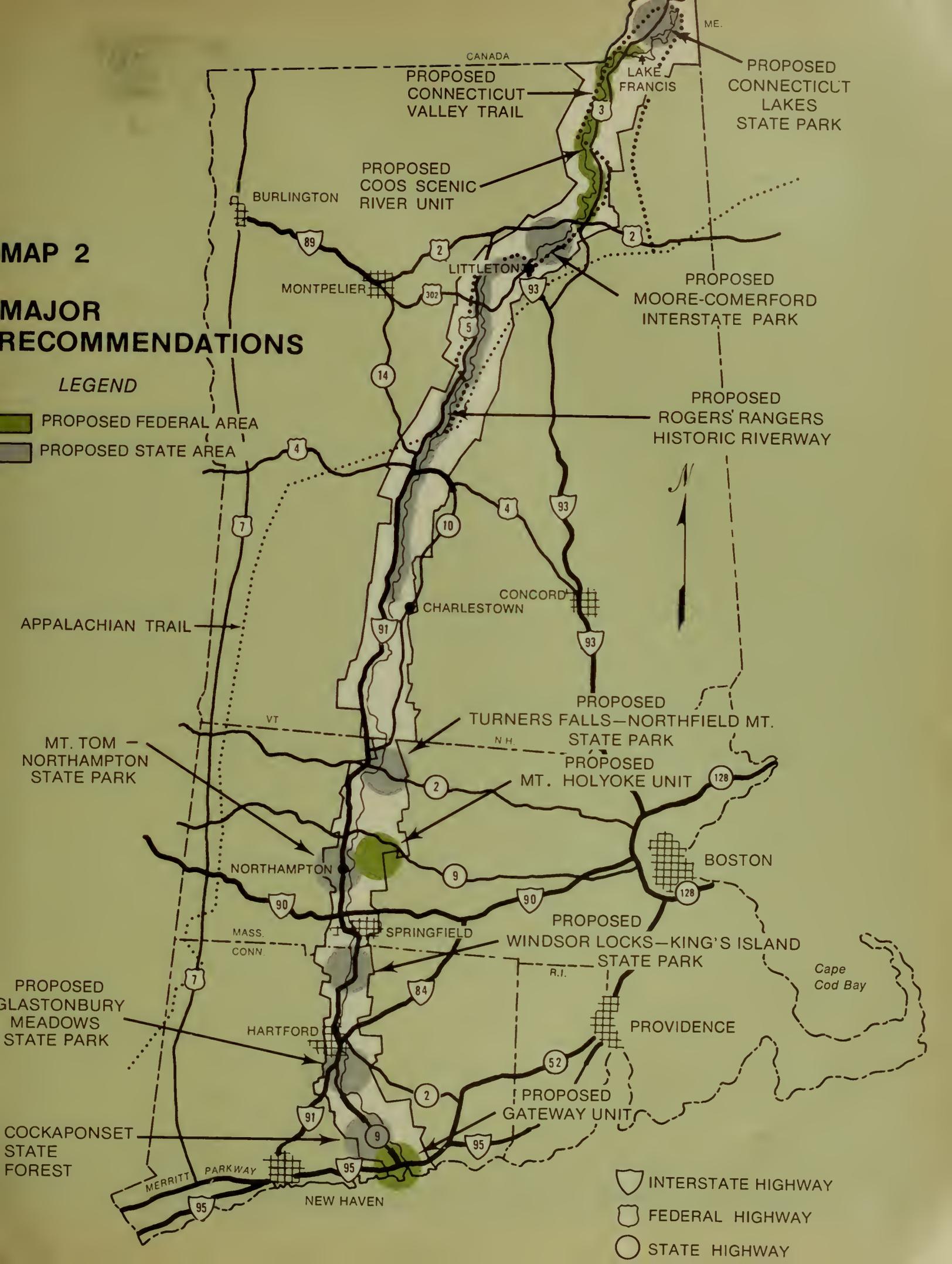
It is recommended that the Bureau of Outdoor Recreation, under the authority in its Organic Act (Public Law 88-29), encourage coordinated recreation planning throughout the Connecticut River Valley. This would permit concerted action at all levels of government and with the private sector both to conserve the beauty of the valley and to develop its full recreation potential.

The recommendations set forth in this report have been designed to have a minimum impact on existing residential, commercial, industrial, agricultural, and transportation uses of the valley. This report does not seek to turn back the clock, nor to bar future development. It sets forth a plan to assure that development will take into account the scenic, historic, scientific, and recreational values still present throughout much of the Connecticut River Valley.

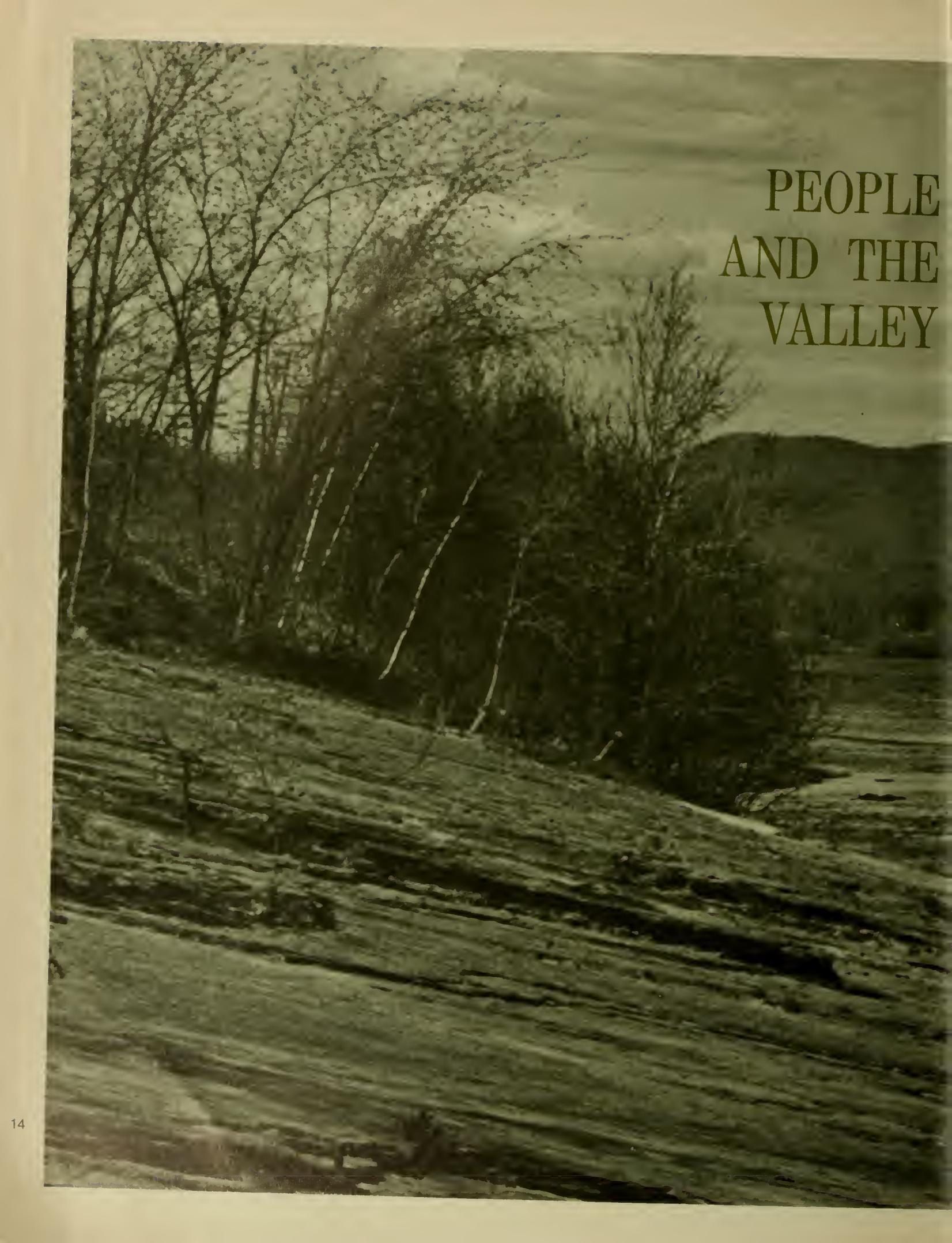
MAP 2 MAJOR RECOMMENDATIONS

LEGEND

- PROPOSED FEDERAL AREA
- PROPOSED STATE AREA



- INTERSTATE HIGHWAY
- FEDERAL HIGHWAY
- STATE HIGHWAY

A black and white photograph of a valley. In the foreground, a hillside slopes down from the left, covered with a dense forest of bare, thin trees. The ground appears to be a mix of dirt and sparse vegetation. In the background, a wide valley opens up, with a line of trees and a distant mountain range under a cloudy sky. The overall tone is somber and naturalistic.

PEOPLE
AND THE
VALLEY

BACKGROUND

HISTORICAL HIGHLIGHTS

The Dutch explorer, Adrian Block, discovered the Connecticut River in 1614, naming it "De Versche Riviere" (the fresh water river). However, the Algonquin Indians called it "Quinatuquet" (the long tidal river) and it was this name that evolved to the "Connecticut" of today. Block established a trading post on the site of present-day Hartford and claimed a broad territory for his native country. English settlements followed in the 1630's. During this period of settlement, both the Dutch and the English formed precarious alliances with the neighboring Indian tribes, leading to clashes for power and control. In 1650, the Hartford Treaty defined the boundaries of Indian, Dutch, and English holdings, and ushered in a short period of relative peace. War again erupted between the two European powers in 1652. It was a brief conflict

and forced the Dutch to abandon their claim to the river. The Connecticut colonists manifested their spirit of independence at an early date. They were proud of their colonial charter, which allowed them more freedom and independent action than most of the other American colonies. When it appeared to the King of England that the colony was going too far in its pursuit of liberty, his agent, New England Governor Sir Edmond Andros, moved to revoke the charter. Colonial officials gathered at a meeting with the Governor to surrender the document. Suddenly, tradition has it, the windows of the meeting hall were flung open, and a gust of wind blew out all the candles in the room. In the ensuing confusion, the charter was spirited away and hidden in a large oak tree nearby. "Charter Oak", as it was called, became a symbol of freedom, and of the independence of the Connecticut Yankee. Meanwhile, the influence of *Nouvelle France* to the north was pressing upon the Connecticut Valley, and the various later 17th century European conflicts between the French and the English had their counterparts in



struggles between the French settlers in Canada and the English colonists in New England. The Connecticut River served as a waterway for the French and their Indian allies to raid the villages and settlements of the New England colonists. These raids were partially avenged in 1759, when Robert Rogers, leader of the famed Rogers' Rangers, sacked a village of the marauding Indians at St. Francis in Canada.

Rogers' dramatic flight from his enraged pursuers led down the Connecticut River Valley from near the confluence of the Nulhegan and Connecticut Rivers to Fort Number Four, the present-day Charlestown, N.H. The taking of Quebec by the English in 1759 and the signing of the Treaty of Paris in 1763 finally brought peace to the valley.

The Revolutionary War left the valley virtually unscathed. Connecticut, Massachusetts, and New Hampshire were among the 13 original colonies which banded together to form the new Republic. In 1791, Vermont became the 14th State in the Union.

The upper end of the valley was the site of a curious footnote to early American history. The Indian Stream Republic, perhaps the smallest and shortest-lived nation ever known in the Western Hemisphere, had its beginnings when three adventurers from New Hampshire acquired the upper valley from the Indians and settled it in 1796. About 1820, the State of New Hampshire acted to bring the area's almost 300 inhabitants within its fold. In resistance to the State's efforts, the residents of the area formed the Indian Stream Republic and appealed to Washington for recognition. The inhabitants were informed bluntly that they were within the territorial limits of both the United States and the State of New Hampshire. This attempt to establish an independent nation was abandoned in 1836.

The economy of the Connecticut River Valley developed primarily on a basis of agriculture and trading. The Dutch founded a substantial trade with the Indians living along the river, dealing in furs and other goods.

The English settlers from Plymouth Colony were at-



tracted by the agricultural potential of a temperate climate and rich soil and were the first to build permanent villages in the valley. Their economy centered on livestock and farm produce and was largely self-sufficient. As the region expanded, shipbuilding, fishing, and lumbering became increasingly important. By the end of the 18th century, tanneries and small local mills thrived by processing leather, grain, lumber, and paper. The early 19th century saw the rapid growth of textile mills within the area.

With the development of mechanical equipment, New England's machine tool industry mushroomed, and factories making a wide range of articles from guns to pumps to sewing machines became a major factor in the economy of the area. The river served both as a source of power and as an economical way to transport raw materials and finished products.

It was also the principal factor of social and economic life. The first settlers chose the fertile plains near the river banks; the water served their household and farm-

ing needs, provided power for waterwheels, and was their means of transportation. But at the same time, the river acted as a barrier, hindering travel to and from established areas. Bridges became necessities to those who lived on either bank. In 1784 the first span, a toll bridge connecting Walpole, N.H., and Bellows Falls, Vt., was built by Colonel Enoch Hale.

The residents of the valley soon sought a convenient method to extend their travel down river around the falls. This prompted construction of the first canal in the United States, which was begun at Bellows Falls, Vt. in 1792. The Nation's second and third canals were also constructed along the Connecticut at Turners Falls and South Hadley, Mass. Today, Windsor Locks is the only functional canal remaining on the river. Built in 1829, it provides passage around Enfield Dam and Rapids.

Many inventions and innovations are also reflected in the Connecticut's waters. Residents along the river have always felt that the Connecticut was the birthplace of modern shipping. The first steam propelled boat was

2



1. "Metropolitan" Hartford as it appeared in 1640 (from a 19th century map).

2. Canals along the river diverted water to produce power for early industry, and facilitated transportation of finished goods.

3. The famous Colt firearms have been manufactured in Hartford, Conn. since the mid-19th century.

3



built in Windsor, Conn., by John Fitch in 1787. Six years later, and 14 years before Robert Fulton's steamboat, an improved version with a steam-turned paddle wheel was constructed by Samuel Morey at Orford, N.H. In 1848 Samuel Colt established a factory in Hartford, equipped with the most up-to-date machines for making his famous firearms. Numerous factories were built along the river during the 19th century, changing the face of much of the valley from rural countryside to a series of booming industrial towns.

ECONOMY

In the Connecticut River Valley, as elsewhere, the number of farms and farm workers has dwindled and the importance of agriculture in the economy has declined during the last century. In 1910, 9.65 percent of the labor force in New England listed occupations in the Agriculture category; by 1950 this had dropped to only 3.15 percent. Today, the industrial economy of the New England States is based on manufacturing and services. These States have a higher percentage of the labor force in manufacturing and services than the United States national average. The 1960 percentage of white collar workers in the lower valley was also higher than the United States average, but in the northern counties fell below the national average. The Connecticut Valley is a major manufacturing center of the Nation, producing such a diverse range of goods as jet engines, machine tools, electronic equipment, leather goods, textiles, and wood pulp products. Agriculture, although diminishing in New England generally, still plays a large role in the valley's economy. Tobacco has been grown in the lower valley since Colonial times. Farther north, where the growing season is shorter, dairying and truck farming predominate.

The per capita income of New England is almost 9 percent higher than the United States average. This difference is expected to double by 2000 and be 22 percent by 2020. The area's labor force is constantly acquiring more highly paid professional and technical workers while the percentage of unskilled laborers declines. New England also has a larger proportion of high-wage industries and higher rates of employment than the national average. Of the four-State area, Connecticut has the highest per capita income—\$3,401 as of 1965—the second highest in the Nation. Massachusetts is next among the four States with an annual per capita income of \$3,050, followed by New Hampshire with \$2,547, and Vermont with \$2,312. These figures compare with a national average of \$2,746.

POPULATION

The 1960 population living within 50 miles of the Connecticut River (5,624,619) was 53 percent of the total New England population and 3 percent of the United States population. It is predicted that by 1980 approximately 8.5 million persons will live in this area, and that by 2000, the population will reach 11.6 million. Between 1950 and 1960, population increased in all of the counties bordering the river except for the three northern ones in Vermont, which showed small losses. The increases in population have been the greatest in

Connecticut, with somewhat smaller gains in Massachusetts and New Hampshire. The urban areas in general show the greatest population increases as people leave rural areas and farms in increasing numbers to work in the cities. The Hartford, Conn., and the Springfield-Chicopee-Holyoke, Mass. Standard Metropolitan Statistical Areas are the largest population centers of the valley with 549,249 and 493,999 people, respectively (1960).

As a whole, New England is 76.4 percent urban, compared to a 69.9 percent figure for the United States. Massachusetts (83.6 percent) and Connecticut (78.3 percent) have the highest proportion of urban dwellers, while New Hampshire is 58.3 percent and Vermont only 38.5 percent urban. In the counties bordering the Connecticut River, extremes of urbanization range from none in Orange and Essex Counties, Vt., to 87 percent in Hampden County, Mass.

Table 1: Population Density

	PERSONS PER SQUARE MILE	
	1950	1960
Connecticut	410	521
Massachusetts	596	657
New Hampshire	60	67
Vermont	41	42
New England	148	167
United States	43	51

Trends indicate that the urban population will continue to increase. In its lower reaches, the Connecticut River flows through Megalopolis, the giant eastern urban area, which, it is predicted, will extend along the coast from north of Boston to south of Washington, D.C. and have a population of 72 million by the year 2000.

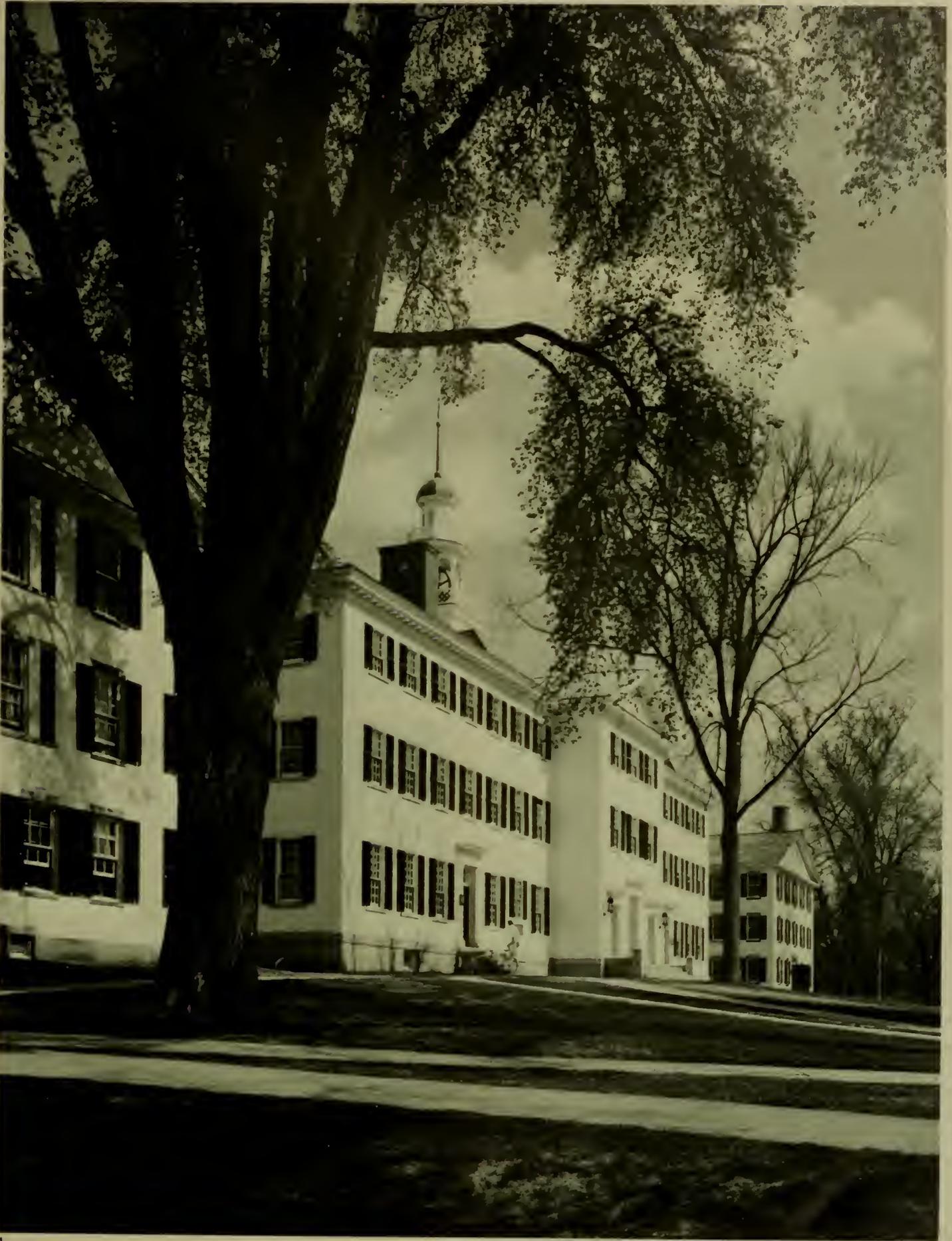
EDUCATION

The median level of education in the four States is higher than the United States average of 10.6 years. In only four of the counties bordering the river, the most northerly in Vermont and New Hampshire, does the median fall below the national level. There are over 50 colleges and preparatory schools in the Connecticut River Valley, providing valuable cultural and research facilities. Of prominence among the many institutions of higher education in the study area are Dartmouth College, the University of Massachusetts, Amherst College, Smith College, Mount Holyoke College, Trinity College, and Wesleyan University.

ACCESS

The Connecticut River corridor is served by seven Interstate or limited access highways, including I-91, I-93, I-95, I-89, and I-84, some in various stages of completion. From a recreation standpoint, the most important of these routes is I-91, which parallels the Connecticut River

4. Founded in 1769 at Hanover, N.H., Dartmouth is the ninth oldest college in the country.

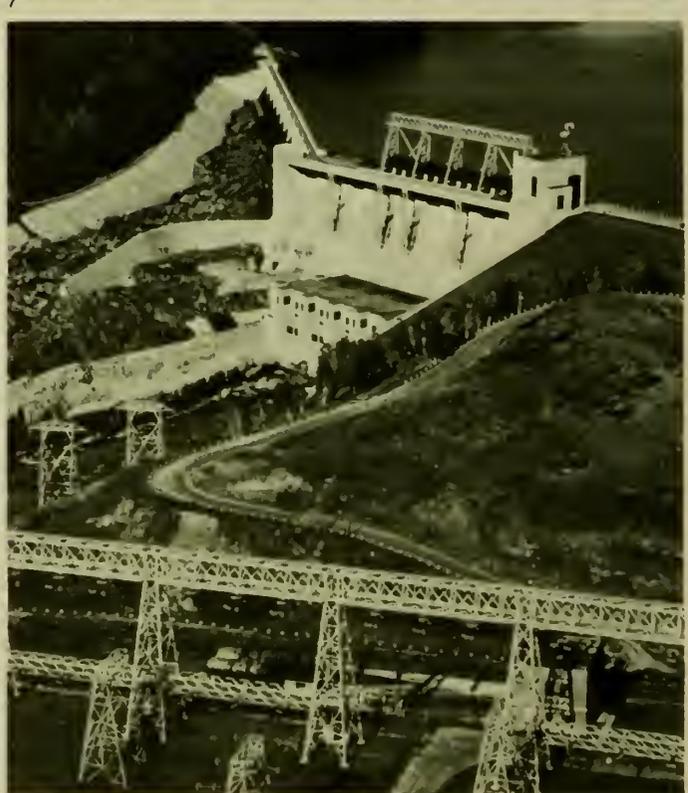


5. Bradley Field, between Hartford, Conn. and Springfield, Mass., handles both domestic and overseas air traffic.

6. While passenger service has dwindled, railroads still play a major role in the transportation of freight.

7. Although not a major part of the Connecticut Valley's transportation complex, this ferry shuttles cars across the river in the proposed Gateway Unit.

8. Frank D. Comerford Dam. Many miles of the river have been dammed for the production of hydroelectric power.



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beginning at a point south of Hartford, Conn., north almost to St. Johnsbury, Vt. Traffic originating in the New York metropolitan area flows into the study area via the Merritt and Wilbur Cross Parkways, the Connecticut Turnpike (I-95), and I-84. The Massachusetts Turnpike serves as an important connection with the New York Thruway to the west and to the Boston metropolitan area in the east. At White River Junction, Vt., I-89 crosses I-91 to tie Boston and southern New Hampshire with Vermont, northern New York, and Montreal, Quebec.

The secondary State road systems play an important supporting role in getting people into the study area, and will be a significant element in the establishment of tour routes. In addition to Federal, State, and town roads, the larger timber companies which permit public use of their lands have made available many miles of their own roads.

Eight railroads enter the Connecticut River corridor, either crossing or paralleling the river. In the northern half of the study area there are six railroads: the Boston and Maine, Canadian National, Central Vermont (owned by Canadian National), Canadian Pacific, Maine Central, and Green Mountain Railroads. In the southern half, the two major railroads are the New York, New Haven and Hartford, and the Penn Central. Railroad passenger service has been discontinued in Vermont and New Hampshire.

There are approximately 20 airports within the study area, but only two, Bradley Field, serving the Hartford-Springfield area, and Lebanon Regional Airport at Lebanon, N.H., have regularly scheduled flights. Bradley Field, the largest, handled over 900,000 passengers in 1966. General and commercial airline transportation is growing and this growth is expected to continue.

Of all modes of transportation available in the valley, the privately owned automobile is at present the most important. In Connecticut, it accounts for 93 percent of all passenger miles (of the remainder, buses account for 5 percent, rail—1 percent, and air and water—1 percent). The national percentage of housing units with one or more automobiles, 78.4, is exceeded in all Connecticut River States (except Massachusetts) with an average of over 83 percent of all households having at least one automobile.

These characteristics of the New England States—high levels of education and income, a high degree of mobility, and a high rate of urbanization—combine to create a recreation market that is considerably above average. Higher participation rates are correlated with these characteristics. The influence of these elements is increasing.

TRENDS

Although employment in the New England States is on the rise, and the median income in the New England States is higher than the national average, there are still pockets where incomes are low and unemployment rates are high, particularly in the northern counties. In the last century, the New England States were leaders in manufacturing, but today's rate of industrial growth falls short of the national average. In the last two decades,

the recreation and tourism industries within the Connecticut River Valley have seen such significant growth that they presently surpass historically important industries. This is especially true in Vermont and New Hampshire where recreation and tourism are the second-ranking industries, representing an income of over \$400 million annually. This growth stems from a superb recreation resource, coupled with aggressive promotion and enthusiastic cooperation between the State governments and private interests.

New England's future outdoor recreation demand can also be expected to skyrocket. A larger population, lower median age, higher incomes, and great mobility will influence recreation participation immensely within the next decade.

NATURAL RESOURCES

The Connecticut River forms in the mountains above Fourth Connecticut Lake near the Canadian border. From the northern side of the same mountain the Salmon River flows northward, joins the St. Francis and then the St. Lawrence Rivers, and finally empties into the North Atlantic. Thus these mountains overlooking Fourth Connecticut Lake serve as the headwaters for two major rivers, one Canadian and one American.

The Connecticut River flows some 400 miles through a basin 280 miles long and 60 miles wide. The basin encompasses an area of over 11,000 square miles, in four States and a small portion of one Canadian Province. Major tributaries include the Ammonoosuc, Ashuelot, Millers, and Chicopee Rivers entering from the east; the Passumpsic, White, West, Deerfield, Westfield, and Farmington entering from the west. Daily flow of the Connecticut averages nearly 16,000 cubic feet per second. However, it has ranged as high as 282,000 and as low as 971 cfs. In the spring, daily flows average over 24,000 cfs., but drop to under 5,000 in late summer.

The climate of the valley varies considerably depending on elevation and location with respect to the coast. The valley is subject to frequent but generally short periods of heavy precipitation since it lies in the path of prevailing westerlies and cyclonic storms. The central and lower portions of the valley are exposed to occasional coastal storms, some of tropical origin, that travel up the Atlantic seaboard.

Temperatures within the valley vary from summer highs in the upper 90's to winter lows of minus 15°F. Average annual rainfall is over 40 inches. Annual snowfall ranges from an average of less than 40 inches in the lower valley to over 100 inches in the northern part of the study area.

The river is regarded by the U.S. Coast Guard as navigable water from its source to Long Island Sound, but navigation is impeded by a series of 16 dams commencing at Holyoke, Mass., and extending northward up the river. These dams are used either directly or indirectly for the production of hydroelectric power, with an aggregate capacity of over 470,000 kilowatts. Currently, the

only navigable canal on the river is at Windsor Locks, Conn.

At present, from source to mouth, the Connecticut River runs the complete scale of water quality from an undefiled purity suitable for drinking to an offensive water of a quality unsuitable for fish life (See Map 14 on page 70). The mountain headwaters of the river in northern New Hampshire and Vermont are of sparkling quality. As the river passes between New Hampshire and Vermont, discharges of partially treated and untreated municipal and industrial wastes degrade the waters. For 25 miles below Groveton, N.H., during periods of low streamflow, the river is grossly polluted. Other reaches support fish life of varying character but now are unsuitable for swimming and often appear esthetically unpleasing.

As the Connecticut flows through north central Massachusetts, the general quality of its waters is similar to that in New Hampshire and Vermont. In the vicinity of Holyoke, Springfield, and Chicopee, Mass., further degradation often makes its waters suitable only for boating and industrial uses. This degraded condition continues through much of Connecticut to the river's mouth.

Due to the polluted condition of the river, there is little use of its water for municipal water supply. However, there is some use of the river for irrigation, especially on the fertile land between Greenfield, Mass. and Hartford, Conn.

The Connecticut River is subject to extreme variations in flow created by water release or storage activities at the 16 dams. The reservoirs fluctuate according to power demands. These demands tend to increase during the day and diminish in late evening. Weekends, when industrial use is considerably lighter, are periods of light demand. As a result, the reservoirs rise abruptly Friday evenings and may continue to rise until Monday morning. The downstream effect is, of course, reversed since temporary retention of water in the reservoirs creates low stages along the river. The result is a shortage of water for recreational boating and an increased concentration of pollutants on weekends when recreation demand is greatest.

The study area may be considered in four sections, delineated by the boundaries of the four physiographic regions classified in Fenneman's *Physiography of the Eastern United States* (See Map 3). These are: White Mountain (I), New England Upland (northern) (II), Connecticut Lowland (III), and New England Upland (southern) (IV). A fifth section, Coastal Plain (V), has been created for the purposes of this study, although this involves an adaptation of the Fenneman classification.

The dominant characteristic of the northern third of the White Mountain Section (I) is the presence of many mountains with elevations of over 3,000 feet. The river in this area is a narrow, swift, coldwater stream, which, in 30 miles, falls some 900 feet, the sharpest drop within the river's profile. This fall, however, is not that of a completely free-flowing stream since there are three artificial impoundments (Second Connecticut Lake, First Connecticut Lake, and Lake Francis) within this reach of the river.

The southern two-thirds of the White Mountain Section,

the "coos" area, is characterized by only occasional elevations of over 2,000 feet. Throughout this area, the mountains of the Lake Francis-Connecticut Lakes area and the White Mountains create a visually pleasing and impressive panorama when viewed from the river. This area, marked by stratified glacial deposits, is extensively dissected by river erosion and exhibits characteristic oxbows and flood plains. Here the river is a wider, slower, more meandering stream, despite the fact that in the stretch between Gilman and East Ryegate, Vt., it makes its second greatest fall, dropping some 400 feet. The width and slower flow can be attributed in part to five dams.

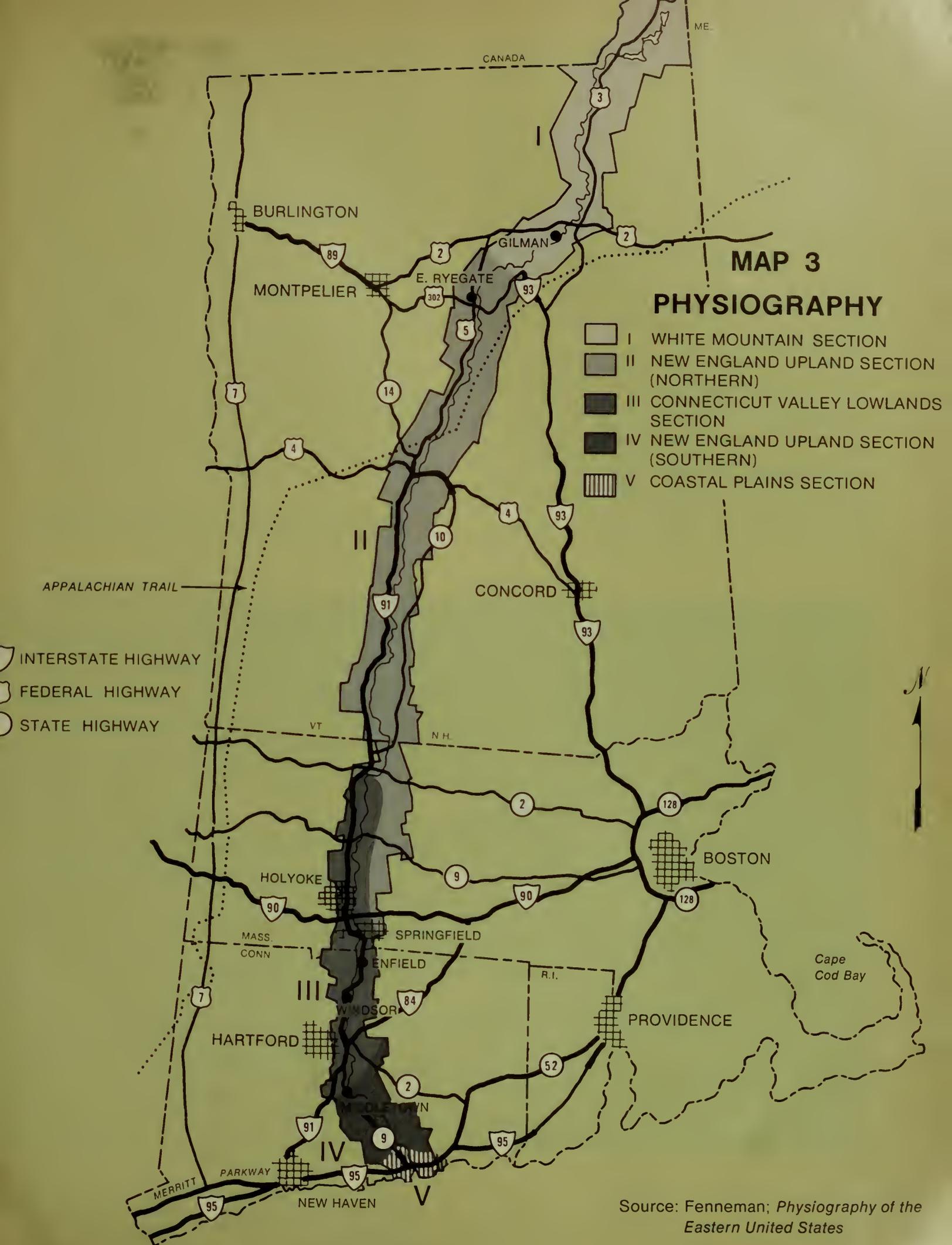
The New England Upland (northern) Section (II) has been described as a deeply dissected, elevated peneplain. Its northern portion exhibits stratified glacial deposits similar to those of the coos area, a number of monadnocks, and an abrupt southerly shift in the direction of the river caused by the uniform resistance of the underlying rock. The river flows through hilly and rolling country, with elevations of up to 2,000 feet, and gradually drops 365 feet. This section of the river valley has six dams.

The Connecticut Valley Lowlands Section (III) is a north-south faulted area, topographically and geologically distinct from the upland bordering it. While the valley floor is less than 500 feet above sea level, the trap-rock ridges and adjacent uplands rise sharply to an elevation of 500 to 1,000 feet. The wide elongated valley floor, flat to moderately rolling topography, an extensive flood plain area, and a gradual fall of the river elevation, all combine with the north-south fault to produce a strong contrast with other sections. There are two dams on this section of the Connecticut, at Holyoke, Mass. and Enfield, Conn.

South of Middletown, Conn., the river turns southeastward, leaves the lowland section, passes through the Connecticut River Straits, and enters the New England Upland (southern) Section (IV). This zone is a ruggedly dissected plateau with only a few hilly or mountainous elevations rising as much as 660 feet. Lands along the river are fairly steep, and little valley floor exists. The river here is free-flowing and tidal, coursing through an especially attractive setting.

The Coastal Plain (V), is differentiated from the dominant New England Upland sections by a gradual transition evidenced by the presence of tidal coves, an increase of coastal plain not visually unlike the flood plain of the upper reaches of the river, the presence of extensive tidal marshes, meadowlands, and large estuarine islands, and by a gradual decrease in elevation from that of the uplands. The river is tidal and unobstructed by dams from Windsor, Conn. to its confluence with Long Island Sound. The bedrock of the upland sections gives way to rocky and till-covered headlands dotted with sandy beaches and sheltered bays. A number of offshore rocks, shoals, and shifting sandbars give further evidence of the confluence. The Connecticut is one of the few large rivers in the United States that does not have a major city as its mouth.

In the White Mountain Section (I) the forests are primarily northern hardwood (maple, beech, and birch) on the lower elevations, and conifer (spruce-fir) in the



MAP 3

PHYSIOGRAPHY

- I WHITE MOUNTAIN SECTION
- II NEW ENGLAND UPLAND SECTION (NORTHERN)
- III CONNECTICUT VALLEY LOWLANDS SECTION
- IV NEW ENGLAND UPLAND SECTION (SOUTHERN)
- V COASTAL PLAINS SECTION

- INTERSTATE HIGHWAY
- FEDERAL HIGHWAY
- STATE HIGHWAY

Source: Fenneman; *Physiography of the Eastern United States*

higher areas. In the New England Upland (northern) Section (II), northern hardwoods become intermixed with red and white pine. An oak-hickory forest is predominant in the remaining three sections.

Use of the forest by the logging industry has not always been consistent and planned. In Colonial times, the virgin wilderness was subject to high grade cutting, removing only the best timber for ship masts, furniture, and homes. Later, vast areas were clear-cut to allow agricultural development of the land. Most of what remains today is now carefully managed. Many commercial market changes have occurred in the past 20 years, the result of creating new uses for the raw materials and eliminating other uses through the discovery of substitute materials. Such changes have turned forest management policies of private timber owners more toward a multiple-use concept.

The Connecticut River Valley was once part of the unbroken wilderness which covered the entire Northeast. White-tailed deer, black bear, elk, moose, and caribou roamed the valley, and each spring the river shimmered with Atlantic salmon, American shad, striped bass, and other anadromous species on their annual spawning run. The caribou and elk are now gone, eliminated by some 300 years of agricultural and industrial development, but moose may still be found in those parts of Vermont and New Hampshire where the habitat has seen the least disturbance. Although Atlantic salmon have been elimi-

nated by dam construction and pollution, shad still make an abbreviated run up the river.

RECREATION OPPORTUNITIES

Existing Federal and State outdoor recreation developments within the Connecticut River Valley study area consist of 34 State parks, 19 State forests, 27 fish and game lands units, 38 boat access sites, three Federal flood control structures, and a National Historic Site. These 122 administrative units encompass 87,000 acres of land in public ownership, less than four percent of the study area. Of these units, 60, with a total of some 22,000 acres, are on the Connecticut River. The 38 publicly-owned or operated boat access sites have an average size of one acre, with extremely modest shore frontage. There are, however, numerous informal access sites on public and private lands along highway rights-of-way and through farmers' fields. There are some 838 miles of river frontage, of which only 77 miles (some 9 percent) are at present in public ownership. This figure includes 16 miles of flood control levees in the Springfield-Hartford area.

The land and its river dictate to some extent the patterns of socioeconomic development of an area. This pattern in turn influences the recreation use of the land. The

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Connecticut River Valley is no exception. In general, recreation activities and facilities have been located where they would not conflict with already established commercial, agricultural, and residential uses of the valley's land and water resources. Such a pattern has led to the present situation, in which much of the total recreation opportunity exists in remote areas where suitable lands are more available and less expensive to acquire. This does not explain, however, the absence of efforts to preserve for public use what remains of the Connecticut River waterfront. Only in limited areas is the riverfront controlled by land-use zoning. As a result, immediate financial gain has been the only measure for development and exploitation of the scenic, natural, and recreation values along portions of the riverfront.

Few rivers in the United States offer more potential for a satisfying total environment to a greater concentration of people. The Connecticut River Valley still has natural beauty in its variety of landscape and waterscape, charm in its historic heritage, extensive education opportunity in its numerous high quality educational institutions, and unparalleled productive capacity in its resources, climate, and population.

HUNTING

The Connecticut River Valley offers a varied range of hunting opportunity for the recreationist, with forest and farm game species, as well as migratory waterfowl,

available during the hunting season.

Forest game species, such as black bear, white-tailed deer, gray squirrel, snowshoe hare, ruffed grouse, and woodcock are presently extending their ranges in the White Mountain and New England Upland (northern) sections. Here, the human population is declining and farmland is being permitted to revert to forest, and forest game population is increasing. The reverse is true in the southern portion of the valley, where the human population is expanding and the land being subjected to more intensive uses. Farm game species, including cottontail rabbit, ringnecked pheasant, and bobwhite quail, abound in the southern section of the valley where land is devoted to agriculture.

The Connecticut Valley is a migratory route for a variety of waterfowl, including black, pintail, and wood duck, and teal. They nest near suitable waters found throughout the study area, but are most numerous in the northern sections. The river itself provides good waterfowl habitat, as do natural lakes and beaver flowages. The meadows and tidal marshes in the southern portion of the valley provide excellent nesting, and are hunted intensively in the autumn.

While no Federal wildlife areas exist along the river, State-regulated public hunting is permitted at a number of Federal reservoirs. Some State forests and game lands and (in New Hampshire and Vermont) State parks, are open to public hunting. However, the major portion of

9. Many riverfront homeowners maintain their own boat docks and access sites.

10. The hunter brings down his bird. An abundance of large and small game draws sportsmen to the Valley.





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available hunting land is privately owned. The productivity of and access to these lands will, to a large extent, determine the future quality and quantity of hunting in the study area.

FISHING

At present, 57 percent of the river's length supports productive sport fisheries. An additional 35 percent is classified as marginal, with moderate levels of pollution, while the remaining 8 percent is so polluted as to be almost devoid of fish life.

Pollution and the construction of dams have all but eliminated certain fish species which once made the Connecticut a major fishery. Pollution is also primarily responsible for the virtual disappearance of the once-prominent estuarine shell fishery of oysters, clams, and blue crabs. Although the Atlantic salmon has disappeared, and only a few striped bass are found, the American shad seems to be making a partial recovery. At Enfield Dam, the best shad fishing area of the river, catches have ranged from a recorded low of 3,400 in 1950 to a high of 16,700 in 1964.

A cold water habitat in the upper portions of the river valley provides one of the finest remaining trout fisheries in New England. First, Second, and Third Connecticut Lakes are intensively fished for the native lake and brook trout, and for the introduced land-locked salmon. The stretch of largely free-flowing river from the Connecticut Lakes area downstream to North Stratford, N.H. is managed for rainbow and brook trout and land-locked salmon. The river from the mouth of the Upper Ammonoosuc River through Moore Reservoir is at present so polluted it provides little or no sport fishing opportunities.

Below White River Junction, Vt., the Connecticut takes on the character of a warm water stream and supports pickerel, largemouth and smallmouth bass, northern and walleyed pike, and a variety of panfish. The more tolerant carp, suckers, and catfish predominate in the stretches where the more desirable game species cannot survive. Summer flounder and striped bass may be found at the mouth of the river in Long Island Sound.

An accelerated pollution abatement program is the single most important fishery management consideration for the river. Companion programs for construction of fish ladders at dams on both the main stem and tributaries would be an important forerunner to the restoration of the river's Atlantic salmon and shad fisheries.

It is expected that the once-thriving shell fisheries of the lower estuaries could be revived for both commercial and recreational harvest if programs for pollution control in the river are realized.

BOATING

Of the 38 publicly-owned boat launch sites providing access to the river, the majority are State-owned, intended primarily for hunters and fishermen. The remainder are the property of local governments and public service groups. The public also has use of launching and docking facilities at 63 privately-owned liveries, marinas, and boating clubs. Many private landings also exist as the property of individual riverfront owners.

11. *Danger Ahead!* The protruding rocks and shallow waters of *Sumner Falls* near Hartland, Vt. discourage even the most adventurous canoeist.

12. *Success!* A New Hampshire fisherman lands his catch.

13. *Waterskiing near Middletown, Conn.* The river's many placid stretches offer abundant opportunity for this popular sport.

14. *Power salutes sail.* With spring, various types of pleasure craft slip their moorings to cruise the Connecticut.

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Various obstructions or hazards limit boating on the Connecticut. There are the 16 dams between the source and Long Island Sound, as well as a number of natural obstacles such as Sumner Falls between Windsor and White River Junction, Vt. Bad currents, protruding rocks, and debris threaten boaters' safety during periods of fluctuating water levels. However, navigable segments all along the river are intensively used by boating enthusiasts.

While dams and other obstructions pose few problems to canoeists, most are impassible by larger boats. An exception is the Windsor Locks Canal north of Hartford which provides passage for pleasure boats around Enfield Dam and Enfield Rapids. During the spring high water season some 30 boats pass through the canal on their way downstream to the ocean. At the end of the boating season in the fall, they return. Because of the inconvenience of passing through the locks and canal, use of the canal is not as heavy as its location might seem to indicate. This inconvenience includes a 24-hour advance notice to the canal owners before the actual passage is made, the negotiation of four locks with the necessary opening of several pedestrian and highway bridges, and the long, narrow, shallow dimensions of the canal itself.

SWIMMING

Swimming in the Connecticut River and its tributaries has been severely restricted by pollution, hazardous currents, and unsuitable water temperature. At present, the only section of the river with water quality suitable for water contact recreation is a 28-mile stretch between the source above Fourth Connecticut Lake and a point just above the community of Pittsburg, N.H. Of the river's 36 major tributaries, only 12 reach the main stem with a water quality level permitting water contact recreation.

There are no designated public swimming areas on the Connecticut. Those few individuals who might swim in the river do so when no other suitable water is available and where such hazards as pollution and current appear to be at a reasonably safe level. Such swimming is normally done in the vicinity of seasonal homes, campsites, and picnic areas, and in areas frequented by water skiers and pleasure boaters.

The prime asset from the standpoint of swimming is the significant number of water impoundments, natural broad water areas, and coastal areas which have desirable dimensions, shorelines, water levels, and temperatures. The key to realization of the full potential of the river and its tributaries for swimming lies in a solution to the problem of pollution.

TRAIL USE

Along the Connecticut River, extensive utility company land ownership, railroad rights-of-way, flood control levees, and old logging roads offer excellent opportunities for the development of foot, horseback riding, and bicycle trails. The abandonment of the Middletown-Old Saybrook line by the New York, New Haven and Hartford Railroad and its acquisition by the Connecticut Department of Agriculture and Natural Resources could form a nucleus for an outstanding trail network. Similar

15. *The Snowmobile Grand Prix in Lancaster, N.H. provides thrills for both drivers and spectators. In recent years, snowmobiling has become a popular winter sport.*

16. *With his tent pitched conveniently on a nearby island, this camper engages in another leisure time activity.*



actions along other sections of the river, such as the easement granted to the Federal Government by United Aircraft Corporation, could provide the basis for other trails. The possibility of tie-ins with major existing trails such as the Appalachian Trail and Long Trail also merit consideration.

CAMPING

The Connecticut Valley's best camping potential is located along the forested frontage of the reservoirs on the main stem, particularly in the northern portion of the valley. Other areas offering important camping opportunities are undisturbed islands, coves, and flood plains.

Because of the variety of terrain and number of potential sites, camping areas along the river could be developed for different intensities of use. Vacation and overnight camping areas could be situated where highway access is available. Lower density campsites should be distributed along the river to serve the needs of water travelers. Boat camping areas, accessible only from the river, would appeal to those who prefer a more primitive outdoor setting.

Water-oriented camping in the Connecticut Valley is limited at present because of the polluted condition of the river, and because most of the lands adaptable for camping are in private ownership and unavailable for public use. The majority of existing campsites within the study

area are found away from the river, in the forested uplands. However, as the quality of the Connecticut's waters improves, water-oriented camping beside the river will become more feasible.

WINTER SPORTS

The more southerly areas of the Connecticut River Valley and the lower elevations along the valley have a somewhat limited winter sports potential because of relatively short winters, infrequent snowfall with little accumulation, and a fewer-than-optimum number of days below freezing.

The northern latitudes and higher elevations, especially from northern Massachusetts to the source of the river, have greater potential, but this is eclipsed by the superior conditions of the adjacent Green Mountains to the west and White Mountains to the east.

Urban winter sport facilities are generally provided to meet the needs of local residents and are usually only day-use. Non-urban facilities, particularly forests and parks, often are either closed or inaccessible during the winter months. Within the boundaries of these areas, access is usually limited to snowshoes, skis, and snowmobiles, which number over 16,500 in the northeastern States and neighboring Canadian Provinces.

The private sector plays the major role in providing winter sports facilities, principally through the construction and operation of ski areas. Most ski areas along the





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river itself are small in terms of capacity, and are not significant in meeting weekend or winter vacation needs of such urban centers as Boston and New York. Such needs are met primarily by the ski centers in the Green Mountains and the White Mountains. However, the Connecticut River Valley offers opportunities for scenic drives and hikes during the winter months. Easy accessibility from the metropolitan centers of Boston and New York make this a growing recreation consideration.

DRIVING

"Two roads diverged in a yellow wood, . . . and I took the road less traveled by." Autumn in New England, evoked by the words of Robert Frost, is to many observers the most splendid of all the seasons in this region. The fall colors are matchless. A typical recollection is of the flaming foliage of maples set against a brilliant blue sky.

Touring in New England is a year-round activity, for the changing seasons provide an ever-changing setting for the scenic, historic, architectural, cultural, and industrial sights that are to be observed from the roads of the region.

When the Interstate Highway system is complete, most areas along the river will become easily accessible. These highways, especially I-91, are often designed to follow higher ground and offer panoramic views of the valley.

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17. Mt. Tom Ski Area, Mass. Skiing is a popular winter activity, not only in the Connecticut Valley, but throughout the Northeast.

18. Tree-lined roads, much like the one pictured, are common in the northern portion of the Connecticut Valley.

19. This quiet cove on a river island offers an inviting retreat for picnickers.

20. The sight of growing tobacco, protected by a blanket of cheesecloth, greets travelers to the lower Connecticut Valley.

21. The Goodspeed Opera House, built in 1876, stands in Victorian splendor on the river bank in East Haddam, Conn.



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PICNICKING

Picnicking along the Connecticut is severely limited by the lack of facilities. Although most parks within the study area contain some picnic facilities, they are too few to meet the growing need. This shortage is especially acute near urban centers. In the Hartford area for instance, where demand is for facilities to serve thousands, existing areas accommodate only a few hundred users.

Any grove of trees shading a scenic vantage point, any stream bank, riverfront, or roadside turn-off presents an opportunity to establish a picnic site. The only deterrents are available land, money, and initiative. Many more picnic opportunities should be provided along scenic stretches of roads and in conjunction with other major recreational developments.

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RECOMMENDED PLAN



The Connecticut River Valley is still a resource of beauty and recreation opportunity. However, these features are being allowed to deteriorate to a serious extent. The following sections outline a plan designed to protect not only the valley's remaining natural beauty, but also to provide a means of reclaiming some of its original charm.

This plan also suggests ways to provide public access and recreation opportunity at specific areas along the river, and to restore water quality, regulate flow, and improve navigation. Proposals for coordinated Federal-State-local-private actions contemplate the protection of the entire length of the river.





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CONNECTICUT RIVER NATIONAL RECREATION AREA

A major National Recreation Area consisting of three units is proposed to be administered by the National Park Service of the Department of the Interior. The three units are: a Gateway Unit in Connecticut extending 11 miles along the river between Higganum (Town of Haddam) and the Connecticut Turnpike (I-95); a Mt. Holyoke Unit in Massachusetts near the city of Northampton with 4½ miles of river front and including the Mt. Holyoke Range; and a Coos Scenic River Unit situated along the 82-mile portion of the river in New Hampshire and Vermont between Moore Reservoir and Lake Francis (see Map 2, page 13).

This proposed National Recreation Area fully meets the criteria as specified in Policy Circular No. 1 of the Recreation Advisory Council (now the President's Council on Recreation and Natural Beauty). It would be a

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spacious area, embracing 56,700 acres. Portions of the area would be designed to achieve a relatively high carrying capacity. It would appeal to people dwelling far beyond the boundaries of the immediate four-State area. Over 40 million people live within 250 miles of the proposed National Recreation Area. A broad range of outdoor recreation opportunities would be the dominant resource management purpose within the National Recreation Area. There is an acute need in the Northeast for the type and magnitude of recreation opportunities that would be provided by the establishment of this National Recreation Area.

Acquisition, development, and operation would be at a scale beyond the capabilities of the States and localities, with the costs of the three units estimated to total \$57 million including \$45 million for land acquisition and \$12 million for capital improvements.

A Connecticut River National Recreation Area would take its place with such other notable Federal areas in the Northeast as the Delaware Water Gap National Recreation Area, Cape Cod National Seashore, and Fire Island National Seashore. A Connecticut River National Recreation Area would, however, differ significantly from the others. Rather than one contiguous and homogeneous unit, it would comprise three separate units, each with individual characteristics and providing diverse recreation opportunities.

GATEWAY UNIT, CONNECTICUT

This unit, located on the river's estuary and its adjacent uplands, would straddle the river from just above the Tylerville-East Haddam Bridge (State Route 82) south to the I-95 bridge, encompassing along this route portions of nine lower river towns. Of the unit's 23,500 acres, 19,800 would be in land situated adjacent to the river. The remaining acreage would be water areas in the river and its major bays (see Map 4).

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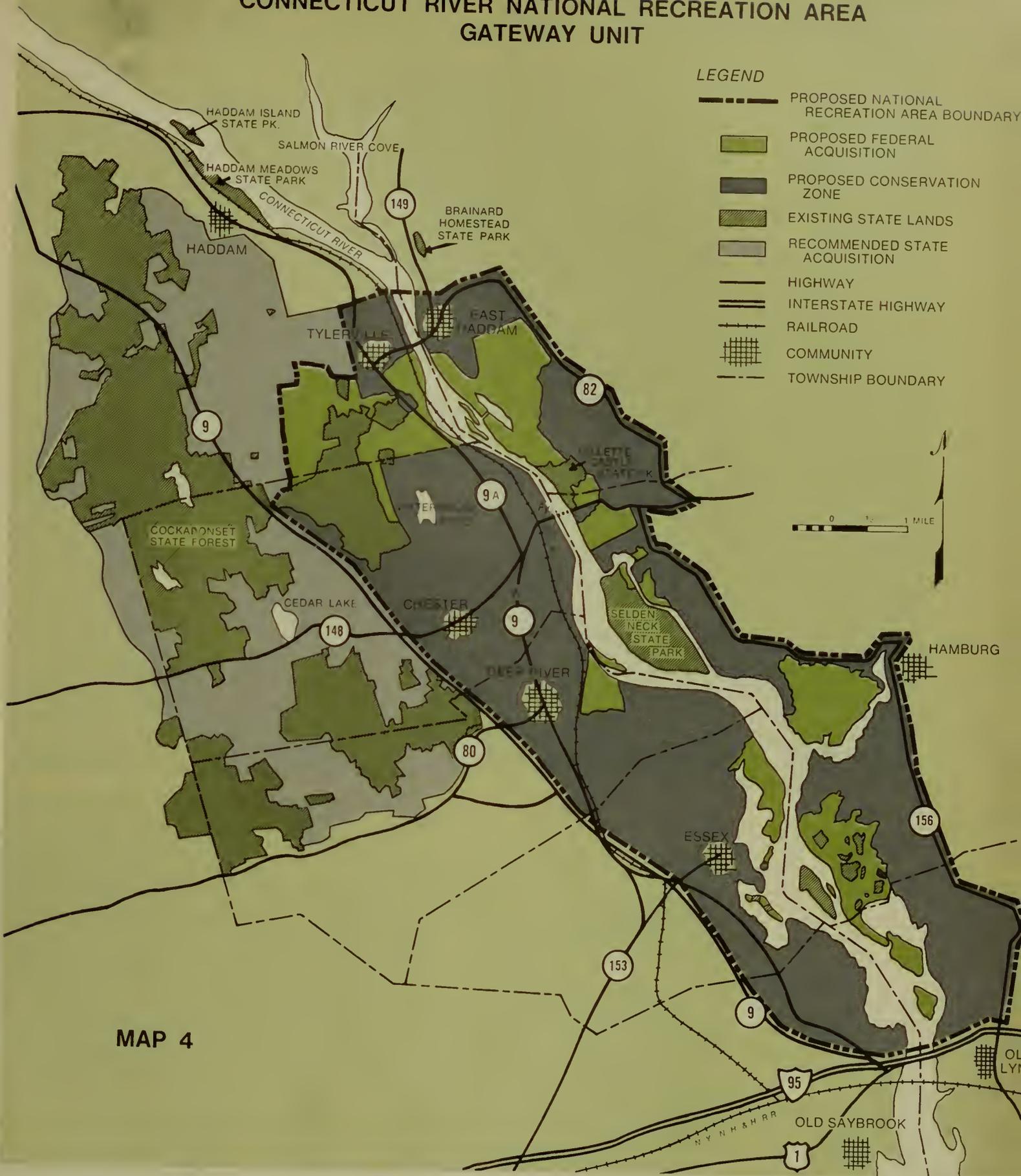


22. The Gateway Unit proposal would help to preserve the historic and natural beauty of lower river towns.

23. Boats lie at anchor near the southern end of the proposed Gateway Unit.

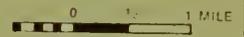
24. The Tylerville-East Haddam Bridge, northern boundary of the proposed Gateway Unit.

CONNECTICUT RIVER NATIONAL RECREATION AREA GATEWAY UNIT

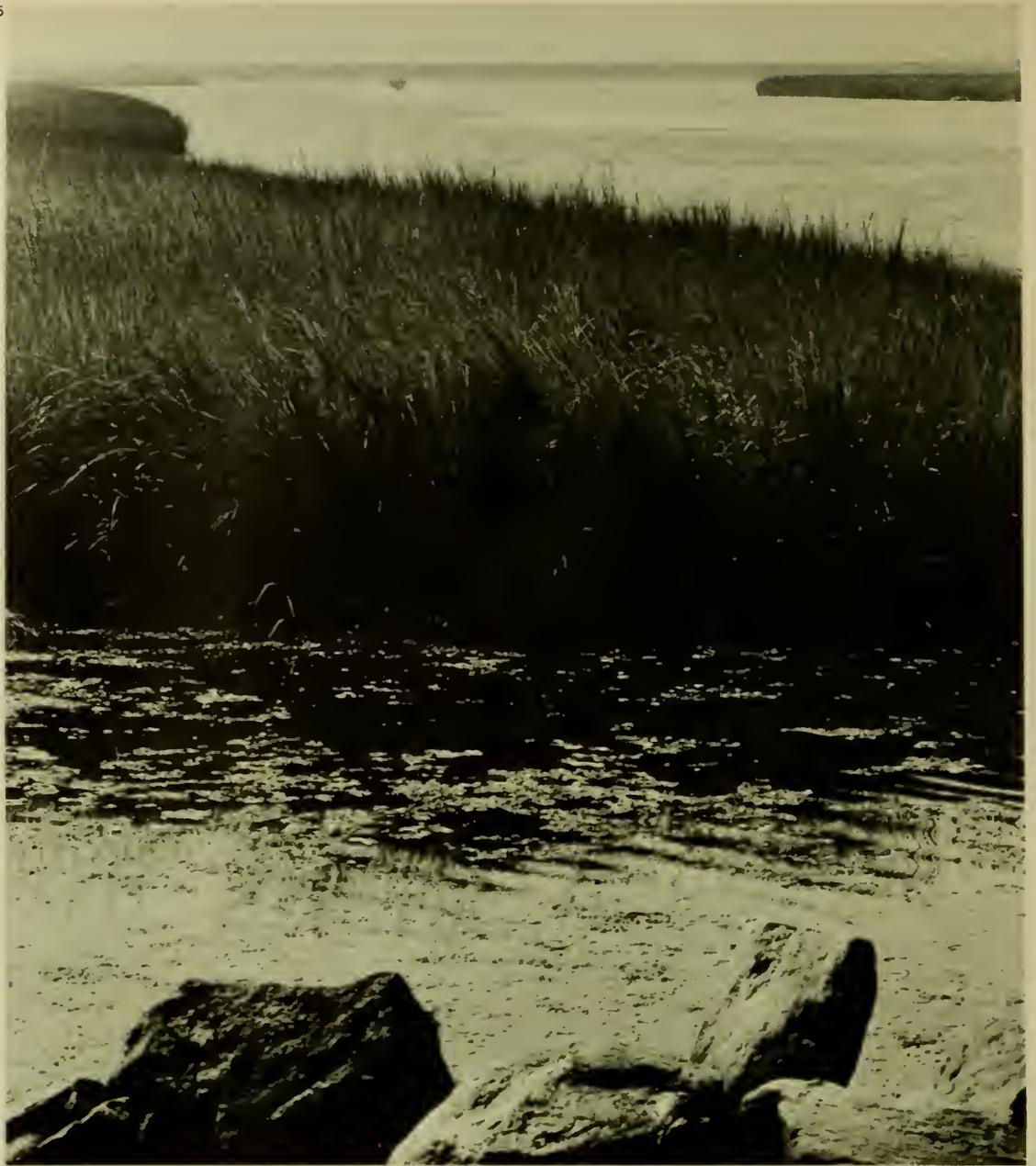


LEGEND

-  PROPOSED NATIONAL RECREATION AREA BOUNDARY
-  PROPOSED FEDERAL ACQUISITION
-  PROPOSED CONSERVATION ZONE
-  EXISTING STATE LANDS
-  RECOMMENDED STATE ACQUISITION
-  HIGHWAY
-  INTERSTATE HIGHWAY
-  RAILROAD
-  COMMUNITY
-  TOWNSHIP BOUNDARY



MAP 4



The Gateway Unit would serve principally to preserve the scenic character of the river and its adjoining lands, in addition to retaining the charm of its towns. Another purpose would be to provide controlled public use and access at suitable points along the river.

A major portion of the unit (17,500 acres) would be protected within a "conservation zone." Lands in this zone would remain in private ownership, with the requirement that zoning ordinances meeting standards prescribed by the Secretary of the Interior be put into effect. Such a zone is already in effect at the Cape Cod and Fire Island National Seashores and a number of other areas administered by the National Park Service. This arrangement has proved an effective method of allowing continued commercial and residential use of an area while perpetuating its scenic and historic character. The Federal regulations would be designed to establish minimum standards which local zoning ordinances must meet.

The regulations would establish standards for minimum setback distances for residences, and prohibit activities such as cutting timber, burning undergrowth, removing soil or other landfill, and dumping or storing refuse that

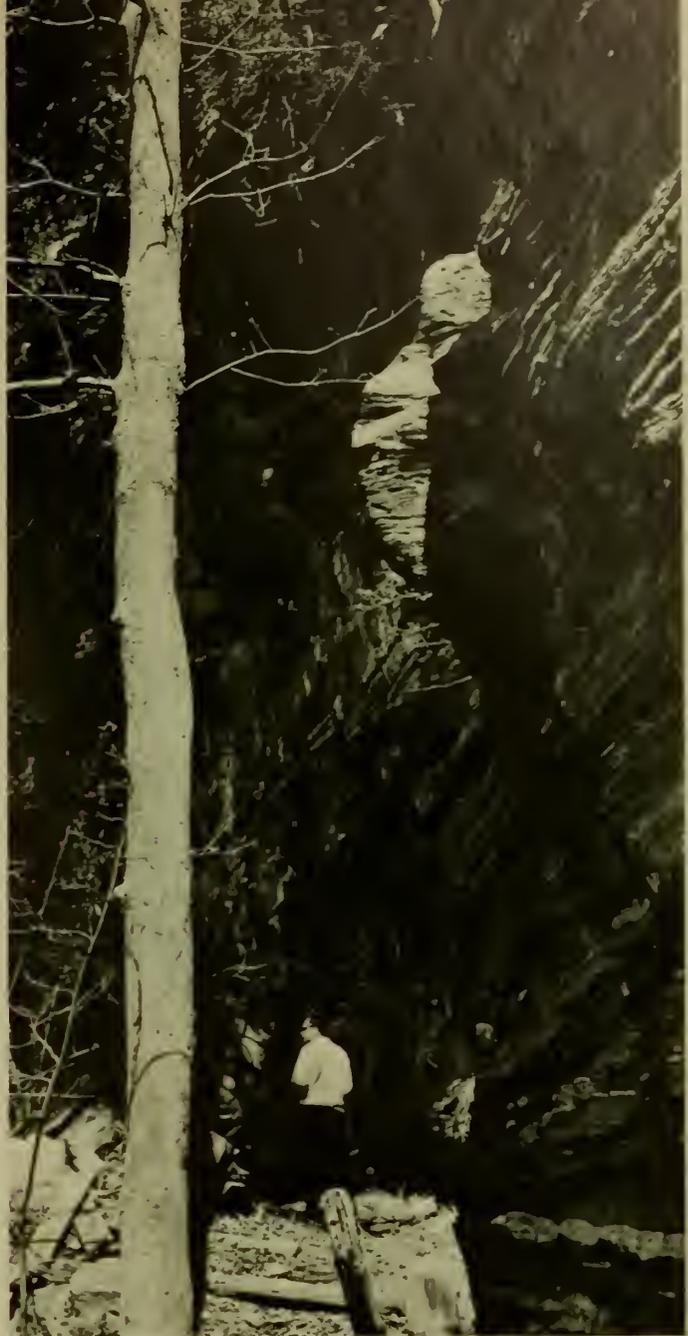
25. Marsh grass is typical of the tidal wetlands in the proposed Gateway Unit.

26. Despite increasing urbanization, much forest cover remains along the river in the proposed Gateway Unit.

27. This aerial view of Old Lyme Center captures the scenic New England character of a lower river town.

28. Towering cliffs give graphic testimony to the geologic processes that formed the topography of the Connecticut River Valley.

29. As urban pressures change land use patterns, appealing farms like this one are disappearing.



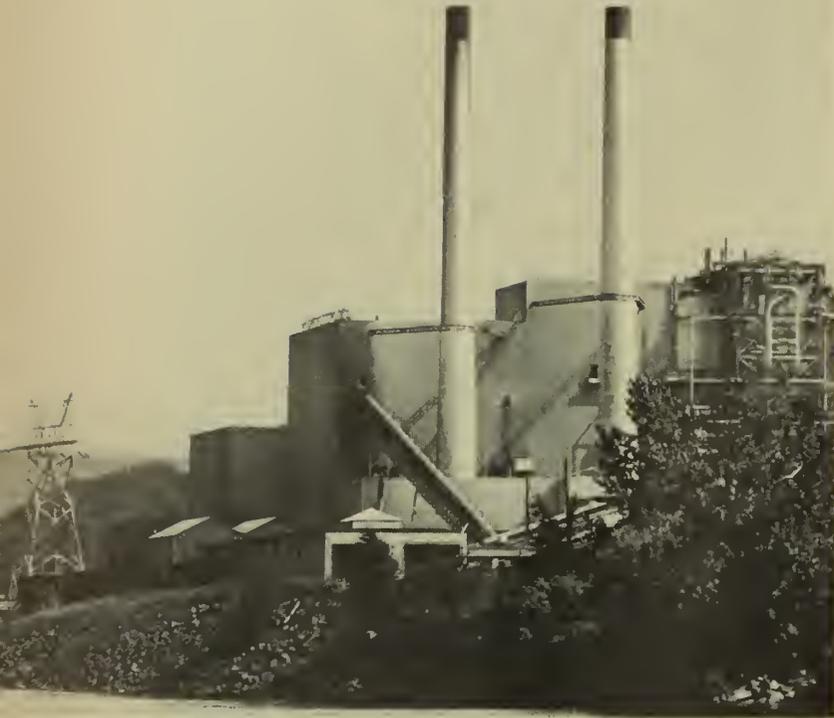
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would detract from the natural or traditional riverway scene. The Secretary's standards would also cover development density and design criteria.

Most of the towns within the proposed boundaries of the Gateway Unit already possess the legal and institutional means to zone property. Some already have effective zoning regulations in force.

A limited amount of acreage would be acquired within the Gateway Unit to provide public access to the river, campgrounds, picnic areas, and other related facilities. These improvements would be located to blend with the scenic character of the surrounding landscape. This limited acreage would consist of a number of scattered areas fronting on the river, as well as several islands, as shown on Map 4. The areas total about 6,000 acres, of which 1,900 acres are presently owned by the State. The balance of 4,100 acres is in private ownership. The lands would be developed and operated by the National Park Service.



30. A coal-burning electric power generating plant, situated on the river south of Middletown, Conn.

31. Industry and parks compete for choice riverfront lands. North of the proposed Gateway Unit, an atomic energy plant obscures the view from Haddam Meadows State Park.

32. Marina development, once concentrated near the mouth of the river, is now spreading upstream.

33. Gillette Castle, home of the famous turn-of-the-century actor William Gillette, now attracts many visitors.

The State is encouraged to transfer lands it owns within the boundary to the Federal Government. Except where areas would be needed immediately for public purposes, life tenancy or lease-back agreements could be entered into with individual landowners.

The bulk of lands proposed for acquisition are undeveloped, although a few scattered residences exist on some of the acreage. Combined with existing State ownership, Federal acquisition of 870 acres of tidal marshland would place most of the Gateway Unit's significant wetlands in public ownership.

The estuary in which the Gateway Unit is located is fringed alternately with low-lying marshes and with lands sloping to the water. The steeper slopes are heavily forested and not yet subjected to intensive development. The more gentle slopes and flat lands are the sites of such picturesque old communities as East Haddam, Chester, Deep River, and Essex. A number of islands in this area interrupt the placid flow of the river. The

largest is Selden Island (530 acres), most of which is owned by the State. The islands present variable profiles—some treeless and marshy, others rising to modest elevations, crowned with trees and shrubs. Away from the river the land rises gradually in most places to assume the hilly character of the New England uplands, attaining maximum elevations of over 500 feet. The higher elevations are heavily forested, while in the intervening valleys there are many small farming centers. Along several sections of the river, the land drops abruptly to form steep cliffs.

The estuarine area in and surrounding the proposed Gateway Unit has been subjected to an uncommonly low rate of development since the initial settlement in the mid-1600's. Communities are small and widely separated. The economy of the region is based upon agriculture, forestry, mining, fishing, and seaside recreation. However, the area is beginning to see more economic diversification with the growth of manufacturing and service industries and utility companies. Within recent years, the extension of earlier economic endeavors and the creation of new enterprises has meant the relentless acquisition of land and water resources by private enterprises. Development has often run counter to the basic principles of comprehensive planning.

North of the Gateway Unit the once spectacular view of the Connecticut River straits today is marred by an open-pit feldspar mine and a coal-burning power generating plant. Just below the straits, in another once beautiful area, a large manufacturing plant sprawls over a hillside, its straight-line architecture standing in stark contrast to the picturesque countryside. In East Haddam, choice river frontage has been defaced by the construction of a nuclear power generating plant. While such activities are legitimate uses of the land, their location has had an unfortunate effect on the riverscape. Hopefully, future development will take into consideration, and strive to preserve, the esthetic beauty of the valley.

The towns along the estuary south from Middletown, although small at present, are expanding with residential development. Occasionally this development is in the form of large estates or several-acre lots, which are less damaging to the river scene than more intensive developments.

At the mouth of the river there appears to be no end to the land subdivision taking place. In recent years the shores of Long Island Sound on both sides of the river have been covered with summer cottages to the point where little open space remains. Developments crowd to the water's edge, and the once beautiful open shorescape is a thing of the past. Now only a narrow spit of sand—Griswold Point—jutting into the mouth of the Connecticut at Old Lyme, remains undeveloped.

The lower river, connecting with Long Island Sound and the Atlantic Ocean, now thrives as a recreational boating center. Power boats, sailboats, and waterskiers skim over its waters, while its shores provide safe harbor for small and large craft. Most available sites in the towns of Essex and Old Saybrook on the extreme lower estuary are already occupied by marinas. The development is creeping steadily up river along the shores of Deep

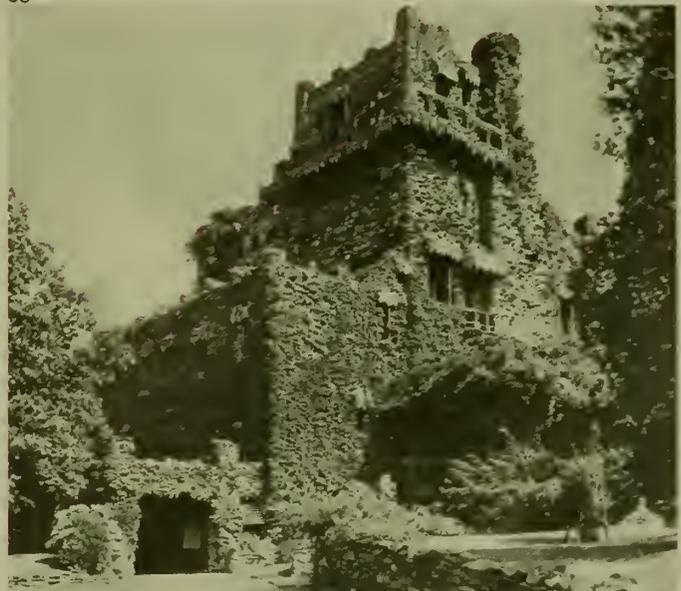
River, Haddam, and Lyme. Even some of the river islands have fallen victim to this encroachment. Channel dredging is opening up more and more of the shoreline for the development of pleasure craft facilities.

In most cases this development is taking place on the tidal wetlands, a vital resource seriously threatened by continuing encroachment and land filling. If this development continues, the banks of the river could become a series of marinas along the broadwater reach of the river all the way to Middletown, resulting in the loss of the natural river environment.

Public efforts to preserve the resources of the lower Connecticut or to control their development have been limited in effectiveness. However, eight State parks in the area possess river frontage, the only significant public ownership for the entire length of the Connecticut River. These areas provide for the protection of scenic values in several localized areas. Although open to the public, most are virtually undeveloped for recreation purposes. Only one, Haddam Meadows, provides access for boaters. Gillette Castle State Park has a developed scenic overlook. The park was donated by the famous character actor William Gillette, and is one of the most popular facilities on the river. This is due partly to the vista it provides and partly to the interest in Gillette.

The remaining parks have either nominal outdoor recreation development or none at all. Hurd-Seymour State Parks (950 acres), are the largest on the river. They provide limited facilities for picnicking, hiking, and camp-

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ing. Selden Neck and Haddam Island State Parks remain undeveloped. Selden Neck, a large hilly island fringed with marshes, possesses unique potential for development as a boat-camping complex. The State Division of Forests and Parks, while recognizing this potential in its long-range plans, has scheduled no developments for the near future.

Another possible recreation opportunity within the Gateway Unit exists in the right-of-way of the New York, New Haven and Hartford Railroad. The State legislature has provided for its acquisition. The right-of-way might be converted for use by hikers, cyclists, and equestrians. The section of the rail line that runs through the Gateway Unit parallels the river over much of the distance.

Despite developmental changes which have occurred along the estuary, an excellent opportunity exists to plan for future recreation and open space needs there. By comparison, these lands are among the least developed in the State of Connecticut and have long been recognized for their prime public recreation and open-space potential. The lands are located only a half-hour drive from the city of Hartford and two hours from Boston and New York City.

Complementary Action A Gateway Unit by itself would fall short of optimum resource utilization unless steps are taken to conserve adjacent lands. Therefore, four major recommendations are made for State and local actions affecting these lands.

Cockaponset State Forest The first calls for the State of Connecticut to enlarge and round out that portion of

the Cockaponset State Forest that lies immediately west of the Gateway Unit (see Map 4, page 35). The State Forest holdings presently include many scattered parcels throughout the area that extend generally west from the Gateway Unit. The most significant grouping of Cockaponset Forest lands consists of 8,200 acres in 13 closely grouped tracts adjacent to the Gateway Unit.

These holdings are hilly and forested with certain locations on the eastern perimeter affording excellent views of the river. A number of streams have been impounded to form 13 small reservoirs with a total water area of 220 acres. Three of the reservoirs are located wholly or partially on State Forest lands. The general Cockaponset area has excellent potential for the establishment and development of a major recreation unit to function in harmony with the Federal efforts in the adjacent Gateway Unit.

The State of Connecticut is encouraged to expand and consolidate the existing 8,200-acre holdings near the proposed Gateway Unit through the acquisition of an additional 10,100 acres and to provide for general recreation in this enlarged 18,300-acre component of the Cockaponset State Forest.

Recreational demand on the west side of the river is expected to increase sharply in the future with the completion of Connecticut Route 9, a four-lane, limited access highway. This road, a major artery that will connect I-91 with the Connecticut Turnpike, runs through the State Forest, and provides rapid access from Hartford. This ease of access promises to make the Cockaponset State Forest area a popular recreation destination for



the many nearby urban dwellers. With proper consolidation and development of its holdings, an annual visitation of three million users could be expected.

Because water is a prime motivation for recreation activities, a vital consideration is the construction of reservoirs. Pattaconk, Turkey Hill, and Deep Hollow, three of the area's 13 existing impoundments, lend themselves to enlargement. Five additional sites have been identified by the Soil Conservation Service as having water storage potential. Enlargement of the existing reservoirs and the creation of new ones would expand the present water base by approximately 1,400 surface acres and provide additional recreation facilities for camping and picnicking.

The combination of a largely water-based and federally-operated Gateway Unit and a land-based and State-operated Cockaponset State Forest would not only protect the scenic character of the lower river but would also provide a large amount of excellent recreation opportunity.

Land Use Controls The second recommendation is for the application of land use controls in the surrounding towns on the lands which are not included in the Gateway Unit and Cockaponset State Forest.

The State and local governments are encouraged to seek land use controls on the lands in the towns of Haddam, East Haddam, Chester, Deep River, Essex, Lyme, Old Lyme, and Old Saybrook not included in the proposed Gateway Unit and Cockaponset State Forest. Adequate protection might best be achieved through the application of zoning regulations, tax incentives, and State or

local acquisition of scenic easements. Desirable and compatible land uses within this area should be encouraged. Several of the towns have already instituted planning and zoning.

"Green Triangle" The third recommendation is for the reservation of lands within the heavily forested 185-square mile "Green Triangle" west of the Gateway Unit and Cockaponset State Forest for possible eventual public recreation purposes. The points of the triangle are Old Saybrook, Middletown, and West Haven. The water utility companies which control much of this area are urged to grant first refusal rights to the State of Connecticut.

Riverscape The fourth recommendation is for the protection of scenic values along 14 miles of the Connecticut



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34. A shimmering pool at Gillette Castle State Park captivates these youngsters.

35. The view south from Gillette Castle. This stretch of the river would be included within the proposed Gateway Unit.

36. What is now a railroad right-of-way in the future could become a hiking path.

37. Picnickers at Cockaponset State Forest.



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River upstream from the Gateway Unit as far as Middletown. The State is encouraged to acquire lands to expand its already significant ownership there, with priority given to the land between the river and the New York, New Haven and Hartford Railroad right-of-way. The towns of Middletown, Portland, and East Hampton are encouraged to curtail adverse land use practices which are encroaching on the river.

Industry is urged to grant scenic easements in keeping with United Aircraft Corporation's precedent-setting gesture of providing a 50-foot wide easement along the river fronting its property. Easements on land along the Yankee Atomic Energy Plant and on lands bordering picturesque Salmon River Cove in the town of Haddam would be particularly desirable.

These actions, plus the establishment of the Gateway Unit, will result in an integrated complex of Federal, State, and local efforts that will conserve the entire estuarine area of the river.

MT. HOLYOKE UNIT, MASSACHUSETTS

This unit would encompass some 12,000 acres, a major portion of the scenic Mt. Holyoke Range that abuts the east side of the Connecticut River as it flows near Northampton. The Federal unit would front on the river for 4½ miles, and would extend east from the river approximately 9 miles. The boundary would also enclose the river islands in that stretch as well as a strip 200 feet wide on the west bank of the river (see Map 5). The Federal Government would acquire up to the entire 12,000 acres in fee simple or through other protective devices.

The Mt. Holyoke Unit would provide a variety of high quality outdoor recreation opportunities while preserving the rugged character of the mountain range. It would be developed by the National Park Service to afford year-round outdoor activities. Because of the existing highway network, its land would be accessible to nearby colleges and universities, as well as to more distant urban centers. The potential for recreation at Mt. Holyoke includes camping, hiking, climbing, nature study, sightseeing, upland game hunting, picnicking, and winter sports. Opportunities exist to construct small recreation reservoirs.

Across the river to the southwest rise the peaks of the Mt. Tom Range. Elevations for both ranges exceed 1,000 feet, and spectacular views of the Connecticut Valley are the hiker's reward. Silhouetted against the sky, they form a striking backdrop to the valley. The Mt. Holyoke Range rises abruptly from an almost level plain. Eastward from the river, the rocky-backboned ridge gradually falls away. It is covered with a mixed hardwood and conifer forest, and a few farms and orchards.

Mt. Holyoke has been a favorite attraction for many years. Such noted personalities as Samuel Clemens (Mark Twain) and Jenny Lind, the "Swedish Nightingale," rode the cable car to Summit House atop the mountain, attracted by the warm hospitality of this famous hostelry and by the promise of a panoramic view. A winding road in place of the former cable car now leads motorists to Summit House, located in the 375-acre Joseph Allen Skinner State Park. Deer and upland game

hunters also flock to this mountain range.

The mountain range has been subjected to logging operations which still continue on a limited scale. Designated watersheds in this area provide for the needs of the nearby communities. Various roads probe the area and several cross the range at depressions in the ridge. The major threat to an otherwise largely unspoiled area is the urban sprawl manifested in an increasing number of residences being built along the peripheral and transverse roads. Another major intrusion is a rock quarry situated in the center of the area.

Of the approximately 12,000 acres located within the proposed Mt. Holyoke Unit, some 85 percent are in private ownership. The balance of the acreage, except for 500 acres in the Joseph Allen Skinner Park and other State holdings, and an Air Force radar installation, is owned by various towns and community watershed associations.

The region surrounding the proposed unit is a mixture of farm lands and wood lots. Nearby major colleges include Amherst, Mt. Holyoke, Smith, the University of Massachusetts, and soon-to-be-built Hampshire College. Five miles east of the unit is Quabbin Reservoir, Boston's primary water source. The flow of the Connecticut River is placid from Calvin Coolidge Bridge to Holyoke Dam, with sweeping meanders etched in a broad flood plain. Immediately north of Mt. Tom lies the Great Oxbow, flanked by the Northampton-Eastampton flood plain. At the Mt. Holyoke-Mt. Tom water gap, the river narrows.

Population pressures exerted by the cities of Springfield, Holyoke, and Chicopee (500,000 combined population) threaten to engulf scenic vistas along the river and Mt. Holyoke Range. These same pressures and those from Boston, which is only two hours away by auto, are also generating an increasing amount of demand for outdoor recreation.

To accommodate the expected heavy visitation and enable visitors to enjoy the full range of activities possible in the Mt. Holyoke Unit, a major portion of lands within the boundaries would have to be acquired, improved, and made available for public use. Some lands, however, would be excepted. Joseph Allen Skinner State Park would constitute a requested donation from the Commonwealth to the Federal Government. If the Commonwealth preferred to retain ownership, the park should continue to be administered as it is at present. The Air Force radar installation would continue in operation until no longer needed.

The proposed boundary of the Mt. Holyoke Unit is drawn to exclude the Hampshire College campus, as well as most of the private residences, farms, and associated lands lining the unit's peripheral roads.

Where unnecessary to acquire a tract for public access and use but desirable to maintain its scenic character, a scenic easement might be acquired. Purchase and lease-back might also be used to achieve the same objective. Agricultural lands under active farming operations might

CONNECTICUT RIVER NATIONAL
RECREATION AREA
MT. HOLYOKE UNIT



be allowed to continue as a conforming land use, thereby preserving the pastoral setting of the area.

Except where the lands would be needed immediately for public purposes, residents could elect to have life tenancy.

Complementary Action

Mt. Tom-Northampton State Park A significant part of the recreation potential of the Springfield-Holyoke region is found in the Mt. Tom-Northampton area adjacent to the proposed Mt. Holyoke Unit. Therefore, this report recommends the establishment of a major Mt. Tom-Northampton State Park. This area would consist of the present 1,800-acre Mt. Tom State Reservation, the Great Oxbow immediately north of the Reservation, and the flood plain surrounding the Oxbow in the towns of Easthampton and Northampton. Enclosed would be a total of about 4,800 acres (see Map 5).

Existing recreation areas within the proposed boundaries,

in addition to the Mt. Tom Reservation, include Acadia Wildlife Sanctuary, Northampton Fairgrounds, a private rod and gun club, and several private marinas. Adjacent to the south boundary is the privately owned Mt. Tom ski area.

Recreation activities on Mt. Tom Reservation presently are limited to sight-seeing, picnicking, hiking, and rudimentary camping. There is a significant amount of boating on the river. The Oxbow has some of the finest fishing along the Connecticut River. The flood plains are mainly in agricultural use with the exception of the Northampton Fairgrounds, a private airport, and the Massachusetts Audubon Society's 300-acre Acadia Wildlife Sanctuary.

Development and operation by the Commonwealth should be coordinated closely with development and operation by the National Park Service of the Mt. Holyoke Unit. The two areas would share a common boundary, with



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the types of activities provided complementing rather than duplicating each other.

Activities and facilities would be expanded for wider variety and more intensive use. On Mt. Tom, the State's role should support the adjacent skiing activity through the development of snowmobile trails, ice-skating rinks, tobogganing, and winter camping as recommended by the Massachusetts State Comprehensive Outdoor Recreation Plan.

Since water recreation is of great importance, major attention should be given to swimming, fishing, boating, and complementary facilities for picnicking, hiking, and play areas. The Oxbow includes some 200 acres of water surface. Its potential for recreation suggests its use as a marina for pleasure craft, with certain portions being zoned exclusively for fishing. Since the Oxbow usually freezes in the winter, it could become a major natural ice-skating area.

The flood plain, which includes some 2,800 acres in private ownership, exhibits recreation potential for a great range of intensive uses including field games, camping, swimming, boating, and picnicking. It should also be considered in the light of the various needs developing

from the concentration of cultural forces represented in the colleges and universities of the area.

Massachusetts recommends full development of the Connecticut River's water resources to provide needed recreation opportunity for the metropolitan areas of Springfield, Chicopee, Holyoke, and Northampton. Such development will offer a variety of year-round recreation experiences, protect a highly scenic area, and save the flood plain from encroachment.

38. *The Northampton flood plain could be protected and developed for recreation by joint Federal-State action.*

39. *Mt. Holyoke provides an impressive backdrop for boaters on the Connecticut River.*

40. *The proposed Mt. Holyoke Unit would encompass a major portion of the Mt. Holyoke range.*

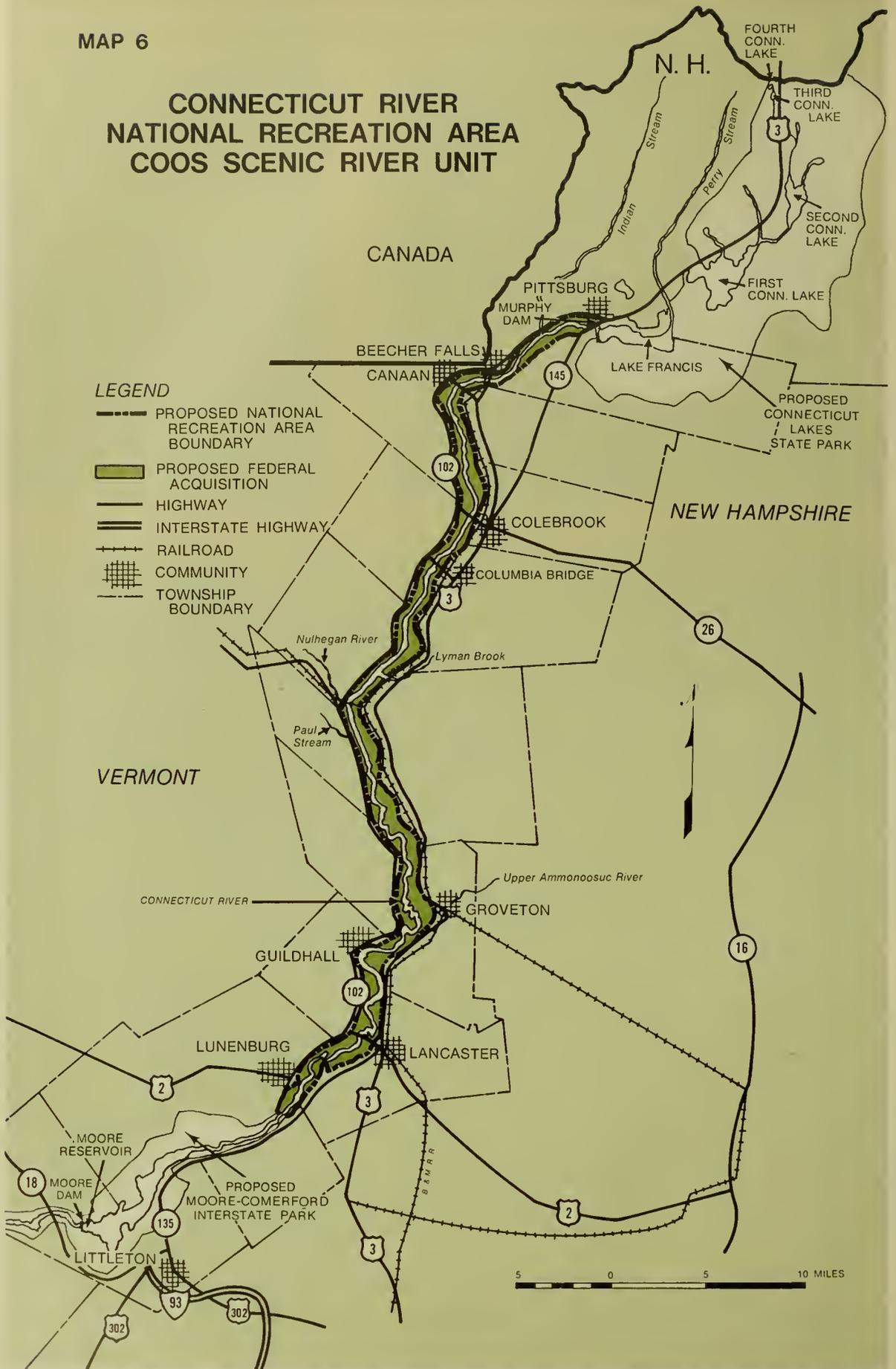
41. *Geologically similar to Mt. Holyoke, Mt. Tom rises from the western bank of the Connecticut River.*

42. *The Mt. Tom and Mt. Holyoke ranges lie on the outer fringe of the Springfield-Holyoke-Chicopee metropolitan area.*



MAP 6

CONNECTICUT RIVER NATIONAL RECREATION AREA COOS SCENIC RIVER UNIT





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COOS SCENIC RIVER UNIT, VERMONT AND NEW HAMPSHIRE

The upper Connecticut River is famous for its near-wilderness setting, excellent trout fishing, and exciting canoeing. In light of this, the 82 miles of the river, from Murphy Dam on Lake Francis, downstream to the head of Moore Reservoir, is recommended for "scenic river" designation as the third unit of the proposed Connecticut River National Recreation Area (see Map 6).

The Green Mountains to the west and White Mountains to the east, create an almost alpine backdrop to the valley. The river's meanders and oxbows, formed by the changing course of the river, are some of the finest examples found anywhere in the northeastern United States.

Although the upper Connecticut is well known to local trout fishermen, fishing pressure in the area is surprisingly modest in view of the high quality fishing that the area affords. The northernmost 86 miles of the river and Indian Stream and Lyman Brook tributaries in New Hampshire, and the Nulhegan River and Paul Stream tributaries in Vermont are eagerly sought by anglers in search of the popular New England "square tail" or brook trout, as well as the brown and rainbow. Below Groveton, where the polluted Upper Ammonoosuc enters, trout no longer survive.

43. The proposed Coos Scenic River Unit would protect the Connecticut's meanderings and oxbows for the enjoyment of future generations.

Forty-one miles of the reach is in a free-flowing condition. Three low level dams (Canaan, Northumberland, and Gilman) interrupt the remaining mileage. River travelers, however, are hardly aware of the reservoirs behind these dams as the water seldom spreads beyond the natural channel. Throughout this stretch the traveler is constantly aware of the mountainous background. Where there are towns, they strike a sharp note of contrast to their setting, appearing as tiny outposts in a formidable landscape. Typical of these are the communities of Colebrook, N. H., and Canaan, Vt. At all seasons of the year these towns and their setting are attractive, but in the fall foliage season the spectacular qualities of the land surface match the grandeur of the mountains. Where the evergreens form a background to hardwood trees cloaked in fall's multi-colored garments, the viewer cannot help but marvel at the beauty.

Agriculture is predominant on the valley's flood plain. The focus of the dairy industry for most of New Hampshire and for northeastern Vermont is in this valley. Produce crops are becoming increasingly important. Herds of cattle browsing in meadows along the river remind the traveler that this land is partially bent to man's will. At Lancaster, N. H., and at Lunenburg, Vt., covered bridges transport the viewer back to the 19th century. Railroads—the Canadian National (Grand Trunk) and the Maine Central—are firmly established and seem to have an inevitability about them; they follow the river from Lancaster, N. H., to Beecher Falls, Vt. In several instances, their tracks prevent access to the river's edge, unwittingly helping to preserve the scenic values along the river.

The boundary of the Coos Scenic River Unit is designed to protect the scenic qualities of the river and its adjoining lands and to provide public access with a minimal effect on the established patterns of private ownership in the area. Its lines encompass 21,200 acres and have been drawn in sufficient depth to safeguard not only the natural character of the lands bordering the river, but also the vulnerable flood plain and the various ridges and escarpments facing the river.

44. *Anglers and other outdoorsmen are drawn to the Nulhegan not only for its fishing but also its beauty.*

45. *Cattle graze along the banks of the river. Dairy farming is a major industry in the upper Connecticut Valley.*

46. *Still in business. Constructed in 1911, this covered bridge near Lancaster, N.H. still carries traffic across the Connecticut.*

47. *Pulp processing plants like this one at Groveton, N.H. are a major source of pollution of the upper Connecticut.*

48. *Nestled beside the Connecticut, the village of Canaan, Vt. drowns on a summer afternoon.*

49. *Railroad tracks mimic the serpentine course of the Connecticut River along the Coos Scenic River Unit.*



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LOG DRIVES

The dramatic process of conveying lumber logs and pulpwood from northern New Hampshire forests to manufacturing centers, by driving them down the Connecticut River, spanned the turn into the Twentieth Century. Hardy crews of "white-water men" risked life and limb in the hazardous work of the annual spring drives.



50. A pastoral quality pervades numerous stretches of the river.

51. The Connecticut River near North Stratford, N.H.

Conservation of the Coos Scenic River Unit would be accomplished mainly through scenic and access easements. Scenic easements could protect a major portion of the riverway (approximately 20,200 acres). They would keep valuable agricultural land on the local tax rolls and permit the continued use of the land in ways that are compatible with the scenic riverscape. At the same time, certain nonconforming industrial and commercial uses would be discouraged. Less restrictive scenic easements would be utilized for the protection of the ridges and escarpments.

Where an area is needed for permanent public access and use, such as boat launching and camping sites, full title would be acquired by the Federal Government. A maximum of 1,000 acres, located in scattered tracts along the river, should be sufficient for these purposes. Boat launching points would be provided where public roads lead down to or cross the river, while camping areas might be located several miles apart.

Access easements along the river's edge would have to be acquired to allow fishermen and other users to trail along the bank.

There appears to be no need for the Federal Government to acquire the riverfront land presently owned or controlled by the New England Power Company as long as these lands continue to be undeveloped.

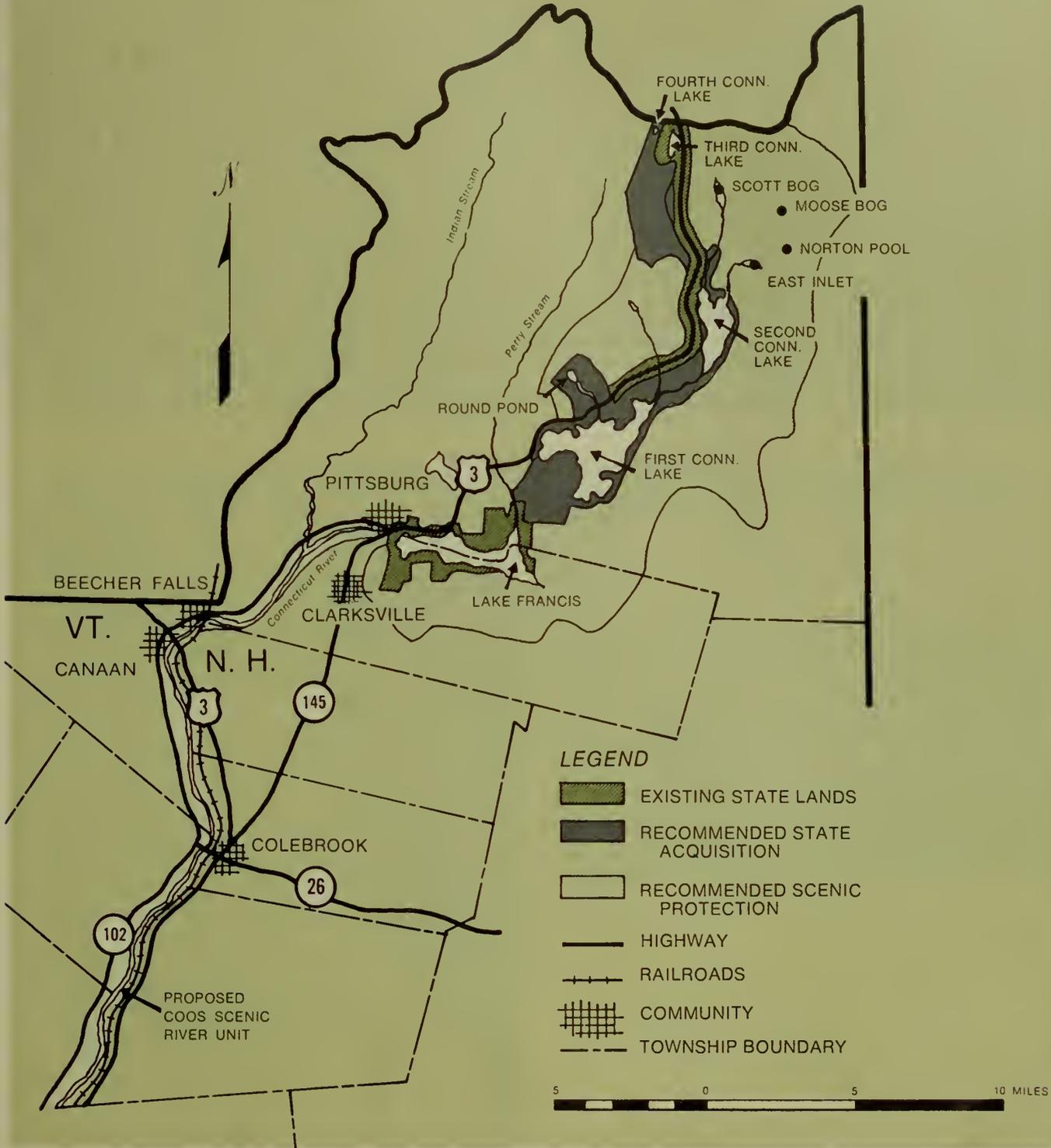
If the New England Power Company should decide to dispose of any of these lands, the Federal Government should have first option for either fee acquisition or for the acquisition of scenic easements. There would be no need to acquire lands owned by the towns within the area.

Complementary Action

Connecticut Lakes State Park The State of New Hampshire now owns some 7,000 acres of land around the Connecticut Lakes. This report urges the State to acquire an additional 47,000 acres in this area to create a 54,000-acre Connecticut Lakes State Park that would connect with the upstream terminus of the proposed Coos Scenic River Unit. Some 14,000 acres might be purchased in fee, while the remaining 33,000 acres might be protected through the acquisition of scenic easements (see Map 7).

MAP 7

CONNECTICUT LAKES STATE PARK

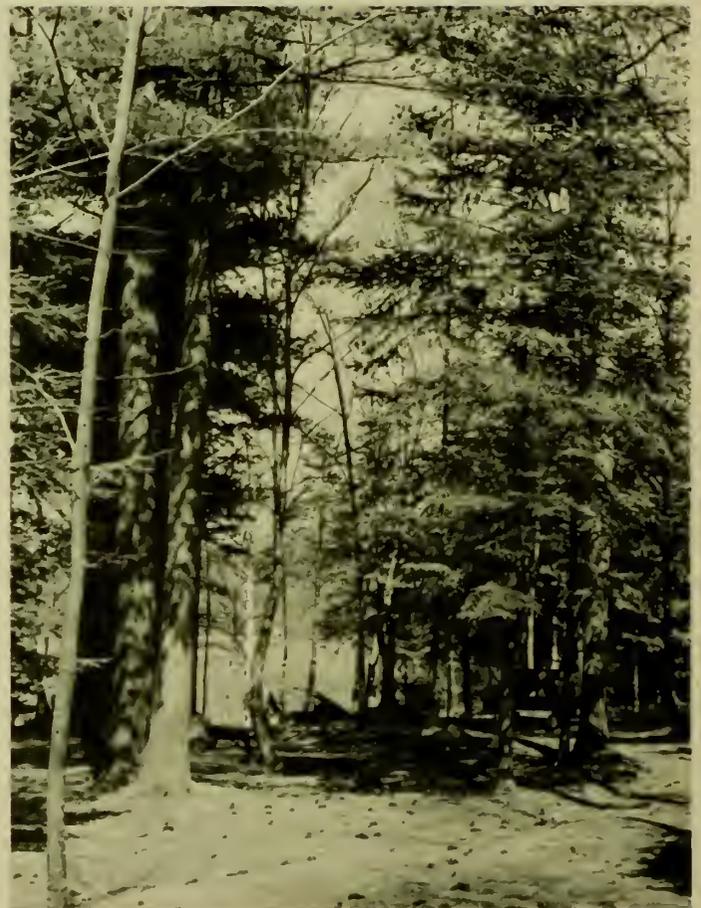




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52. Sunrise over Third Connecticut Lake.

53. Summer foliage frames Lakes Francis in the proposed Connecticut Lakes State Park.

54. A small picnic area, one of the few recreation sites at Moore Reservoir. Establishment of the proposed Moore-Comerford Interstate Park would more fully utilize the area's recreation potential.

This "north country" proposal encompasses a high mountain basin that contains large forested tracts laced with small streams, remote lakes, and ponds. As the Statewide Comprehensive Outdoor Recreation Plan notes:

. . . the Connecticut Lakes area in northern New Hampshire . . . should be considered for potential acquisition as a primitive area. If comprehensive analysis of the Connecticut Lakes area justifies public ownership, it should be acquired and preserved, regardless of its size.

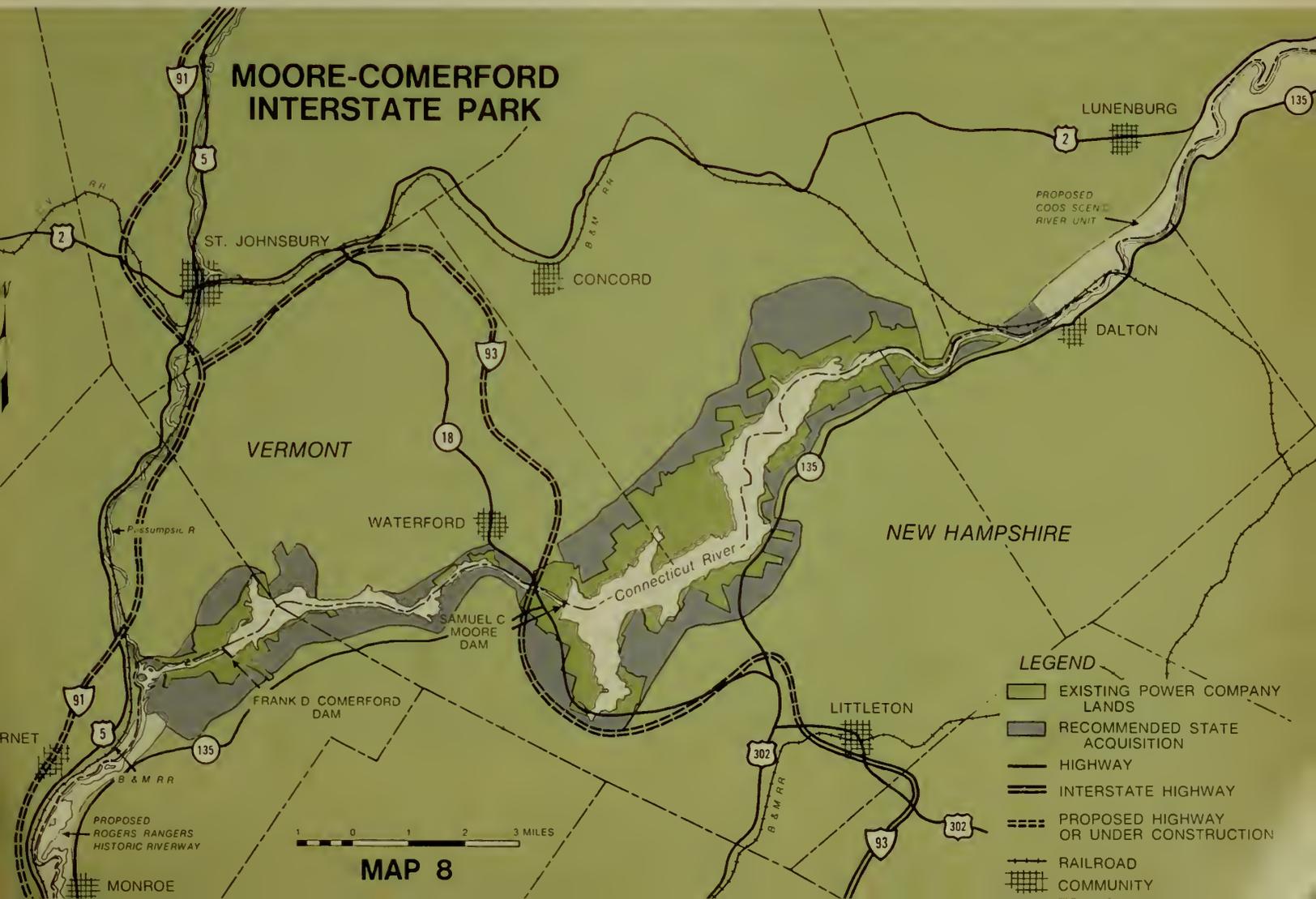
The area is situated in northernmost New Hampshire in the towns of Pittsburg and Clarksville and contains four major bodies of water: Third Connecticut Lake owned and administered by the New Hampshire Division of State Parks; Second Connecticut Lake controlled by the New England Power Company; First Connecticut Lake also controlled by the New England Power Company; and Lake Francis, an artificial impoundment owned and administered by the State of New Hampshire Water Resources Board.

Most of the land is in private ownership, the greatest portion being held by the St. Regis Paper Company. Included within the proposed State park boundaries is the 1,548-acre George D. Roberts State Park, and acreage owned by New England Power Company north of Lake Francis along the Connecticut River and around the First and Second Connecticut Lakes.

The scenic quality and natural beauty, with sparkling lakes and streams, unquestionably make the area one of the most significant in the Northeast. Its present recreation uses include hunting, fishing, boating, and camping. The emphasis should continue to be on these high quality, extensive activities; however, there might also be scenic overlooks, tent and camper trailer sites, swimming areas, boat launching sites, and marked trails. Unique natural areas such as the 100-acre black spruce-tamarack Moose Bog, Norton Pool (125-acre tract of virgin spruce and fir), Scott Bog, an area of significant scenic qualities and East Inlet with exceptionally fine brook trout fishing should all be protected.

Moore-Comerford Interstate Park At the lower end of the Coos Scenic River Unit, the States of New Hampshire and Vermont are urged to undertake a joint program with the New England Power Company to develop the Moore and Comerford Reservoirs into a major interstate park. This report recommends that the States and the power company increase the development of company-owned lands, and that the States acquire 9,400 acres in fee and less-than-fee to round out the company's present 6,000-acre holdings into a 15,400-acre Moore-Comerford Interstate Park (see Map 8).

At the two reservoirs, the New England Power Company has constructed six picnic and boat launching sites and a visitor's house, all of which are heavily used. Both New





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Hampshire and Vermont have recognized the great undeveloped potential of the area, and each has noted recommended actions in its statewide outdoor recreation plan which would realize this potential.

The additional 9,400 acres to be acquired by the States would be comprised of sparsely developed, marginal agricultural and forest lands and should be selected to protect the environmental qualities of the park as well as meet the land base demands of park visitors.

Although the reservoirs are relatively remote, two interstate highways, I-91 and I-93 will soon intersect near the area and make the proposed interstate park easily accessible to the urban populations of Boston and New York.

The recreation use of storage reservoirs and company-owned lands is restricted by pollution of the Connecticut River and limited provision of public facilities. The pollution adversely affects the quality of fishing and water contact activities, while company policy limits public facilities to day-use. These conditions must be overcome through cooperation between the public and private sectors if an interstate park is to be a reality.

A potential exists for an outstanding multiple-use vacation and weekend recreation area. This potential should be developed by providing increased water access and facilities for water-oriented activities, and protection of the natural beauty of the area. The park would also provide a link between the Coos Scenic River Unit and the Rogers' Rangers Historic Riverway, as well as serving as a canoe route point of origin and terminus.



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STATE ACTION

In addition to the complementary State actions already discussed in connection with the Gateway, Mt. Holyoke, and Coos Scenic River units of the proposed National Recreation Area, four major State parks are recommended: two in Connecticut, one in Massachusetts, and one straddling the New Hampshire-Vermont border. These proposed parks would be located along the river at points offering outstanding recreation opportunities. Most of the areas involved in the study already include some State park or forest lands.

The Federal Government could assist in the acquisition and development of these areas by providing matching grants from the Land and Water Conservation Fund and the Open Space programs. The States would be responsible for establishing and operating the areas.

CONNECTICUT

Glastonbury Meadows State Park The State of Connecticut is urged to acquire the 4,400 acres of Connecticut River flood plain, otherwise known as "the meadows," located in the towns of Glastonbury, East Hartford, Rocky Hill, and Wethersfield. Map 9 delineates an approximate boundary. The State should be responsible for maintaining the natural integrity of the area in perpetuity, and for providing those forms of intensive and extensive recreation which the municipalities cannot provide.

This meadowland is one of the largest remaining blocks of open space along the Connecticut River. Approximately

25 percent of the meadowland is presently being used for agriculture, with a greater extent being utilized for restricted hunting by private clubs. Less than five percent of the land is publicly owned, with only one significant recreation area at Wethersfield Cove. The majority of the land is owned in numerous small parcels by private individuals or organizations. Ninety-five percent of the proposed park land is protected by stream encroachment lines established by the State Water Resources Commission. All of the towns have further protected the areas by instituting flood plain zoning.

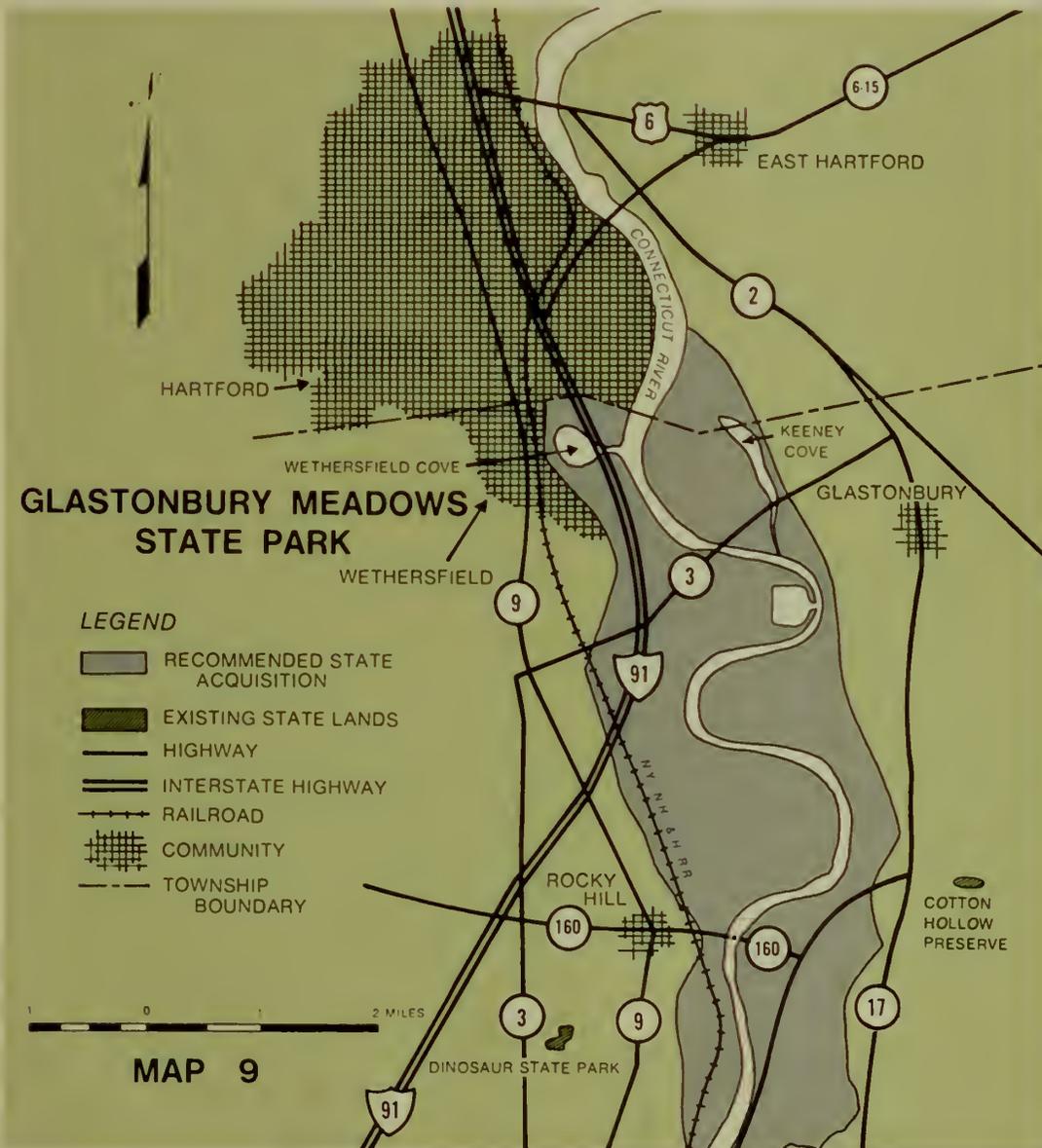
These forms of protection are designed to prevent develop-

ments and improvements on the flood plain which would be susceptible to flood damage and are not intended for protection of the natural integrity of the area.

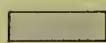
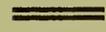
To insure the preservation of the open space of the meadows and the conservation of its recreation resources, it is recommended that this land be acquired by the State. This recommendation is further justified by the proximity of the area to the expanding Hartford metropolitan area, with a population of over 500,000 persons. This factor, in conjunction with a steady upward trend in land values, may jeopardize compatible agricultural uses and increase the prospects of adverse development.

55. Access area at Comerford Reservoir. Comparatively undeveloped, Moore and Comerford Reservoirs offer a wealth of recreation potential.

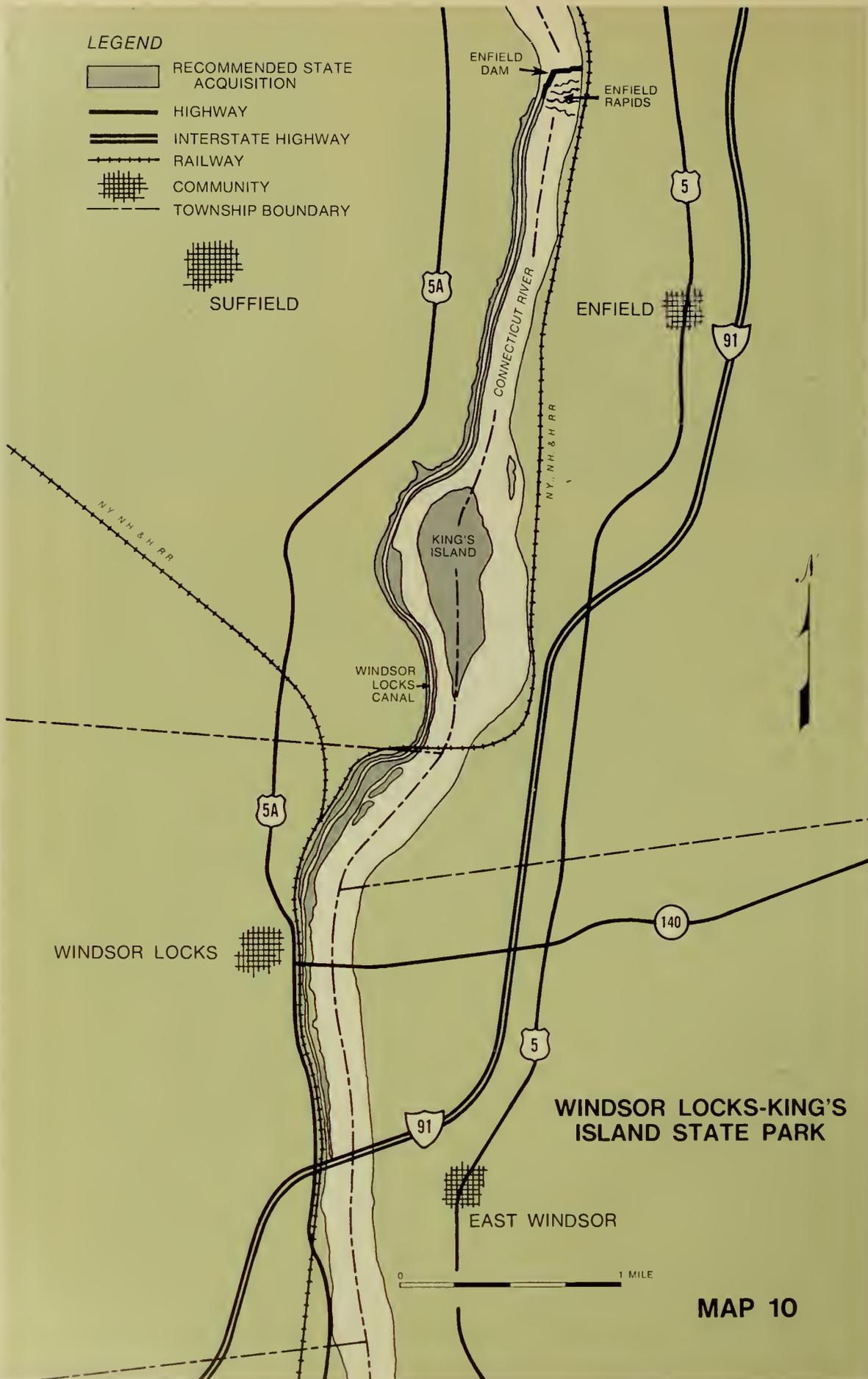
56. The proposed Glastonbury Meadows State Park would provide needed recreation opportunities for the Hartford metropolitan area.



LEGEND

-  RECOMMENDED STATE ACQUISITION
-  HIGHWAY
-  INTERSTATE HIGHWAY
-  RAILWAY
-  COMMUNITY
-  TOWNSHIP BOUNDARY


SUFFIELD



WINDSOR LOCKS-KING'S ISLAND STATE PARK

MAP 10

The proposal of the Capitol Region Planning Agency that the area be an integral part of the agency's proposed Connecticut River "Greenbelt" is endorsed. The nature of this area offers an opportunity to develop a variety of river-oriented day-use and overnight facilities for the adjacent urban population as well as for visitors traveling the Tourway or the navigable waters of the Connecticut River. In addition, recommended programs offer an opportunity for wildlife management, watershed protection, and the preservation of areas of scenic and scientific interest.

Wethersfield and Keeney Coves offer ideal bases for boating development which could provide a significant adjunct to the proposal for increased recreational navigation on the river. The flood-prone wetlands and the open waters of the meandering river are important waterfowl areas. These waterfowl, with the farm game species of the area, provide a needed hunting resource. The riverfront corridor of trees fronting upon the almost level flood plain provides an opportunity for trails and picnic sites, adjacent to playfields and golf courses.

On the periphery of the proposed State park are the villages of Old Wethersfield and South Glastonbury which contain homes of architectural and historic interest, outstanding natural and scientific areas such as Cotton Hollow Preserve and the new Dinosaur State Park, and the parks and playgrounds of metropolitan Hartford. Considerable potential exists for the development of municipal recreation facilities which, if planned and developed in coordination with the proposed State area, will provide a full and unique recreation and scenic experience for the residents and for the visitor.

Windsor Locks-King's Island State Park It is recommended that the State of Connecticut accept donation of 250 acres reportedly surplus to the needs of the Connecticut Light and Power Company and establish a Windsor Locks-King's Island State Park at Enfield Rapids.

Situated between the major metropolitan areas of Hartford and Springfield, this area offers unlimited opportunity for creating an extensive recreation and conservation complex along the river; it would include the historic Windsor Locks Canal and adjacent land, the Enfield Dam and Rapids, and the wooded 120-acre King's Island (see Map 10). Few areas presently are developed for recreation between Hartford and Springfield. Water-oriented activities needed in this area are swimming, boating, and fishing as stated by the Capitol Region Planning Agency. Since some of the State's finest shad fishing is found in the vicinity of Enfield Dam, there is a need for more boat launching sites and better access to the river's shores.

The creation of a State park would ensure continued fishing and boating through additional access and boat launching sites. Valuable flood plain could be protected from encroachment, and King's Island could be developed for boating, picnicking, and fishing. This action would afford an unusual opportunity to enjoy more of the Connecticut River. Physical improvement of the canal, facilitating movement of larger craft, and operational improvement of locks and bridges, eliminating inconveniences presently encountered by boaters, would alleviate certain navigation problems. It would also preserve the only existing navigational canal left on the Connecticut River. The present service road along the canal could be established as a historic and scenic pathway for equestrians, hikers, or cyclists.

57. Windsor Locks Canal and nearby King's Island could be developed for a broad range of recreation activities.



Channel improvements between Hartford and Windsor Locks are recommended in this report. This would give boating additional significant acreage as recommended in the Connecticut Statewide Outdoor Recreation Plan and would serve as a focal point for the increased boating activity.

The proposed park will complete the desired "greenbelt" around the expanding metropolitan area as recommended in the Capitol Region Planning Agency's "Open Space Plan." Like Glastonbury Meadows, this area is located in the path of the expanding Hartford area. It offers needed recreation opportunity for the adjacent densely urbanized areas.

MASSACHUSETTS

Turners Falls-Northfield Mountain State Park The Commonwealth of Massachusetts and the private utility companies are encouraged to undertake development of all recreation areas and facilities proposed by the *Recreation Plan and Report* for the Northfield Mountain pumped storage and Turners Falls hydroelectric projects to be developed jointly by the Western Massachusetts, Connecticut Light and Power, and Hartford Electric Light Companies. This proposal includes that portion of the Connecticut River and environs from Cabot Station, below Turners Falls Dam in Massachusetts, approximately 20 miles north to Vernon Dam in New Hampshire. The report recommends development of nine recreation areas to be owned or operated by the Commonwealth or local authorities. In addition, it recommends State or local riverfront land use controls, such as flood plain zoning, scenic easements, conservation easements, deed restrictions, and the like throughout the entire project area. The recommendations involve some 31,000 acres (see Map 11).

58. Barton Cove, one area within the proposed Turners Falls-Northfield Mt. State Park. Cooperation between the public and private sectors is an important element in developing the valley's recreation potential.



The development of these and any additional proposals should be correlated with the development of nearby facilities of the States of Vermont and New Hampshire, and those proposed by the New England Power Company.

With the exception of the newly-created State-owned Barton Cove boat access site, there are no Federal, State, or municipal recreation facilities of regional significance in the project area.

The Massachusetts Statewide Comprehensive Outdoor Recreation Plan recognizes the recreation potential of the Connecticut River and recommends full development of its resources. It also recommends that "a beginning be made by further developing the area through the provision of additional swimming, fishing and boating facilities, as well as complementary picnicking, hiking and play areas."

The outdoor recreation proposal of the utility companies submitted as a part of the application to the Federal Power Commission for a license to construct the hydroelectric project, and coordinated with the Department of Natural Resources of the Commonwealth of Massachusetts, proposed the development of the following nine recreation areas and facilities:

Barton Cove site consists of 700 acres—300 land and 400 water. This site, just upstream of the Turners Falls Dam, provides boat docking facilities, a marina, and waterskiing. Present hazards to boaters would be eliminated by raising the water level. Future plans include a swimming pool, a day-use center, outdoor court games, family and group picnic sites, and rental cabins.

The proposed Farley Roadside Rest Area on Northfield Mountain would protect a scenic waterfall and contain a picnic area and a trail to the falls.

The proposed Grassy Hill State Park on the west bank of the Connecticut River would consist of approximately 450 acres of land and 130 acres of water. It would include a 10-acre island in the Connecticut River. Activities for this area would be camping, picnicking, fishing, swimming, and field games. Development would include a small marina, a boat launching area, and a lodge.

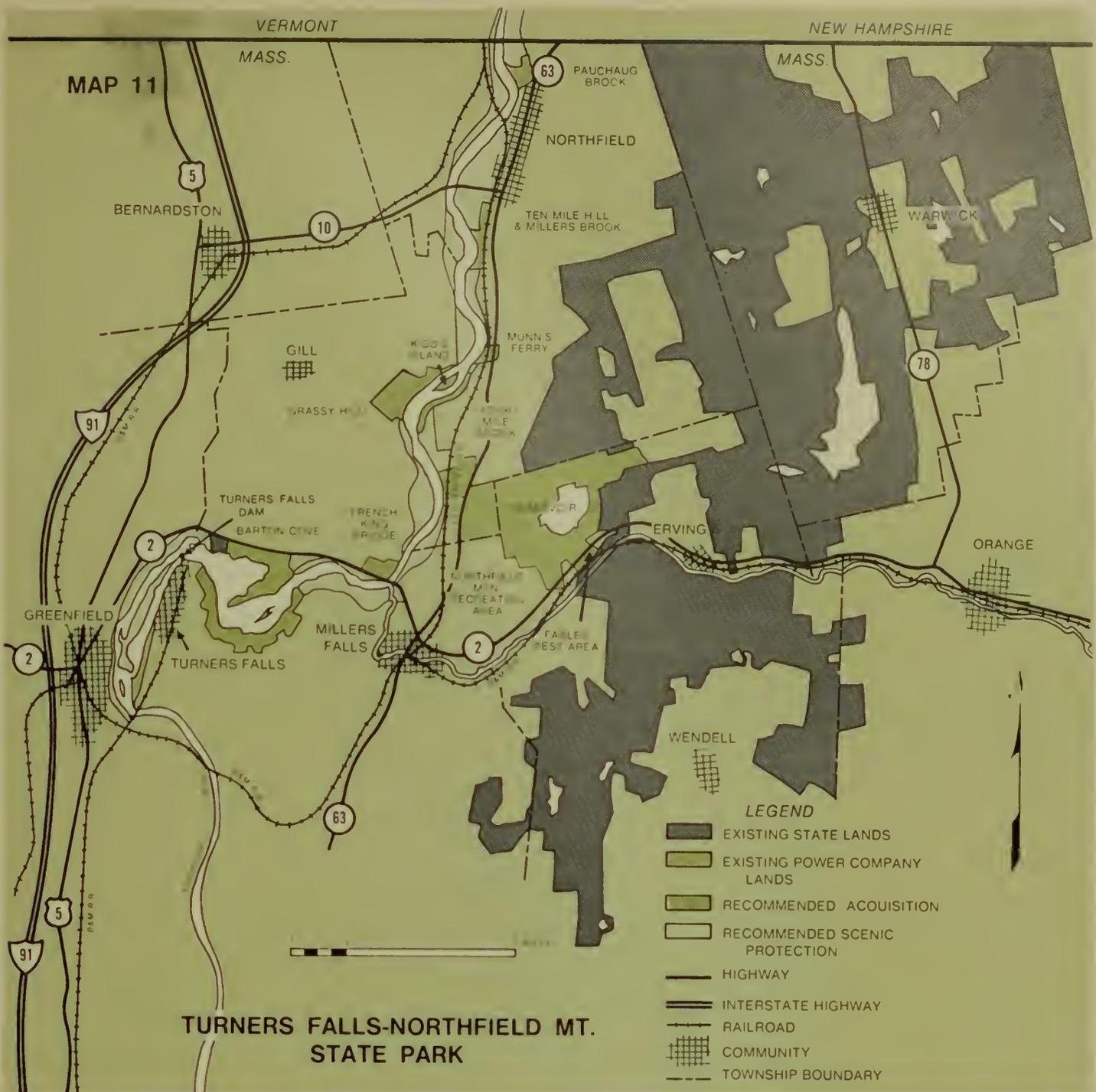
At the 15-acre French King Bridge Roadside Rest Area, an expanded parking area, an overlook, and a picnic area are proposed near the scenic French King Gorge of the Connecticut River.

A boat launching site and parking area are projected for Millers Brook. Adjacent to this area is a 12-acre site proposed for boat camping and picnicking, and to be known as Ten Mile Hill.

Pauchaug Brook on the east bank of the river would contain a boat launching site and a fish and waterfowl subimpoundment.

Munn's Ferry would comprise three acres, offering boating, camping, and docking facilities on the west bank of the river.

Four Mile Brook would be a 50-acre site, south of Munn's Ferry recreation area, with docking facilities, picnic areas,

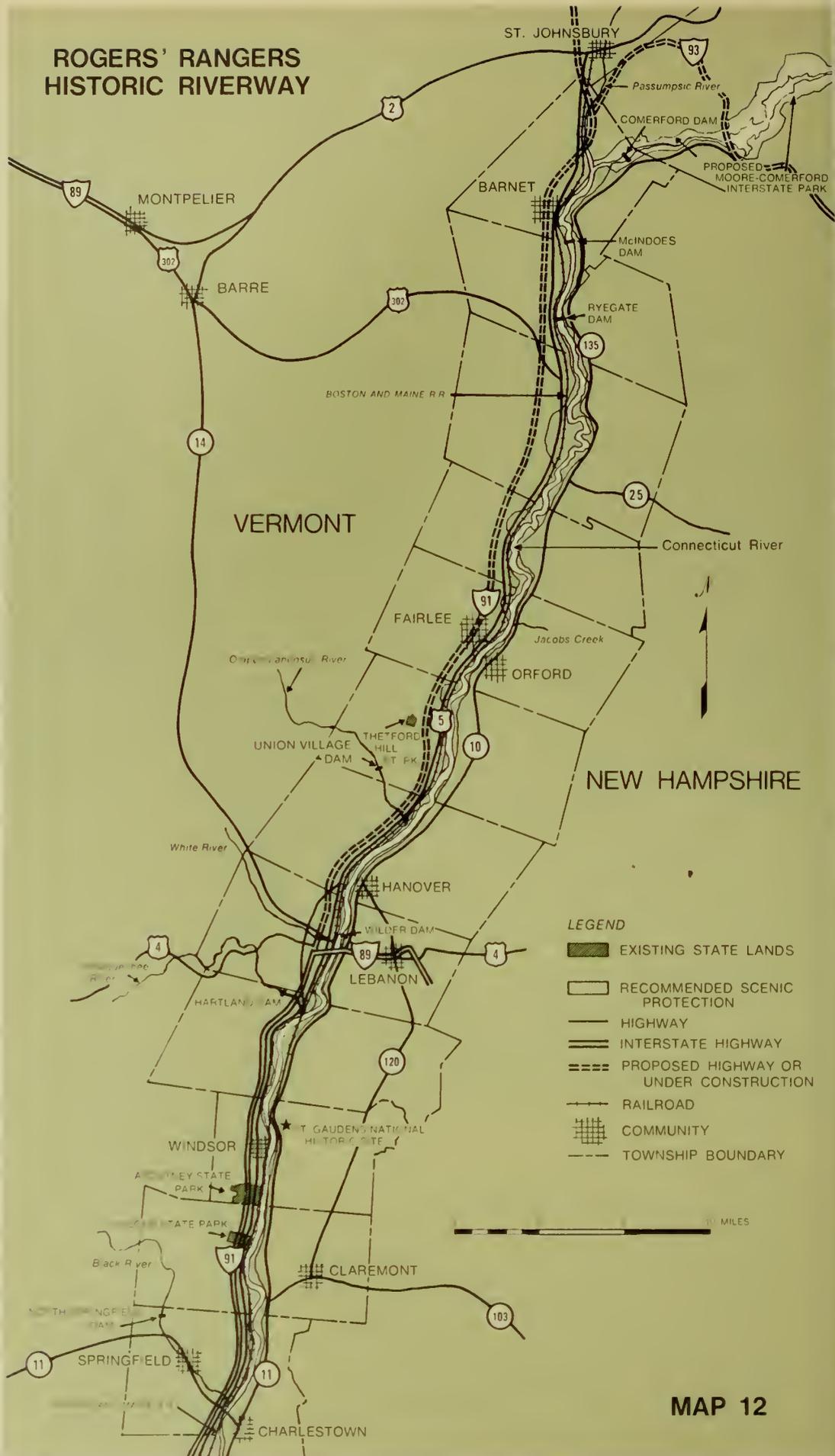


and swimming on a small man-made pond.

The Northfield Mountain Recreation Area with the adjacent State forest land offers an excellent opportunity for a varied year-round recreation experience. A unique system of horse and snowmobile trails totaling 100 miles is planned. Hiking trails would extend for 20 miles. Camping and picnicking facilities would be provided and an overlook constructed at the proposed 1000-acre reservoir. Fishing and hunting access would be improved. More winter recreation opportunity would be provided with ponds for ice skating, a course for snowmobile racing, cross-county skiing, and bobsled and toboggan runs.

Development of this area would provide an important link in the valley's recreation complex. Here is found a unique opportunity for the State, localities, and the private sector to cooperate in providing a recreation complex of outstanding value for the surrounding towns and cities of Greenfield, Turners Falls, Millers Falls, Erving, Orange, Warwick, and Wendell. The magnitude of the resources involved and the overall proposal as it appears in the master plan gives regional significance to the project. It would provide not only a wide variety of activities, but also year-round opportunities for day, weekend, and vacation use.

ROGERS' RANGERS HISTORIC RIVERWAY



MAP 12

NEW HAMPSHIRE AND VERMONT

Rogers' Rangers Historic Riverway The Governors of the States of New Hampshire and Vermont are encouraged to seek establishment of a Rogers' Rangers Historic Riverway, extending approximately 100 miles between the proposed Moore-Comerford Interstate Park and Charlestown, N. H. (see Map 12). The objective of the Historic Riverway would be to commemorate the arduous return trip of Rogers' Rangers following the daring attack on the St. Francis Indian village in 1759, to protect the scenic and historic qualities, and to provide public access and recreation along the river.

A variation of the concept described earlier for the proposed Coos Scenic River Unit is suggested. The towns along the river should be encouraged by the States to initiate open-space and land use controls that will prevent adverse development on lands immediately adjoining the river and to permit some restoration of the natural setting. The controls could be in the form of firm institutional zoning on the part of the States and local governments, or voluntary self-imposed restrictions on land uses granted by the property owners.

The proposed Riverway consists of the riverfront lands, including the flood plain and prime recreation areas, and prominent local topographic features such as palisades.

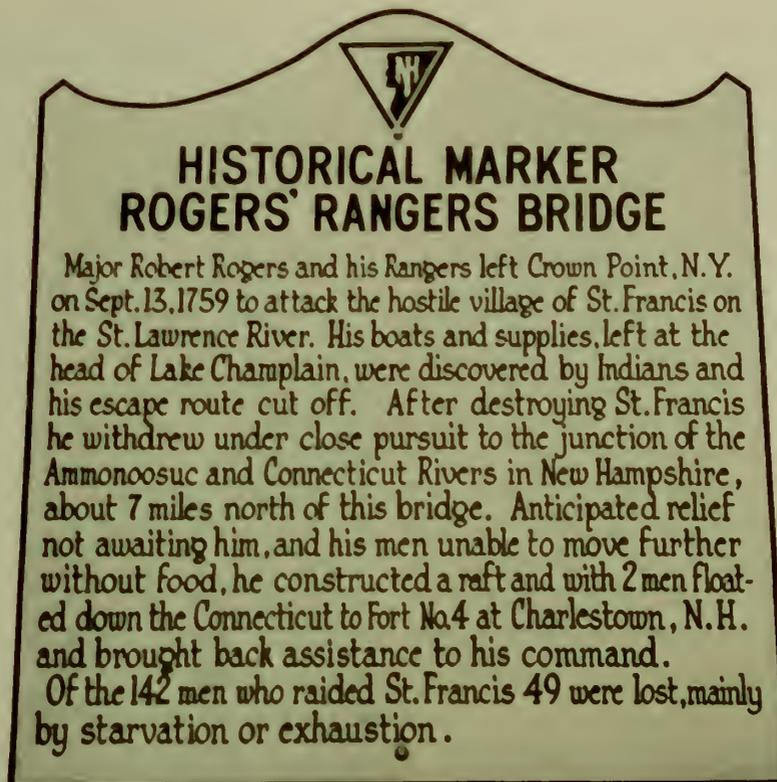
The boundary might encompass some 27,500 acres of land, most of which are in agricultural use and private ownership. Significant private non-agricultural owners include the New England Power Company, licensee of three of the four dams in this stretch, and the Bemis

Bag Company, owner of the fourth impoundment formed by Ryegate Dam. The Saint-Gaudens National Historic Site at Cornish, N. H., is the only federally-administered recreation area along the Connecticut River. This site was the home and studio of the noted sculptor, Augustus Saint-Gaudens. Most significant among the other publicly-owned lands along the river are the State-owned Ascutney and Wilgus State Parks in Vermont, and lesser sized boat access sites and wetlands in both Vermont and New Hampshire.

The open space and land use controls would be utilized to conserve the scenic, historic, and cultural features and would insure the continuation of the important agricultural life of the Connecticut River Valley, while keeping the land on the tax rolls. Limited fee acquisition is recommended to conserve prime riverfront recreation areas. In addition, a riverfront right-of-way should be secured to make available the necessary land for the successful completion of the proposed Connecticut Valley Trail.

Several of the reservoirs in the stretch below the Passumpsic River confluence, and the beautiful, untamed Sumner Falls at Hartland, Vt., already contain public day-use recreation facilities provided by the New England Power Company. It is recommended that the States and the power companies increase the effectiveness of these areas and consider them as a necessary part of the overall concept of a Historic Riverway.

59 *The proposed Rogers' Rangers Historic Riverway follows the return route of this Colonial hero from his daring raid on St. Francis.*





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The entire route of Rogers' Rangers, from the confluence of the Nulhegan and Connecticut Rivers (within the Coos Scenic River Unit), through the proposed Moore-Comerford Interstate Park, and down the proposed Historic Riverway to Charlestown, site of Fort Number Four, the terminus of Rogers' trip, should be marked to add greater significance to the recreational experience of travelers on or along the river.

Outside of the defined Riverway, but of significant influence upon motoring recreationists in the area are three Corps of Engineers' reservoirs on tributary streams—North Hartland on the Ottauquechee River 1.5 miles



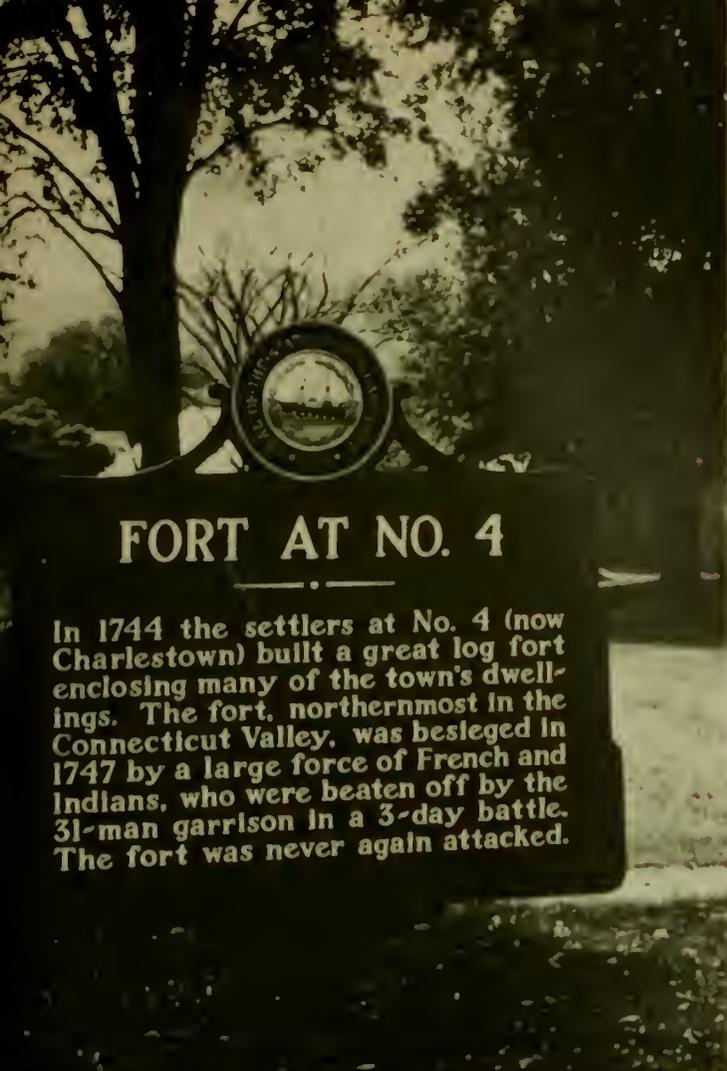
60. Mirrored in the Connecticut's quiet waters, this modern span reminds river travelers that civilization is near at hand.

61. "Aspet," former summer residence of the world acclaimed American sculptor Saint-Gaudens, is now a National Historic Site.

62. The site of Fort No. 4, in Charlestown, N.H.

63. Sites such as this one at the confluence of Jacobs Creek and the Connecticut are accessible from both river and roadway.

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from its confluence with the Connecticut, North Springfield located 8.7 miles upstream from the confluence of the Black and Connecticut Rivers, and Union Village on the Ompompanoosuc River, 4 miles above its junction with the Connecticut River. These presently supply limited public recreation but could be further developed, especially with additional overnight facilities.

LOCAL AND PRIVATE ACTION

The Connecticut River Valley cannot be preserved through the efforts of any one level of government, nor can government alone do the entire job. Preservation of the valley and development of its recreation potential require assistance from the private sector as well.

Local governments in the Connecticut River corridor are beginning to realize their role in planning and implementing conservation programs. They are developing the legal and financial means to direct orderly community development and correct abuses of land and water. Further, they have the necessary legal prerogatives to create and maintain planning bodies, zoning boards, conservation and historic commissions, as well as other appropriate agencies.



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ZONING

One of the most potent methods by which a Connecticut Valley community can participate in the riverside conservation and recreation program involves little or no capital expenditure. The four States of the valley have given their towns the legal authority to effect land-use zoning which recognizes both the best uses of the land and long and short-term community needs.

Effective zoning must go hand-in-hand with farsighted planning. Before zoning decisions are made, local governments must identify what they want future land use to be. Planning can identify various community needs on an overall basis, help establish community goals, and set forth effective means to reach these goals. By enacting comprehensive land use plans and zoning ordinances, communities can guide and channel development to meet local needs. Many valley towns are already moving along these lines. As of early 1967, 45 river towns had approved and were in the process of implementing comprehensive plans. Nearly half of these towns are in Connecticut. Those towns which have not already done so should initiate local and regional planning, with adequate provision for recreation and open space. The respective planning agencies should coordinate on a continuing basis with those State and Federal agencies having responsibility for local recreation and open space programs.

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Local recreation and open space plans should be in accord with Statewide Comprehensive Outdoor Recreation Plans in order that local governments may be eligible for Federal assistance for acquisition and development of recreation land under the Land and Water Conservation Fund grant program.

Presently undeveloped riverfront lands can be retained in their natural state in a number of ways. Flood plain zoning, while designed primarily to prevent damage from floods, can permit low-intensity park and recreation complexes, while restricting urban development. The State of Connecticut has enacted stream encroachment regulations applying to all flood plains in the State. None of the other valley States have such Statewide regulations, and few local communities take the initiative in this field of responsibility.

Cluster zoning can encourage developers to group residences or other buildings in order to leave large areas of open space. Zoning, which limits land use to agricultural and associated activities, can be an effective means of conserving open space. Such zoning is most effective when combined with real estate tax policies which protect those actively engaged in farming without subsidizing the land speculator. At present, much of the "agricultural" zoning along the river is only a catchall classification, or combined as residential-agricultural, and does not discourage adverse development. In protecting riverfront lands, towns must take care to enact *effective* ordinances which will carry out the communities' intended purposes.

Zoning, however, has flaws. Zoning lacks permanence, and years of careful preservation may be undone by a single administrative decision.

SCENIC EASEMENTS

A more effective instrument than zoning for the preservation of the Connecticut Valley's beauty might be the use of scenic easements. Simply stated, easements are partial rights in land. The owner of land subject to an easement has all the rights and benefits of ownership consistent with the terms of the easement. The easement does not transfer title to the land nor dispossess the owner. It is binding on all future grantees of the land who have notice of the restriction.

Scenic easements often include:

1. A restriction of new buildings and structures (or major alterations) to farm and residential buildings and structures only, plus a specific prohibition of further non-residential buildings—with a saving clause permitting the continuance of existing uses.
2. A prohibition against cutting "mature trees and shrubs", but with a proviso authorizing normal maintenance.
3. A prohibition against dumping.
4. A prohibition against billboards.

Local governments may acquire scenic easements either through donation or purchase. An example of a scenic easement now in use in Missouri is included in Appendix 1.

OTHER LESS-THAN-FEE DEVICES

Leaseback or sellback are two more mechanisms for protection of land along the Connecticut River. In both cases, land is purchased in fee simple. Under sellback, the land is then resold with certain restrictions such as those found under scenic easements. In the case of leaseback, the land is leased, usually for a long term, subject to the desired restrictions.

In recreation and urban renewal planning, municipalities should place the highest priority upon the acquisition of riverfront lands. Since available shoreline is being developed rapidly, it is imperative that communities develop a now-or-never attitude toward the protection of the vital riverfront areas as the "front yard" of the community.

This report recognizes that local governments cannot assume the entire financial burden for carrying out many of the recommendations. More and more financial assistance is becoming available through Federal and State aid programs to assist communities in acquiring lands for recreation purposes. Foremost of these programs is the Land and Water Conservation Fund, administered by the Department of the Interior's Bureau of Outdoor Recreation. This program makes grants to States, and through them to political subdivisions, for planning, acquisition, and development of public outdoor recreation areas and facilities. The National Park Service can make funds available under the Historic Preservation Program for the acquisition and development of sites of historic, archeologic, architectural, and cultural significance. The Department of Housing and Urban Development may assist communities who wish to acquire and develop lands in urban areas through its Open-Space Land Program, and can make grants for urban planning under the "701" (Urban Planning Assistance) Program.

However, Federal and State agencies do not have the means to finance all desirable projects. Many of the best examples of progressive local conservation action in the Connecticut River corridor are those involving such mechanisms as bond issues. A better informed citizenry, recognizing present and future needs, is finding that bond issues are one sure way to implement desired public programs at the local level.

PRIVATE ACTION

The private sector also must recognize and accept its share of the responsibility. The utility companies drawing their life blood from the river should meet their public obligations through enlightened management and operation of hydroelectric and storage dams. These structures presently impound 200 miles of the river.

In their applications to the Federal Power Commission for licensing or relicensing of hydroelectric plants, the private power companies must submit exhibits covering most aspects of plant layout and operation, including the amount and kind of proposed recreation facilities. The exhibits are reviewed by Federal and State agencies which comment to the Federal Power Commission on the applications. The Commission, in coordination with other Federal and State agencies, may stipulate that

plans include fully adequate recreation and fish and wildlife provisions relative to the needs and resource potential of the area.

To an increasing extent, utility companies recognize and accept multiple-use concepts regarding hydroelectric projects. What once may have been a costly inconvenience

to the electric utilities is now fully within the framework of good business and effective public relations.

Table 2 provides details about recreation potential and developments at privately-owned dams.

Present recreation programs at these impoundments usually consist of such day-use facilities as boat launch-

Table 2

PRIVATELY-OWNED POWER AND RIVER CONTROL STRUCTURES

Installation	Ownership	Impoundment Acres	Recreation Potential	Existing Public-Use Recreation Facilities
2nd Connecticut Lake	New England Power Co.	1286	High	2 picnic areas, 1 boat access point
1st Connecticut Lake	New England Power Co.	2807	High	1 picnic area, 1 boat access point
Canaan Dam	Public Service Co. of N.H.	40	Local Importance	None
Northumberland Dam	Groveton Paper Co.	473	Local Importance	None
Gilman Dam	Gilman Paper Co.	394	Local Importance	None
Moore Dam	New England Power Co.	3475	High	Guest house, 3 picnic areas, 4 boat access points
Comerford Dam	New England Power Co.	732	High	1 picnic area, 2 boat access points
McIndoes Dam	New England Power Co.	342	Moderate	1 picnic area
Ryegate Dam	Bemis Bag Co.	297	Moderate	None
Wilder Dam	New England Power Co.	3100	High	Visitor center, 2 picnic areas, 1 boat access point
Bellows Falls Dam	New England Power Co.	2804	Moderate	3 boat access points, 2 picnic areas
Vernon Dam	New England Power Co.	2550	Moderate	1 picnic area
Turners Falls Dam and Northfield Mt. Pumped Storage Project	W. Mass. Electric Co.	1312 (Turners Falls)	High	None (see text for proposed developments)
Holyoke Dam	Holyoke Water Power Co.	997	High	Fisherman access point below dam, fish lift, canoe portage
Enfield Dam	Connecticut Light & Power Co.	278	High	None

N/A = Not Applicable, Not Generating stations

ing ramps and picnic areas. Long-range plans often fall short of their potential. This is especially true of plants at Moore, Comerford, and Wilder, which have extremely high potential.

Opportunities occur where the public sector may be able to team up with private utilities in developing recreation facilities. An example is the recreation facility plans at the proposed Turners Falls-Northfield Mountain Pumped Storage Project which calls for cooperative development with the Commonwealth of Massachusetts. This example can set a precedent for the type of planning which may be desirable at other resource areas demonstrating high recreation potential.

Great recreation potential also exists in timber company holdings in the northern part of the valley. Although there are virtually no recreation developments on private timber lands, many areas are open to hunters, hikers, and fishermen. The private timber companies are urged to continue to allow public use of their lands, and to consider instituting more liberal policies which would facilitate overnight use.

The private landowner, both residential and commercial, controls a major portion of the land fronting on the Connecticut River. It is in his power to take pride in his domain, maintain it to please others as well as himself, and help protect many of the scenic vistas for which the Connecticut Valley is noted. The private landowner is encouraged to take the initiative in setting voluntarily imposed land use and development controls in order to maintain the scenic character of his own land during his lifetime. The private landowner is also encouraged to donate scenic easements to the appropriate governmental agencies. The United Aircraft Corporation set a precedent when it granted Federal authorities a conditional scenic easement on its riverfront lands in Middletown, Conn. This report urges the company to continue the easement in perpetuity. It is hoped that others will respond with similar voluntary easements and donations.

The simplest way to assure preservation of land may be to deed the tract to a trusted conservation agency, with or without restrictions, life estate, or other rights. If landowners do not wish to donate land to a governmental agency, they may form a private conservation land trust. Families in Lyme, Conn., have already set up such a trust to protect and conserve the rural beauty of the town. These trusts have the advantage of the trustees' intimate knowledge of the local situation. They are aware of special situations and needs of the community. Land trusts are particularly useful where planning or zoning is not in effect, or where existing authority is lax or ineffective. In addition to holding land, these trusts can help to educate the public and guide policy along the lines of conservation and open space preservation. They can also serve as "watchdogs", to insure that land donated for preservation is in fact preserved, and not turned to some other use.

Conservation land trusts usually qualify as tax-exempt organizations, and persons donating land to such trusts may avail themselves of certain tax benefits. Purposes of the trusts should be carefully spelled out, as well as the duties of the trustees.

It is recommended that land trusts be established in the towns of the Connecticut Valley to provide the mechanism for accepting and maintaining lands which people may wish to donate for preservation. In this way, some of the best lands along the river might be saved, including tracts that Federal, State, or local governments may not be able to acquire. An example of a land trust is included in Appendix 2.

Through such legal devices as land trusts and easements, individual landowners may permanently safeguard the beauty of riverside properties.

Aside from previously discussed Federal, State, and private actions, many other resource opportunities with important recreation and scenic potential exist in the Connecticut River Valley (Table 3 p.68). Each possesses a distinctive recreation and open space potential which in some cases may adequately serve local needs, or may dovetail with other more broadly-based recreation programs in the vicinity. By weight of numbers and by virtue of their wide distribution, collectively they represent a significant proportion of the overall resource potential in the Connecticut Valley. Certain areas already possess on-going public sector programs and are currently subject to some use for recreational purposes, while others exist merely as available open space with an untapped potential awaiting public action and initial development.

Development of these areas can be assisted through such Federal grant-in-aid programs as the Land and Water Conservation Fund and the "701" programs. Many projects, such as that at Quechee Gorge on Vermont's Ottauquechee River, have already received matching Federal funds to help preserve the scenic and natural beauty of the areas.

OVERALL COORDINATION

To promote concerted action, this report recommends that the Secretary of the Interior, acting through the Bureau of Outdoor Recreation, work with the Federal agencies, the States and their political subdivisions, and the private sector to achieve coordinated conservation and recreation development throughout the length of the Connecticut River Valley. Particular attention should be given to landscape and environmental preservation of the river corridor, as well as to its recreation potential. Authority for such cooperation exists in the Bureau's Organic Act, Public Law 88-29, approved May 28, 1963. That Act authorizes the Secretary of the Interior to "encourage interstate and regional cooperation in the planning, acquisition, and development of outdoor recreation resources."

The Secretary of the Interior could also help public and private interests in achieving a more effective coordinated program by providing technical assistance. Public Law 88-29 authorizes the Secretary to "provide technical assistance and advice to and cooperate with States, political subdivisions, and private interests, including nonprofit organizations, with respect to outdoor recreation."

While seeking cooperative planning among the States, the Bureau would obtain a broad view of the opportunities and needs of the valley; provide a forum for all the State and local interests, both public and private, to discuss their interrelated problems; and furnish a continuing means of assessing and evaluating future needs of the valley, as well as guiding long-term conservation and development programs.

Financial assistance is already available to States from the Land and Water Conservation Fund, as well as from the Department of Housing and Urban Development's "701" and "Open Space" programs for the purposes of recreation planning, acquisition, and development.

The Bureau of Outdoor Recreation, in working with the Federal agencies, State and local governments, and the private sector, would seek to promote cooperation in conserving and developing the Connecticut Valley. Where plans exist, they would be coordinated and intermeshed. Through its State planning and technical assistance functions, the Bureau could cooperate in developing plans where none exist.

RIVER RENEWAL

The problems of water quality, flow, fish restoration, hydroelectric power production, and navigation are all interwoven. The level of pollution is a function of quality and flow, as is fish restoration. Navigation is dependent on flow. Action taken in one of these fields will show results in others.

WATER QUALITY AND FLOW

Viewed from a distance, the Connecticut River is a beautiful river, flowing leisurely past wooded banks and open meadows. Its quiet impounded areas invite pleasure boating, swimming, and waterskiing, while its free-flowing segments challenge the canoeist. Viewed at close range, however, long stretches are murky and fouled by municipal and industrial wastes. The Connecticut no longer clearly reflects the wooded slopes of upland valleys or the broad tobacco fields of the valley's rich lowlands. No longer does it serve as a spawning ground and habitat for large numbers of Atlantic salmon and American shad. Today the salmon are gone, while the shad persist in only limited numbers along the lower sections of the river. Deteriorated water quality and the block of power dams have taken their toll.

With the development and industrialization of the Connecticut Valley came cities and industries which use the river for transportation of their waste and for generation of power for electricity. Municipalities often discharge their wastewater, either untreated or inadequately treated, while industries dump their chemical refuse. During rainstorms, combined storm and sanitary sewers discharge raw sewage into the river.

In the proposal for a Connecticut River National Recreation Area, the report has looked beyond present limitations resulting from poor water quality, and even the

current standards; but it has not overlooked the tremendous problems that pollution poses. A National Recreation Area cannot tolerate water of the Connecticut's present quality.

In view of the magnitude of the Federal, State, local, and private investment proposed by this report, the report would be remiss if it did not recommend a quality of water from source to mouth suitable for swimming. Pollution abatement programs must be increased, accelerated, and vigorously prosecuted to make the entire river suitable for primary contact recreation use. Only then will the jewel befit its setting. Accordingly, the water quality standards of the basin States should be upgraded to meet this goal, while recognizing the limitations of present-day technology and resources.

It is therefore recommended that:

1. The goal of the joint State-Federal water quality standards program should be the attainment of a water quality suitable for primary contact recreation use for the entire river.
2. Water quality control and management programs be accelerated where such a speed-up would be beneficial in the development of the proposed Connecticut River National Recreation Area and of the associated recommended State, local, and private activities.

Present pollution precludes or impairs the use of the river for many purposes, including general recreation,

64 *Death by poisoning. Pollution in the Connecticut River kills fish by the thousands.*

64



TABLE 3 RECOMMENDATIONS FOR STATE & LOCAL ACTION

VERMONT	EXISTING PUBLIC PROGRAMS										RECREATION POTENTIAL										POSSIBLE ACTION						
	No public programs	Public recreation area	Fish & game area	State forest	Public water supply	Federal multiple use reservoir	Public boat access	Free flowing stream	Flood plain zoning	Urban renewal	Scenic easement	Boating	Swimming	Camping	Hunting	Fishing	Winter sports	Trails	Sightseeing & driving	Picnicking	Historic & scientific	Initial acquisition	Expansion	Development	Scenic control & land-use zoning	Responsibility	
1. Mount Monadnock	x												x	x	x	x	x	x	x	x		x	x	x	x	S	
2. Yellow Bogs	x						x								x	x				x		x	x	x	x	S	
4. Maidstone St. Park		x					x				x	x	x	x	x	x	x	x	x			x	x			S	
5. Victory St. Park			x		A						x	x	x	x	x	x	x	x	x	x		x	x			SF	
8. Union Village Res.					x						x				x				x			x	x			SF	
9. White River		x					x				x	C		x	x		x	x	x	x		x	x	x		S	
10. Ottauquechee River	x				x	x	x				x	C	x	x	x	x	x	x	x	x		x	x	x		SF	
12. Mount Ascutney	x										x	C	x	x	x	x	x	x	x	x		x	x	x		S	
13. N. Springfield Res.					x										x				x			x	x			SF	
14. West River		x				x	x				x			x	x		x	x	x			x	x	x		S	
NEW HAMPSHIRE																											
3. Nash Stream	x						x				x		x	x	x		x	x	x			x	x	x		S	
6. Israel River	x						x				x		x	x	x	x	x	x	x			x	x	x		S	
7. Jacobs Creek	x										x	C	x	x	x	x	x	x	x	x		x	x	x		S	
11. St. Gaudens Nat'l Hist.	x																x	x		x		x	x	x		F	
15. Surrey Mtn. Res.					x						x	x	x	x	x	x	x	x	x			x	x			F	
16. Otter Creek Res.	x				x						x	x	x	x	x	x	x	x	x			x	x			F	
17. Pisgah Mtn. Range	x						x				x	x	x	x	x	x	x	x	x			x	x	x		S	
MASSACHUSETTS																											
18. Mount Sugarloaf	x												x	x		x	x	x	x				x	x		S	
19. Mount Toby			x										x	x		x	x	x	x				x			S	
20. Tobacco Valley					x	x					x			x	x			x	x					x		SL	
21. Quabbin Res.	x		x		x						x	x	x	x	x		x	x	x				x			S	
22. Chicopee River	x										x	C			x		x	x	x	x		x	x	x		SL	
23. Robinson St. Park	x										x	C			x		x	x	x			x				S	
CONNECTICUT																											
24. Farmington River Valley-Rainbow Res.					x	x					x	C	x	x	x		x	x	x			x	x	x		S	
25. Scantic River Valley	x						x				x	C	x	x	x		x	x	x							S	
26. South Windsor Meadows							x				x			x	x		x	x	x			x	x			S	
27. Dinosaur State Park	x																			x		x	x	x		S	
28. Cromwell-Portland Meadows		x					x				x			x	x		x		x			x	x			S	
29. Connecticut Straits	x						x	x	x		x				x		x	x	x	x		x	x	x		SL	
30. Salmon River Valley			x		x						x	x	x	x	x		x	x	x			x	x	x		S	
31. Eight Mile River Valley	x				x						x	x	x	x	x		x	x	x	x		x	x	x		S	
32. Old Saybrook-Old Lyme	x	x			x		x				x	x		x	x		x	x	x	x		x	x	x		S	

C Contingent upon pollution abatement A Authorized for construction S State responsibility
 F Federal responsibility L Local responsibility

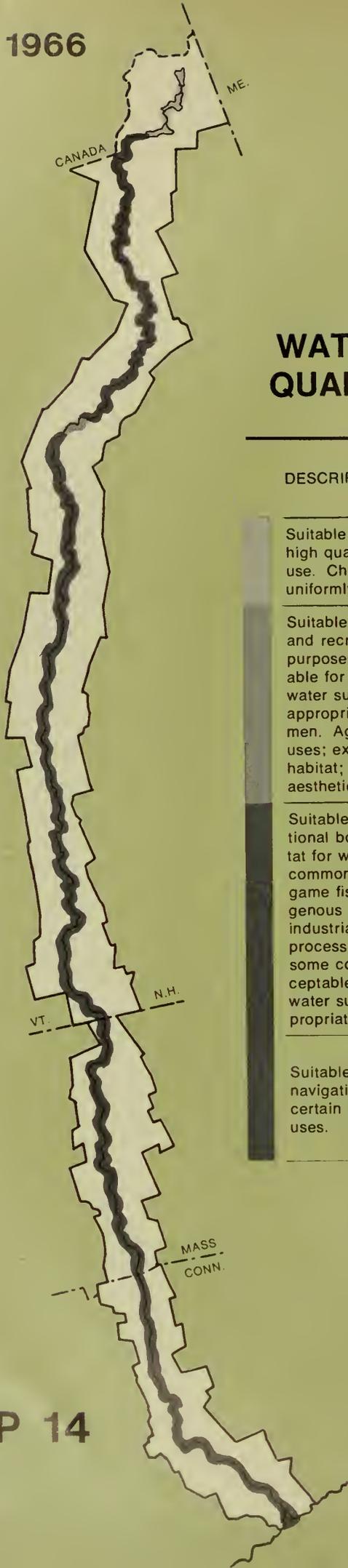
MAP 13

RECOMMENDATIONS
FOR STATE & LOCAL
ACTION



1966

FUTURE



WATER QUALITY

DESCRIPTION

Suitable for any high quality water use. Character uniformly excellent.

Suitable for bathing and recreational purposes. Acceptable for public water supply with appropriate treatment. Agricultural uses; excellent habitat; good aesthetic value.

Suitable for recreational boating; habitat for wildlife and common food and game fishes indigenous to the region; industrial cooling and process uses; under some conditions acceptable for public water supply with appropriate treatment.

Suitable for power, navigation, and certain industrial uses.

propagation of higher types of fish, passage of anadromous fish, and harvesting of shellfish from the area of the Connecticut near Long Island Sound.

Restoration, enhancement, and preservation of the quality of the Connecticut's waters are vital to the realization of the potential of a Connecticut River National Recreation Area. A prime ingredient of recreational development is water of adequate quantity and quality.

The causes of the existing degraded water quality are complex and have evolved over many years. In certain sections, the Connecticut Basin is highly industrialized and urbanized. Such manufacturing companies as pulp and paper mills in the northern and central portions of the basin and large centers of population in the southern portion of the basin discharge wastewater to the river in quantities which the river cannot assimilate.

Modifications of the river flow itself are additional factors influencing the existing water quality. The development of hydroelectric dams along the river has created a series of impoundments which hamper the river's ability to assimilate wastes. The operation of the dams to supply peak load power results in water being released during periods of high electrical demand during weekdays with little or no water being released on weekends. The flows downstream of the dams are often reduced to a fraction of the normal flows during weekend periods.

Although waste treatment and pollution abatement programs are not new to the Connecticut River Basin, the extent of these limited programs has not been sufficient to restore the quality of the waters. Really effective measures are only now beginning to be applied, promoted by the Water Quality Act of 1965 and the Clean Water Restoration Act of 1966. Two Federal enforcement conferences, considering the effects of pollution from Massachusetts which endanger health and welfare in Connecticut, have pointed up and reinforced the need for positive action.

Under the Water Quality Act of 1965, the basin States have developed water quality standards including implementation plans, which, as they are approved by the Secretary of the Interior, become joint Federal-State standards, enforceable through the courts. The implementation plans provide detailed schedules for the completion of the specific waste treatment facilities and other pollution abatement measures required to meet the standards. The plans must provide that all wastes receive the best practicable treatment or control to provide for water quality enhancement commensurate with proposed present and future water uses.

Financing of these pollution abatement measures will be provided from Federal, State, local, and private sources. All of the basin States have the legislative authority to participate in the financing of municipal interception and treatment facilities through a State construction grant program. The following table indicates the percentages of the construction cost which may be provided by Federal, State and local governments.

Table 4: Cost Sharing for Municipal Pollution Control Facilities in the Connecticut River Basin

State	Percent of Costs		
	Federal	State	Local
New Hampshire	50-55	40	5-10
Vermont	50-55	30	15-20
Massachusetts	50-55	25-30	20
Connecticut	50-55	30	15-20

To assure this extent of Federal and local participation, the required funds must, of course, be appropriated. In addition, industries must join with communities in the development of joint facilities or develop their own abatement measures.

Major goals for water pollution abatement have been established. Hopefully, water quality will progressively improve with a corresponding enhancement of the recreation, conservation, and esthetic appeal of the Connecticut River and its valley.

The problems in achieving water of a quality suitable for swimming throughout the basin are immense and are not unique to the Connecticut River Basin. In the larger metropolitan areas and many smaller towns, sewage is collected by a system that collects both waste and storm water. During storms, the amount of flow in the system far exceeds the capacity and excess flows, by necessity, must be overflowed directly to the stream or be treated at a reduced efficiency. The result of these storm water flows is that untreated or inadequately treated wastes are discharged to the river.

One costly solution of this problem would consist of a separation of sewage and storm flows through the construction of separate systems. This solution, however, is exceedingly expensive and has been estimated to cost approximately \$490 million for the Connecticut River mainstem and those tributaries affecting the mainstem. A second alternative would be to detain and chlorinate the storm flows to minimize their effects on the river. The cost of this alternative would be approximately \$265 million. Present Federal laws recognize the problem of controlling storm water overflows and have authorized funds for the development of practical and economic methods to control such discharges.

Regulation of the river by hydroelectric dams results in periods when dam outflow is reduced to only a fraction of the normal. The result is a seriously reduced water quality caused by increased concentrations of pollutants and hampered ability to assimilate wastes. A comprehensive study of water and related land resources in the basin, led by the U.S. Army Corps of Engineers, and under the aegis of the Water Resources Council, is attempting to determine methods of minimizing the effects of these dams.

NAVIGATION

This report proposes the extension of recreation navigation upstream to a point above the proposed Mt. Holyoke Unit of the National Recreation Area.

Although the river is classified as navigable from its source to Long Island Sound, the only craft now able to make the journey are canoes and other easily-portaged, shallow-draft boats. The river's navigation is interrupted by man-made and natural obstacles (see Figure 1). Of the major obstructions, only Enfield Dam and Rapids may be circumnavigated.

Although the Federal Government has improved navigation on the Connecticut River by the creation and maintenance of a 15-foot deep channel from Long Island Sound to Hartford, the full potential of recreational navigation is unrealized.

To improve and extend recreation navigation, it is proposed that:

1. The current recreation navigation project from Hartford to Holyoke, under study by the Corps of Engineers, be a major premise in planning for the Connecticut River National Recreation Area.
2. The Corps of Engineers give priority consideration to providing navigation around Holyoke Dam and upstream some 10 miles to the vicinity of the Calvin Coolidge Bridge at Massachusetts Route 9. The project would relate directly to the proposed Mt. Holyoke Unit and Mt. Tom-Northampton State Park complex.

65. *Holyoke Dam. Boats can navigate the river from Long Island Sound to the dam, but only easily-portaged craft can traverse the Connecticut's entire length.*

65



Such a project would make it possible for small craft to reach the ocean from Northampton. Excellent opportunity exists in the Great Oxbow immediately north of Mt. Tom for marina developments of the magnitude needed to provide for the expected surge in boating interest. It is also recommended that:

3. The Corps of Engineers study the feasibility relative to the extension of recreation navigation upstream from the proposed limit at Holyoke to and including Turners Falls pool.

Recreation navigation could be facilitated in several ways. Dredging can create, enlarge, and maintain channels, thus giving deeper-draft boats access upriver. Locks and canals could bypass existing obstructions. Where locks would be too costly, or where they would seriously impair the natural environment, rail or other portage might be provided.

The various navigation projects now proposed would be fully complementary to the other recommendations contained in this report. Improved recreational navigation would increase the variety of activities at the Mt. Holyoke Unit of the proposed National Recreation Area. A further benefit would be the opening of a river route to Long Island Sound all the way from the Springfield-Holyoke-Chicopee metropolitan area or possibly from above Turners Falls, giving a significant number of additional recreationists access to the sea.

RESTORATION OF FISHERIES

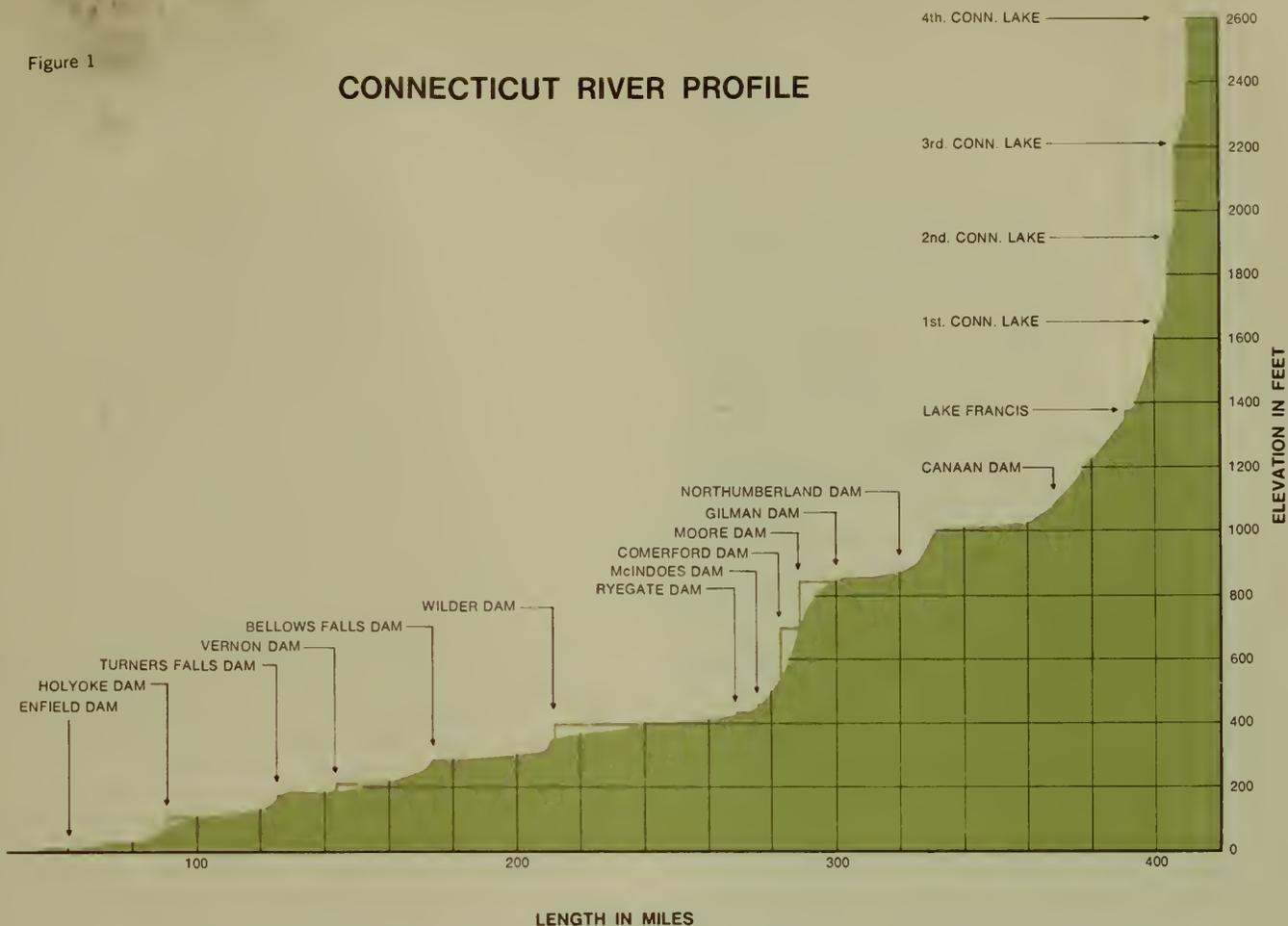
In pre-Colonial times, the Connecticut River was a spawning ground for tremendous numbers of Atlantic salmon, American shad, and other anadromous species. The shad runs extended upriver to the foot of Bellows Falls, and the salmon runs all the way to Beecher Falls. Both shad and salmon runs included the principal tributaries of the Connecticut as well. In 1798, a dam was constructed at Turners Falls, another a few years later at Hadley Falls, thus effectively barring the migratory spawning runs of the salmon and shad from the upper river.

At present, the number of shad found in the river is vastly diminished, and there are only isolated cases of single salmon being seen. Barred from upstream spawning places and killed by pollution, the salmon no longer return to the Connecticut. The more tolerant shad migrate unaided only as far as Holyoke Dam. There the Holyoke Power Company operates a device to lift the fish from the base of the dam into the impoundment behind it. In 1964, its peak year of operation, some 35,000 shad were transported over the dam.

There are various factors which can contribute to the restoration of the anadromous fish to the Connecticut River. The first and most important is an accelerated pollution abatement program. There is also the Federal aid program created by the Anadromous and Great Lakes Fisheries Conservation Act of 1965, and the technical planning committee composed of Federal and State fishery biologists, created under the act to study this problem. Companion programs for the construction of fish ladders and passages at dams on both the main stream

Figure 1

CONNECTICUT RIVER PROFILE



and tributaries would also contribute to the restoration of the river's once-famed fishery. Through combined action, shad will flourish, salmon can return, and the Connecticut River will again become an outstanding fishery.

CONNECTICUT VALLEY TRAILS

To allow walking and hiking enthusiasts and any other recreationists the opportunity to explore the valley's wonders, this report proposes the establishment of trails throughout the Connecticut River Valley.

Within the National Recreation Area units, trails should be developed to appeal to recreationists of different ages and physical capabilities. Steep mountain paths would challenge the hiker, while gentle walking routes might be more suitable to the weekend recreationist. Bicycle and horseback trails are also needed. In the winter, some of these trails could be utilized by snowmobile users.

The Connecticut River Valley provides many opportunities to establish trails. Utility company holdings and railroad rights-of-way have great potential for trail location. The New York, New Haven and Hartford Railroad's Middletown—Old Saybrook line could be developed as a riverside trail. Routes might also run along scenic riverside roads.

The possibilities of trails on private lands should be explored. Lumber company holdings, which are extensive in the northern part of the study area, have excellent potential for trails along old logging roads.

In addition, this report recommends the establishment of a Connecticut Valley Trail. Its suggested route would begin at the Appalachian Trail near Hanover, N.H., and parallel the river much of the way to the Third Connecticut Lake. East of the Third Lake, the trail would turn south, and follow the ridge line through the White Mountain National Forest, joining again with the Appalachian Trail in the Presidential Range. For some 280 miles, this path would host those who seek the solitude and ad-



66. Trails do not always have to cut through the forest. Little-used roads make excellent hiking routes.

venture of the outdoors. An additional trail, 20 miles long, might cut across from the western segment of the valley trail, and follow the Upper Ammonoosuc River to join with the eastern segment about 25 miles north of the Appalachian Trail (see Map 15).

The western section, following the valley floor adjacent to the river, would be less arduous than most present New England trails, which usually follow the ridge lines and involve a good deal of mountain climbing. This section would appeal to those who enjoy hiking or walking but prefer less rigorous routes. The northern and eastern sections would be more rugged in character, appealing to the advanced hiker.

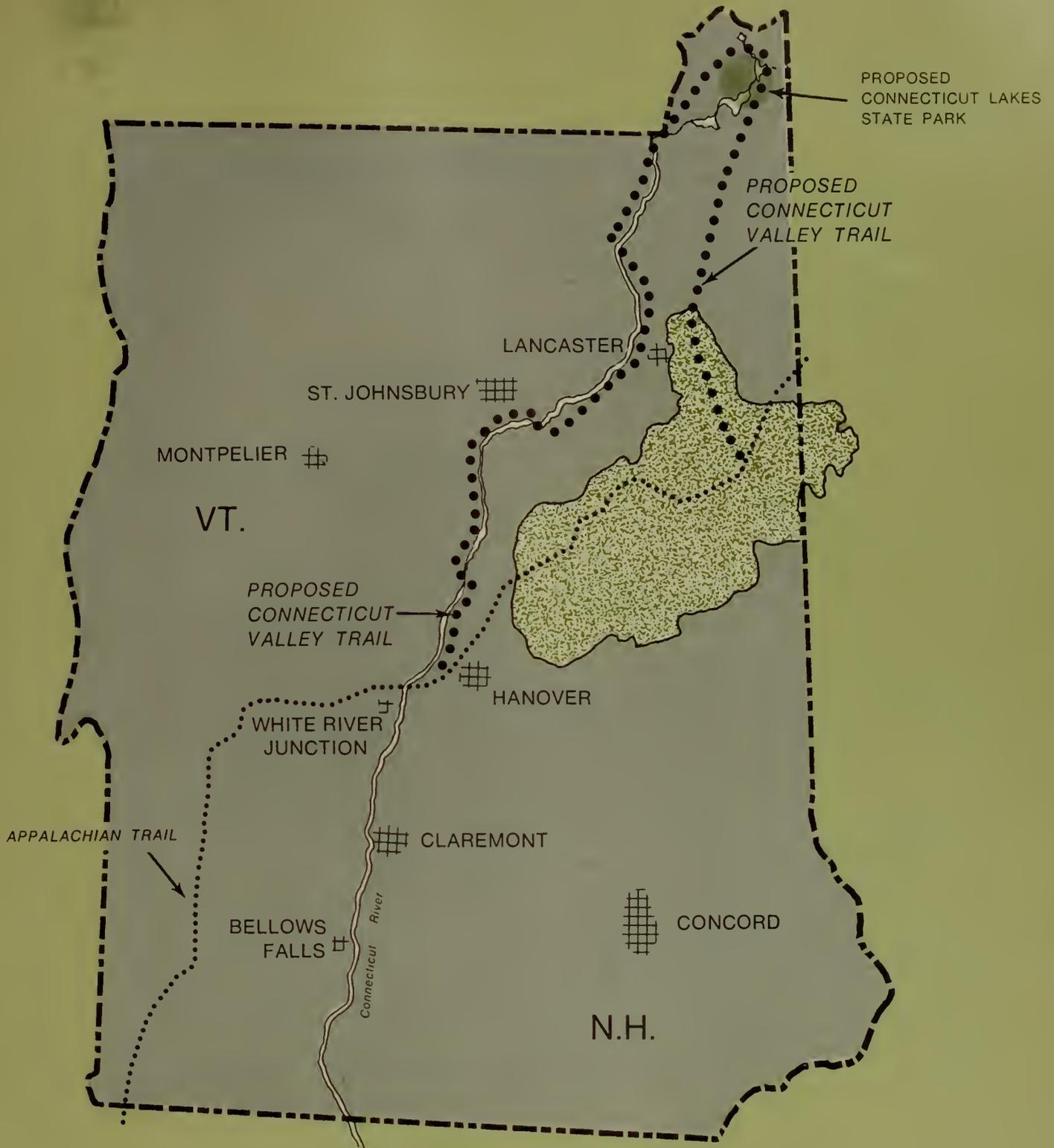
Much of the Connecticut Valley Trail would be located in the Coos Scenic River Unit, adding a further dimension to the recreation activities of that area. The river towns could provide accommodations and provisions that the hikers would require. Where towns are not reasonably close, overnight shelters might be provided at a suggested distance of every 7 or 8 miles, a spacing suitable for family use, yet permitting speedier hikers to skip a shelter.

In areas where the trail crosses private farm or woodland not under some type of scenic control, the right-of-way should average a minimum of 100 feet on each side of the trail, or about 25 acres per mile. Acquisition would be by easement, donation, or exchange, and where necessary, purchase in fee.

Designation of the route should be coordinated by the Secretary of the Interior, in cooperation with other public agencies. Land ownership and responsibility for development and maintenance would rest with the agencies currently holding the various parcels of land.

Completion of this trail would depend on action not only by the Federal Government, but also by the States of Vermont and New Hampshire, and the private sector.

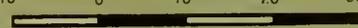
CONNECTICUT VALLEY TRAIL



LEGEND

-  WHITE MOUNTAIN NATIONAL FOREST
-  APPALACHIAN TRAIL
-  PROPOSED CONNECTICUT VALLEY TRAIL
-  COMMUNITY

10 0 10 20 30 MILES



MAP 15

The Federal Government would develop that portion of the trail that runs through the Coos Scenic River Unit and White Mountain National Forest. However, a critical section of the route runs along a portion of the proposed Rogers' Rangers Historic Riverway. Other segments are also outside areas of existing or proposed Federal control. The States of Vermont and New Hampshire are urged to obtain the necessary rights-of-way and establish the trail over these areas, to permit the linkup of the full 300 miles.

CONNECTICUT VALLEY TOURWAY

It is recommended that a Connecticut Valley Tourway, running the length of the Connecticut River Valley, be delineated and designated.

The valley offers superb resources for automobile touring. Many of the old roads, tree-lined and winding, emphasize the landscape's natural features and man's response to them. Along the roads the motorist may discover old farmhouses and homesteads, small villages with their commons, woodlands in vernal or autumnal splendor, forests, mountains and lakes, and a sense of the past and present.

A Connecticut Valley Tourway, as shown on Map 16, would be more than a roadway twining through characteristic New England scenery. It would wind through country villages of great charm, across sparkling streams and picturesque coves, past many schools, including several of the nation's most honored colleges and universities, and near sites of considerable architectural, historic, archaeological, and geologic importance (see Table 5).

Table 5: REPRESENTATIVE POINTS OF INTEREST

EDUCATIONAL

- Connecticut
 - 4 Wesleyan University, Middletown
 - 7 Trinity College, Hartford
 - 8 Suffield Academy, Suffield
- Massachusetts
 - 13 Smith College, Northampton
 - 14 Amherst College and University of Massachusetts, Amherst
- 10 Springfield College, Springfield
- 12 Mount Holyoke College, South Hadley
- New Hampshire
 - 25 Dartmouth College, Hanover
- Vermont
 - 17 Windham College, Putney

HISTORIC

- Connecticut
 - 1 Fort Saybrook, Old Saybrook
 - 6 Historic homes, Wethersfield
 - 7 Old State House, Hartford
 - 7 State Museum, Hartford
- Massachusetts
 - 16 Community of Old Deerfield, Deerfield
- 10 U.S. Armory, Springfield
- 9 Old Storrowton Village, West Springfield
- New Hampshire
 - 19 Site of Fort Number Four, Charlestown
 - 32 Indian Stream Republic, Pittsburg
- 29 Site of Fort Wentworth, Northumberland
- Vermont
 - 21 Old Constitution House, Windsor

SCENIC

- Connecticut
 - 3 Gillette Castle, East Haddam
 - 2 Yacht Harbor, Essex
- Massachusetts
 - 16 Mt. Sugarloaf, Deerfield
- 15 Sugar Houses, Sunderland
- New Hampshire
 - 31 Covered Bridge across Connecticut River, Columbia
 - 32 Connecticut Lakes, Pittsburg

- 26 Community of Orford, Orford
- Vermont
 - 28 Covered Bridge across Connecticut, Lunenburg
 - 24 Quechee Gorge, Hartford

BUSINESS AND INDUSTRY

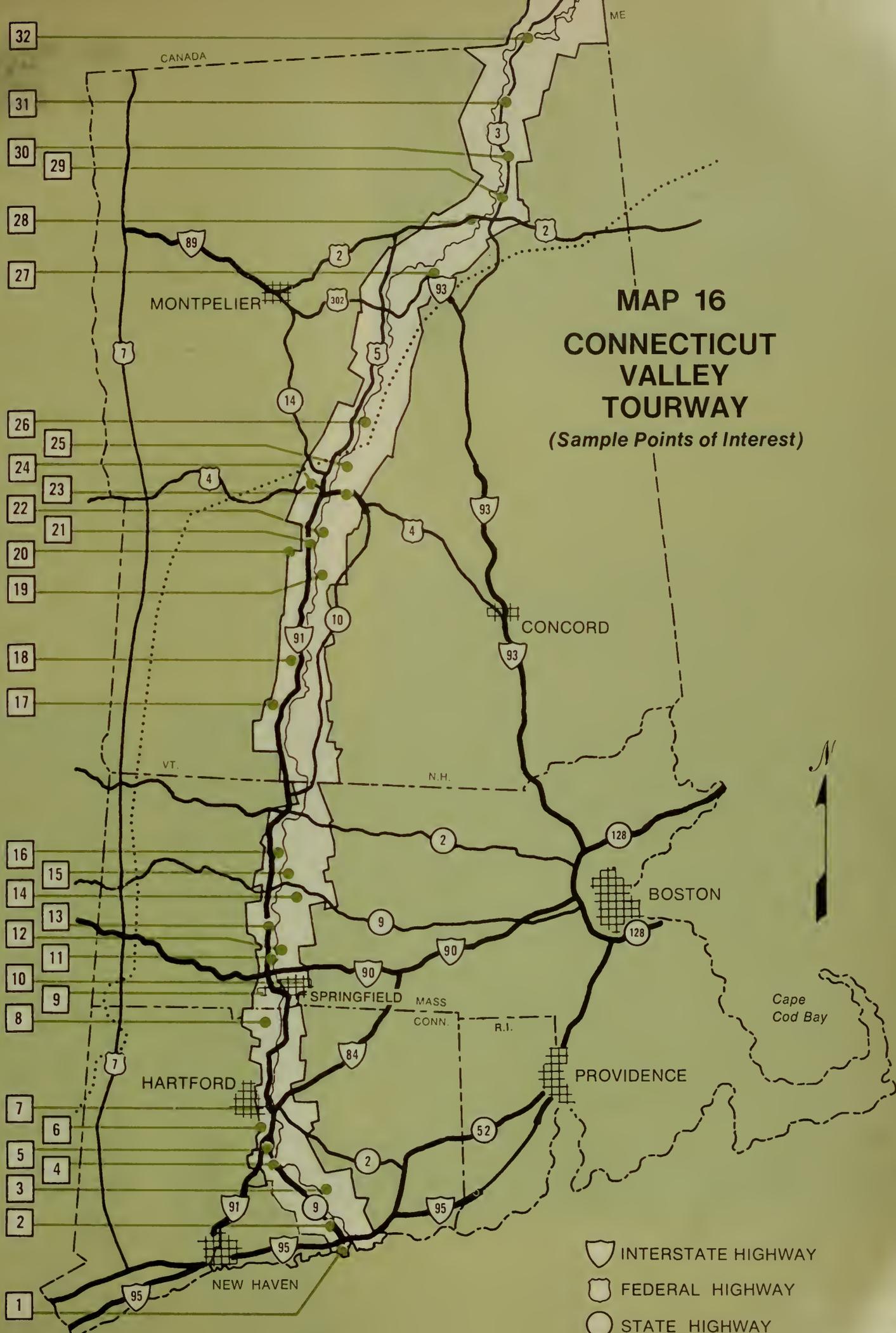
- Connecticut
 - 7 Constitution Plaza, Hartford
 - 3 Connecticut Yankee Atomic Power Company, Haddam
 - 7 Colt Industries, Hartford
- Massachusetts
 - 9 Eastern States Exposition, West Springfield
 - 11 Mills and Factories, Holyoke
- New Hampshire
 - 23 Wilder Dam and Power House, Lebanon
 - 30 Groveton Paper Company, Groveton
- Vermont
 - 20 "Precision Valley", Precision Machine Tool Companies, Springfield

CULTURAL

- Connecticut
 - 3 Goodspeed Opera House, East Haddam
 - 7 Wadsworth Atheneum, Hartford
- Massachusetts
 - 9 "Stage West", resident professional theater, West Springfield
- 10 The Quadrangle Museums, Springfield
- New Hampshire
 - 22 Saint-Gaudens N.H.S., Former home and studios of August Saint-Gaudens, Cornish
- Vermont
 - 17 Experiment in International Living, Putney

ARCHEOLOGIC AND GEOLOGIC

- Connecticut
 - 5 Dinosaur State Park, Rocky Hill
- Massachusetts
 - 11 Dinosaur Tracks-Triassic Beds, Holyoke
- 14 Pratt Museum, Amherst
- New Hampshire
 - 27 Kilburn Crag (Paleozoic fossils), Littleton
- Vermont
 - 18 Pictographs on canal, Bellows Falls



MAP 16
CONNECTICUT
VALLEY
TOURWAY
(Sample Points of Interest)

- 32
- 31
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- 1

-  INTERSTATE HIGHWAY
-  FEDERAL HIGHWAY
-  STATE HIGHWAY



67 Typical Valley Scene

The great appeal of this tourway cannot be overestimated. It would not only attract touring motorists, but would allow them to combine their tracing of the tourway with visits to the various units of the National Recreation Area, as well as State parks, forests, and other similar points of interest. By providing a link with the various areas of the valley, the tourway would assure continued appeal of the area to the recreationist and resident.

In establishment of the tourway, existing highways and roads would be utilized. Future highways could be included where desirable. One major purpose would be utilitarian—to connect various points of interest. However, an equal consideration would be the scenic beauty of the route itself. The tourway should have alternative routes wherever possible, some for speed and others for scenery. Interstate routes paralleling the river, such as I-91, would provide rapid transportation from north to south. Other roads, such as U.S. Route 5 in Vermont or New Hampshire Route 10, could afford more leisurely and scenic routes.

In addition to the general route extending the length of the valley, special routes leading to various points of interest in particular localities could be mapped out for convenient reference. Roads leading to particular classes of attractions, such as historic sites or educational situations, could also be marked. Points of geologic or archeologic interest might be delineated. Another possible route might take visitors to many of the old factories still standing and in operation.

Since there is much scenic beauty in areas adjacent to

68. U.S. Route 5, running close to the Connecticut, provides a scenic route along the river.

70. Hikers pause to enjoy the panorama along the Appalachian Trail.

68



Typical Valley Scene 69

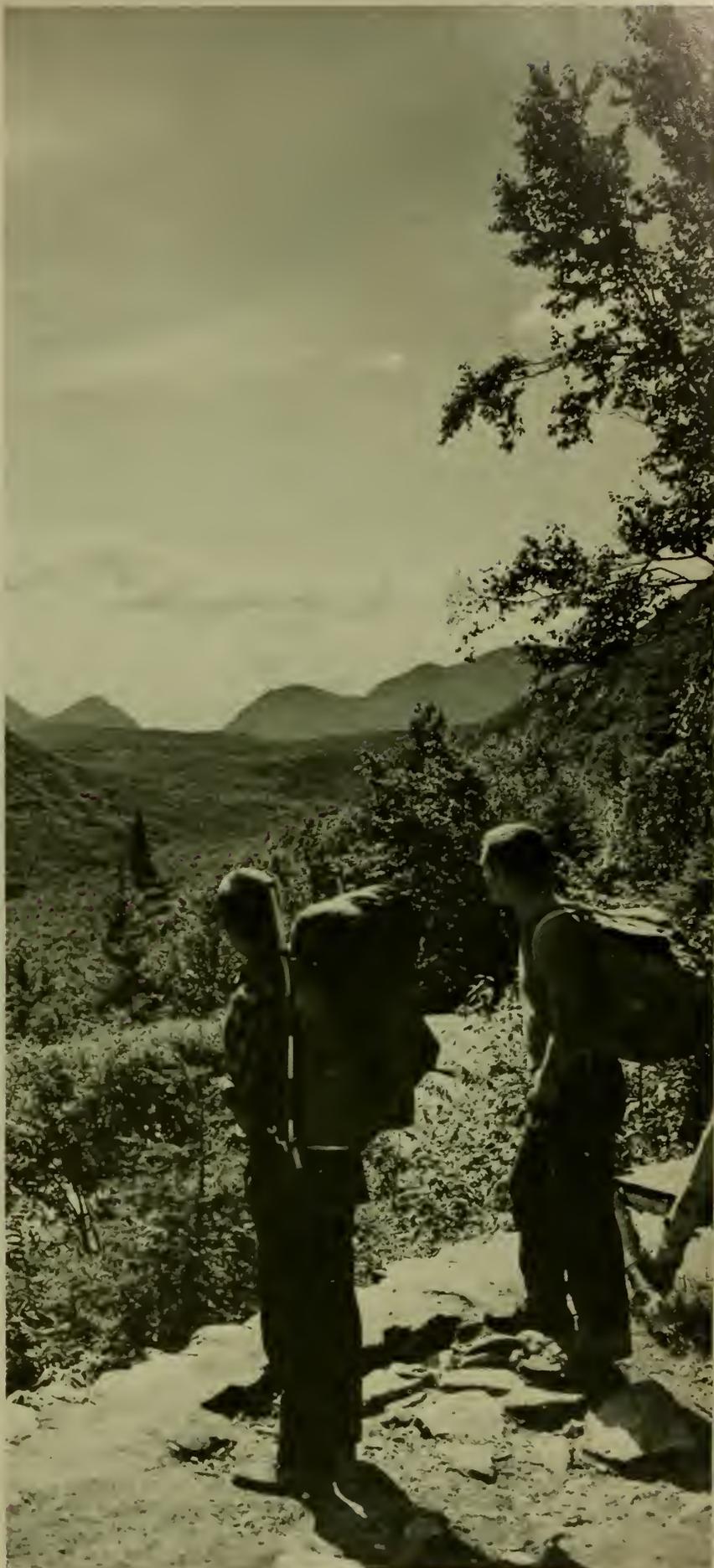


the valley, side trips into these areas might be pointed out. For instance, one of New England's most scenic drives is a few miles away from the valley in the White Mountain National Forest in New Hampshire. A possible route could direct the motorist south from Littleton, N. H., past the "Old Man of the Mountain," along the scenic Kancamagus Highway, and north through Pinkham Notch past Mt. Washington and the Presidential Range. Designation of the tourway should be a joint Federal-State-local endeavor, with the National Park Service cooperating with the valley States in locating, marking, and protecting the route.

The tourway should be clearly marked with special road signs to assist motorists in tracing the route. Where appropriate, the route should have turnouts, rest and picnic areas, and interpretive facilities. Maps and booklets, prepared by the National Park Service and the States, would be further aids to tourway motorists.

A scenic tourway would not remain scenic for long without adequate protection of the panoramic vistas along the route. Protection should go hand-in-hand with designation. Before any segment is officially designated, local governments should be required to take the necessary action to preserve the route's scenic corridor. Protection should not only discourage adverse types of urban developments, but prevent obstruction of important views while screening unsightly uses such as dumps and junkyards.

Extreme care would be taken to insure that the route selected would not damage in any way the scenic beauty which this report seeks to preserve. Too much traffic



through a small village or fragile ecological unit would present a hazard not only to the beauty of the area but also to the safety of its inhabitants. Routes would be chosen to avoid congestion in business areas and to limit traffic in residential sections.

According to the U.S. Department of Commerce's *Proposed Program for Scenic Roads and Parkways*, various devices could be used to protect such a system as the tourway. There could be acquisition of scenic or conservation easements, scenic highway corridor reservation at the State level, and perhaps special conservation or corridor districts. These mechanisms would achieve best results in conjunction with a program of educating the public to their use and meaning. The Federal Highway Beautification Act (P.L. 89-285) would provide relevant support in the cases of new roads which might be added to the route.

71



71-75 Typical Valley Scenes

Legislation might be needed with respect to existing roads. There would be a need to zone parts of the tourway, and it would be advisable to establish standards for portions threatened by billboards and junkyards, patterned after recent Vermont legislation. The purpose would be not to control all development, but only non-conforming development. Tastefully-designed structures and facilities would be permitted as long as they do not interfere with scenic views.

To coordinate planning and designation of the tourway, a standing committee representing Federal, State, and



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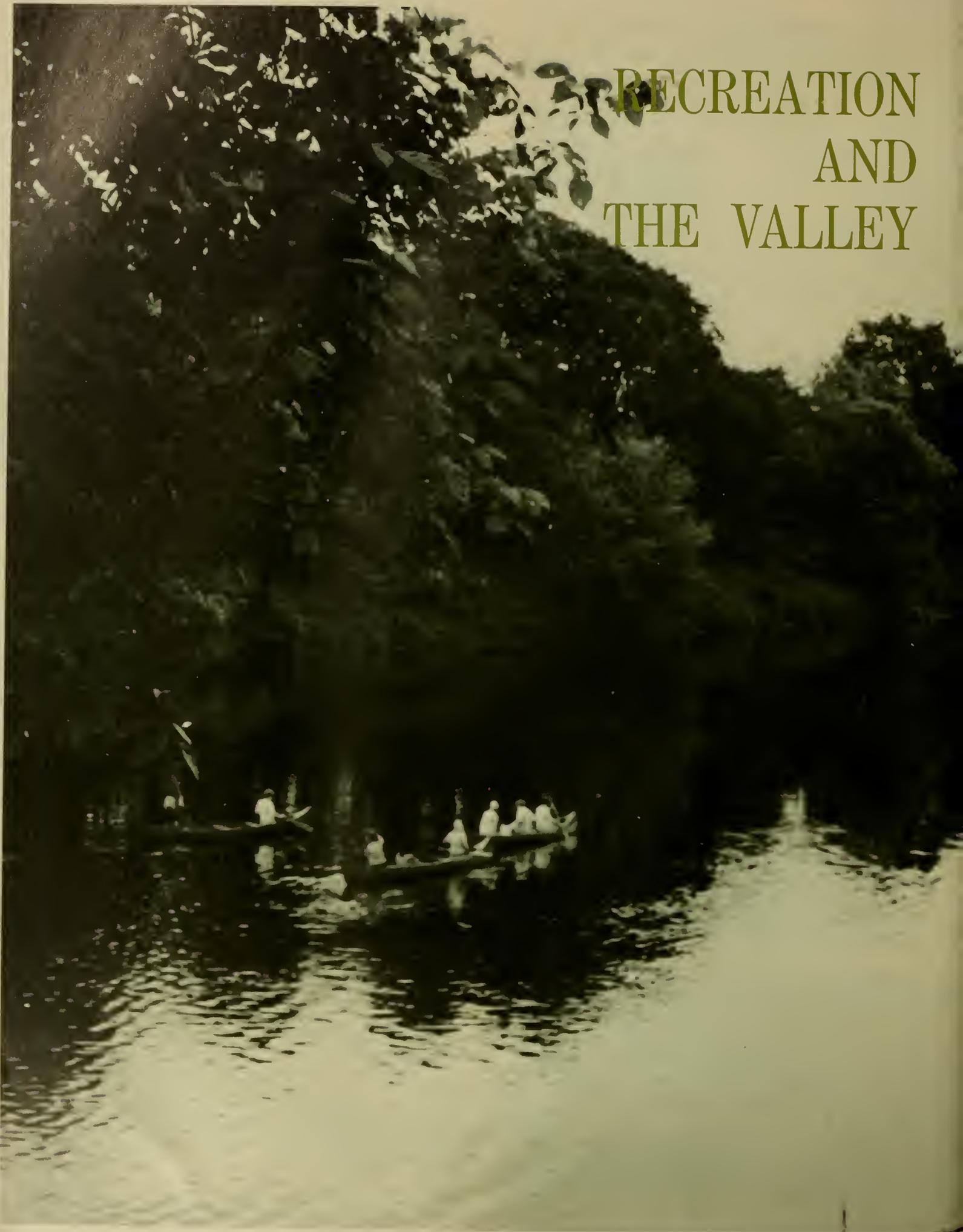
local interests should be established. This committee would oversee the protection of the route, designate stretches of highway as parts of the scenic tourway, as well as guide expansion and pass on the addition of new points of interest. It would establish specific criteria for designation, and be responsible for designation once the criteria were met.

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Every level of government should be involved in the tourway. State and local agencies, functioning with the National Park Service, would locate the route. Municipalities would afford general protection for the scenic corridor and provide safeguards on lands surrounding specific points of interest. The States and municipalities would maintain the portions of the tourway on roads for which they are now responsible. The National Park Service could assist State and local jurisdictions in providing the variety of route maps needed, as well as descriptive brochures and interpretive facilities at appropriate points.



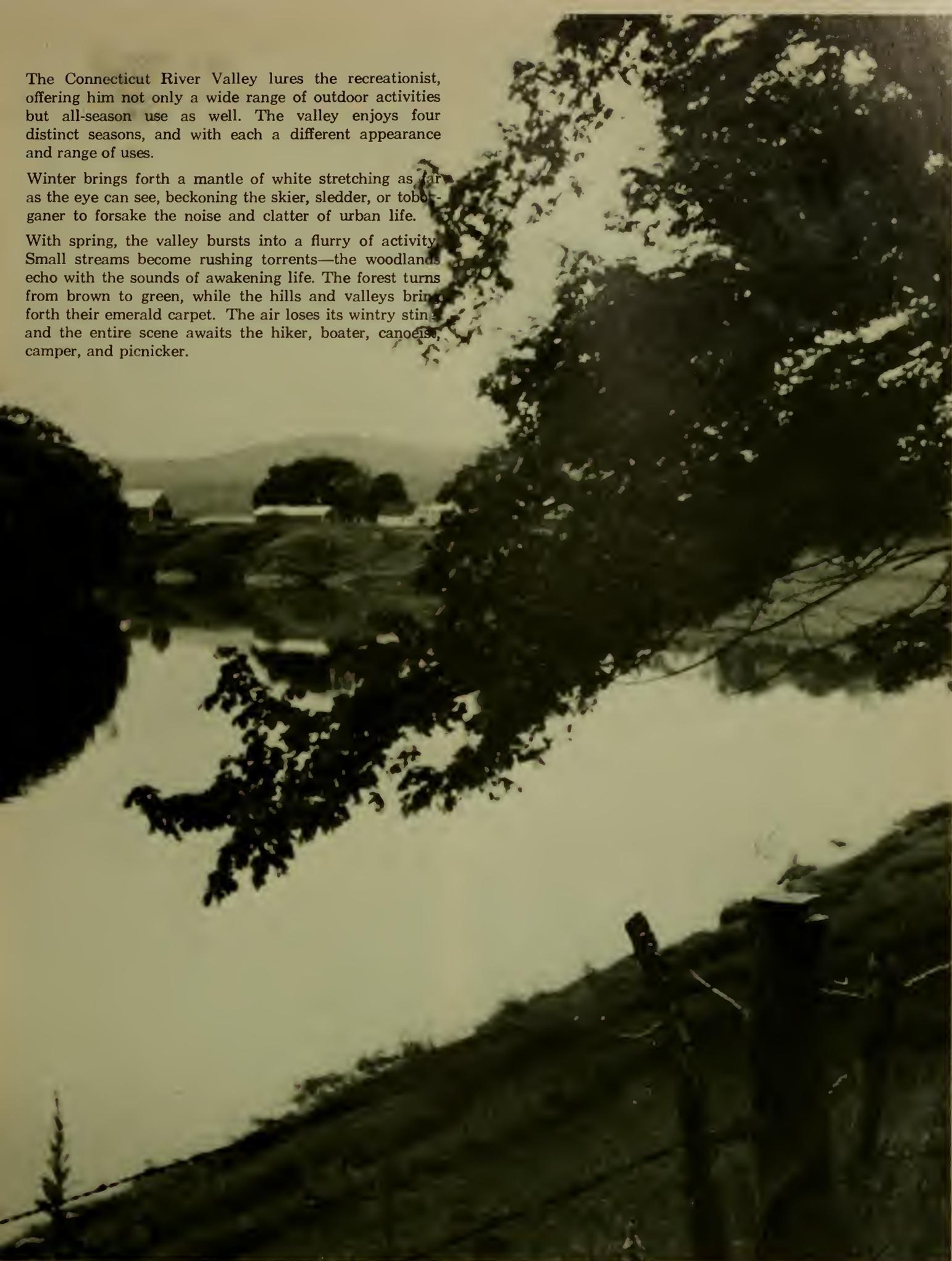
RECREATION AND THE VALLEY



The Connecticut River Valley lures the recreationist, offering him not only a wide range of outdoor activities but all-season use as well. The valley enjoys four distinct seasons, and with each a different appearance and range of uses.

Winter brings forth a mantle of white stretching as far as the eye can see, beckoning the skier, sledder, or tobogganer to forsake the noise and clatter of urban life.

With spring, the valley bursts into a flurry of activity. Small streams become rushing torrents—the woodlands echo with the sounds of awakening life. The forest turns from brown to green, while the hills and valleys bring forth their emerald carpet. The air loses its wintry sting and the entire scene awaits the hiker, boater, canoeist, camper, and picnicker.





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76- 77- 78 Typical Valley Scenes

Summer sun warms the water, making possible all forms of water-oriented recreation: swimming, sailing, water-skiing, boating, or canoeing. Hikers and campers test their skill while picnickers dally in the sun, enjoying the exquisite panorama.

The valley waits until autumn to display its most colorful finery. The entire countryside is ablaze with chestnut browns, fiery reds and oranges, and brilliant yellows, contrasting with the still-green pine, fir, and spruce. The air is now crisp and clear, and the forest's silence is broken by the rustle of hunter's boots on fallen leaves.

The Connecticut River Valley is indeed a thing of beauty. But this beauty is threatened by the ever-growing appetite of Megalopolis for land, and the shortsightedness of those who would fill and pollute the river.

Future pressures on the valley will be great: from proposed highways, from expanding municipalities, from increasing populations, and from various other forms of land utilization.

Additional highways, tying the expanding factory cities together, will be constructed, providing more rapid access not only for the private automobile but also for industrial traffic. The navigable stretches of the Connecticut will see an uncommon increase of commerce.

But at what cost? Will the price tag for "progress" carry a hidden deficit: extreme water pollution, the loss of scenic beauty, the obliteration of wildlife, and the disappearance of the recreational and spiritual values allied

to the valley lands? These are issues which demand careful thought.

The contiguous open space of the Mt. Holyoke and Mt. Tom Ranges is at this moment threatened by land speculation. The critical location of these mountains with their promise of important recreation opportunity makes it imperative that these ranges and their surrounding lands be protected. Another matter crying for urgent action is to minimize the inevitable adverse development pressures along the lower river arising from the completion of Connecticut Route 9. These are pressures which would be aimed at changing and reshaping the Yankee character of the picturesque towns. These are but examples of the valley's critical needs; there exist many others.

The program recommended in this report does not seek to bar future development, but rather to assure that it will be done in a way that respects and enhances the beauty of the Connecticut River Valley. Some impact on present land use is inevitable. But the greatest impact will be on negative, or abusive, land use. The program will put an end to the uncontrolled dumping of effluent into the river. It will stop those who would despoil the valley.

The recommendations made in this report cannot be carried out overnight. Investment on the scope envisioned might be staged over a period of 20 years. This staging of development will serve to reduce the impact on land use by spreading out the acquisition and development process. The magnitude of the program should be no reason for delay. With land prices rising throughout the valley, delay will only mean higher costs in the future. Riverfront lands must be protected against adverse development as soon as possible. Once so guarded, development could be staged to meet the rising demand for recreation.

The proposed Connecticut River National Recreation Area will help to accomplish these purposes. The three Federal units—Gateway, Mt. Holyoke, and Coos Scenic River—will serve primarily to preserve existing land uses, while providing recreation/conservation development within this framework. In keeping with this goal, Federal land purchase will be kept to a minimum.

The three National Recreation Area units will be coordinated closely with nearby State park or forest developments to provide both intensive and extensive recreation for day, weekend, and vacation users. They will be linked by the Tourway into a cohesive recreation entity which will emphasize the history as well as the beauty of the Connecticut River Valley. Additional State parks will not only provide for the increasing demand for recreation, but will lessen the impact of recreation-hungry vacationers. Use will be spread throughout the valley, rather than at only a few locations.

The balance of the river area, it is reasonable to hope, will be protected by local government and the private sector. Enlightened zoning, scenic easements, and concerted action by the valley's residents must take up the battle where Federal and State efforts can do no more. Effective zoning ordinances would encourage the reten-

tion of riverfront lands in uses that can enhance and protect the valley's beauty. The entire range of less-than-fee acquisition would allow private ownership to continue, merely controlling adverse development. Private citizens can join together to set up land trusts, allowing interested individuals to donate land, or money to purchase land. The private sector can play a decisive part in the preservation of the valley.

Water is the focal point of the Connecticut Valley, and water quality is one of the keynotes of this study. All the proposals are founded on the premise of a clean river. Pollution abatement programs are now being carried out and must continue with renewed effort if the valley is to be preserved. Water contact activities are contingent upon an improved water quality. Swimming in the river will enjoy a renaissance; fish runs will reappear.

Establishment of a National Recreation Area will not signal the collapse nor decline of the economy in the localities involved, nor will it disrupt the earning structure. Quite the contrary, recreation and tourism today in America are big business and provide sound job opportunities. With the anticipated pollution abatement of the Connecticut River and the promised preservation of the area's natural resources, land values and tourist income along the entire river can be expected to rise.

Zoning processes and less-than-fee devices allow for the retention of affected lands on the local tax rolls with little or no economic loss to the community other than those encountered under normal circumstances. Wherever possible existing conforming land uses will be preserved. Even where it becomes essential to purchase property as a safeguard to the recreation/conservation concept of a National Recreation Area, the previous owner often will have the opportunity to lease back his former lands. In certain cases the purchase contract will allow the resident to remain on the property under a life-use agreement. In these ways and others the benefits to the Connecticut River Valley and its people may be increased and the negative effects reduced or dispersed.

In view of purposefully limited Federal participation, the bulk of the preservation will have to be shared by the appropriate State and local agencies, and the private sector. This is in keeping with the New England tradition of self-dependence. Cooperation at all levels is necessary if the character of the valley is to be perpetuated.

Forceful but well-planned action is required now. The needs are self-evident: the beauty of the Connecticut River Valley must be preserved for future generations, and the area must prepare itself to meet the inevitable rising demand for recreation in the Northeast.

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Appendix 1

SCENIC EASEMENT DEED

THIS INDENTURE, made this _____ day of _____ 19____ by and between _____ of the County of _____, State of Missouri, parties of the first part, and the UNITED STATES OF AMERICA, Washington, D.C., party of the second part.

WITNESSETH: WHEREAS, Public Law 88-492, passed August 27, 1964, provided for the establishment of the Ozark National Scenic Riverways in the State of Missouri, for the purpose of conserving and interpreting unique scenic and other natural values of objects of historical interest and authorized the Secretary of the Interior to acquire lands and interests therein, including scenic easements; and

WHEREAS, the parties of the first part are the owners in fee simple of the real property hereinafter described, lying, being and situated in _____ County, State of Missouri, over which the Secretary of Interior has determined it to be necessary to acquire a scenic easement for the preservation of the scenic values of the area described in said Act, and are desirous in contributing to the development of the Ozark National Scenic Riverways;

NOW, THEREFORE, in consideration of the premises, and the sum of _____ to them paid by said party of the second part, the receipt of which is hereby acknowledged, the parties of the first part do by these presents GRANT, BARGAIN AND SELL, CONVEY AND CONFIRM, in perpetuity, subject to the considerations hereinafter set forth, unto the party of the second part and its assigns, an estate, interest and scenic easement in said hereinafter described real property of the nature and to the extent hereinafter described and do covenant on behalf of themselves, their heirs, successors and assigns (said covenant to run with said land) with the party of the second part and its assigns to do and refrain from doing, severally and collectively upon the said hereinafter described lands, the various acts hereinafter mentioned; it being hereby agreed and expressed that the doing of and the refraining from doing said acts, and each thereof, upon the said lands are and will be for the benefit of the party of the second part through the preservation of the scenic and other natural values of objects of historic interest to the Ozark National Scenic Riverways in accordance with Public Law 88-492 of August 27, 1964.

The scenic easement restrictions hereby imposed upon the use of said lands and the acts which the parties of the first part so covenant to refrain from doing upon the said hereinafter described lands are and shall be as follows:

1. Using the said lands for mining or industrial activity or for any purpose whatsoever except for noncommercial residential purposes or for such additional purposes as may be authorized in writing on such terms and conditions deemed appropriate by the Secretary of the Interior or his authorized representative. But the parties of the first part shall not be precluded hereby from farming the land nor from grazing livestock thereon provided the same be done in conformity with good husbandry practice. The permitted use for farming and grazing shall not include the harvesting of timber, but firewood for personal use may be gathered from selected areas upon approval of the Park Superintendent.
2. Erecting or building any structures on said lands, including major alterations to existing buildings, except as may be authorized in writing by the Secretary of the Interior or his duly authorized representative. There is specifically retained by the parties of the first part, their heirs, successors and assigns the right to perform ordinary maintenance on all existing structures and buildings, together with the right to replace, rebuild or substitute any building or structure now existing with similar buildings or structures in substantially the same location, if all or any of such existing buildings are destroyed or damaged by fire, storm or other casualty.

3. Permitting any change in the character of the topography of said lands other than that caused by the forces of nature, except as may be authorized in writing by the Secretary of the Interior or his duly authorized representative.

4. Permitting the accumulation of any trash or foreign material which is unsightly or offensive.

5. Cutting or permitting to be cut, destroying or removing any timber or brush, except as may be authorized in writing by the Secretary of the Interior, or his duly authorized representative. Provided, however, that seedling trees or seedling shrubbery may be grubbed up or cut down in accordance with good farm practice on lands presently being cultivated or for residential maintenance purposes. Cultivated crops, including orchard fruit and nut trees, may be pruned, sprayed, harvested and otherwise maintained in accordance with good farm practice.

6. No trailer shall be placed, used or maintained on said lands as a substitute for a residential building or other structure, and no sign, billboard, or advertisement shall be displayed or placed upon the land, except that one sign not greater than 24 inches by 36 inches, in size, advertising the sale of products raised thereon or sale or lease of the lands may be displayed on appropriate occasions.

The lands hereinabove referred to and to which the provisions of this instrument apply, are situated in the County of _____, State of Missouri, and are more particularly described as follows:



This conveyance is subject to existing easements for public roads and highways, public utilities, railroads and pipelines.

By acceptance of this deed, the party of the second part specifically agrees for the purpose of the parties of the first part retaining their present means and rights of ingress and egress, that the parties of the first part, their heirs, successors and assigns, or invitees, shall not be required to pay, when proceeding directly to and from such lands, park entrance or road fees.

The parties of the first part, for the consideration hereinabove set out, do further grant unto the party of the second part and its duly authorized representatives the right of ingress and egress upon and across said lands for the purpose of effecting emergency action with regard to the control and suppression of fires and for emergency action needed for visitor protection in relation to the operation of the Ozark National Scenic Riverways as established by the hereinabove mentioned Act.

TO HAVE AND TO HOLD the hereindescribed scenic easement and rights unto the party of the second part and its assigns forever.

The parties of the first part, for themselves, their heirs, successors and assigns do hereby covenant with the said party of the second part and its assigns that they are lawfully seized of an indefeasible estate in fee simple in the hereindescribed lands; that they have the right to sell and convey the estate, interest and scenic easement herein conveyed; and that they will warrant and defend unto the party of the second part and its assigns, forever, the quiet and peaceable use and enjoyment of the herein granted easement against the lawful claims and demands of all persons whomsoever.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

(SEAL)
(SEAL)

STATE OF MISSOURI }
COUNTY OF _____ } ss.

On this _____ day of _____, 1966, before me personally appeared _____ to me known to be the persons described in and who executed the foregoing instrument, and acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunder set my hand and affixed my official seal, the day and year first above written.

Notary Public

My term of office as a Notary Public will expire



Appendix 2
CERTIFICATE OF INCORPORATION
OF
LYME LAND CONSERVATION TRUST, INC.
(A Nonstock Corporation)

We, the incorporators, certify that we hereby associate ourselves as a body politic and corporate under the Nonstock Corporation Act of the State of Connecticut.

1. The name of the corporation is Lyme Land Conservation Trust, Inc. It shall be located in the Town of Lyme, Connecticut.

2. The nature of the activities to be conducted and the purposes to be promoted or carried out by the corporation are as follows:

a. To engage in and otherwise promote for the benefit of the inhabitants of the Town of Lyme the preservation of natural resources of the land, swamps, woodland and open spaces, and the plant and animal life therein, and the preservation of unique scenic and historic sites therein;

b. To engage in and otherwise promote the scientific study of and to educate the public regarding local natural resources, including plant, animals, birds, fish and other wildlife;

c. To acquire, by gift, purchase or otherwise, real or personal property of all kinds and to use such property in such manner as the Board of Directors shall deem appropriate to carry out the purposes set forth herein and subject to the limitations set forth herein;

d. To use all property held or controlled by the corporation and the net earnings thereof within the United States of America for the benefit of the inhabitants of the Town of Lyme and exclusively for the educational, scientific, charitable and conservationist purposes set forth herein;

e. To exercise its powers through its officers, directors, members, employees and agents and to join with other organizations in activities designed to achieve the objectives of the corporations;

f. In general, and subject to such limitations and conditions as are or may be prescribed by law, to exercise such other powers which now are or hereafter may be conferred by law upon a corporation organized for the purposes herein set forth, or necessary or incidental to the powers so conferred, or conducive to the attainment of the purposes of the corporation, subject to the further limitations and conditions that, notwithstanding any other provision of this certificate, only such powers shall be exercised as are in furtherance of the tax-exempt purposes of the corporation and as may be exercised by an organization exempt under Section 501 (c) (3) of the Internal Revenue Code and its Regulations, as they now exist or may hereafter be amended, and by an organization contributions to which are deductible under Section 170 (c) (2) of such Code and Regulations, as they now exist or may hereafter be amended.

3. No part of the earnings of the corporation shall inure to the benefit of any member, director, or officer of the corporation, or any private individual (except that reasonable compensation may be paid for services rendered to or for the corporation affecting one or more of its purposes), and no member, director, officer of the corporation, or any private individual shall be entitled to share in the distribution of any of the corporate assets on dissolution of the corporation. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corpor-

ation shall not participate in, or intervene in, any political campaign on behalf of any candidate for public office. Notwithstanding any other provision of this certificate, the corporation shall not conduct or carry on any activities not permitted to be conducted or carried on by an organization exempt under Section 501 (c) (3) of the Internal Revenue Code and its Regulations, as they now exist or as they may hereafter be amended, or by an organization contributions to which are deductible under Section 170 (c) (2) of such Code and Regulations, as they now exist or may hereafter be amended.

4. The classes, rights, privileges, qualifications, obligations, and the manner of election or appointment of members are as follows:

- a. Charter Members shall consist of those persons who have paid dues of Fifty (\$50.00) Dollars prior to June 1, 1967. Charter members shall be exempt from any further assessment of dues. Charter Members may attend all meetings of the members of the corporation, but shall have no voting rights. Charter Members may also qualify as members of another class by fulfilling the qualifications and paying the dues of such other class.
- b. Life Members shall consist of those persons elected as such by the Board of Directors. Life Members shall be exempt from any assessments of dues. Life Members may attend all meetings of the members of the corporation, but shall have no voting rights. Life Members may also qualify as members of another class by fulfilling the qualifications and paying the dues of such other class.
- c. Regular Members shall consist of those persons eighteen years of age or over who are residents of Lyme or owners of real property in Lyme and who have paid the current annual membership dues as established from time to time by the Board of Directors. Regular Members may attend all meetings of the members of the corporation during each fiscal year for which they have paid such dues and shall have the right to vote thereat on all matters submitted to a vote of the members.
- d. Associate Members shall consist of those persons eighteen years of age or over who are not eligible to be Regular Members and who have paid the current annual associate membership dues as established from time to time by the Board of Directors. Associate Members may attend all meetings of the members of the corporation during each fiscal year for which they have paid such dues, but shall have no voting rights.
- e. Junior Members shall consist of those persons under eighteen years of age who have paid the current annual junior membership dues as established from time to time by the Board of Directors. Junior Members may attend all meetings of the members of the corporation during each fiscal year for which they have paid such dues, but shall have no voting rights.
- f. Honorary Members shall consist of those persons who have been elected as Honorary Members by the Board of Directors. Honorary Members shall be exempt from any assessment of dues. Honorary Members shall have no voting rights, but shall have such rights and privileges as may be granted to them by the Board of Directors.
- g. The membership of a member of any class shall terminate upon his death or resignation. In addition the membership of a Regular Member, Associate Member, or Junior Member shall terminate at the end of the fiscal year for which he has paid dues, but shall be reinstated upon payment of the dues for the current fiscal year.

5. This corporation shall have perpetual existence; but in the event of the dissolution of the corporation or the termination of its corporate existence, all its net assets shall be transferred, paid over, and delivered exclusively to or for the benefit of the Town of Lyme or the State of Connecticut, or one or more scientific, charitable or educational organizations, to be used and devoted as nearly as practicable in accordance with the purposes of this corporation as herein set out, provided that no such asset shall be distributed other than to or for the benefit of organizations qualifying at the time of such distribution under the provisions of Section 501(c) (3) of the Internal Revenue Code and its Regulations as they now exist or may hereafter be amended.

6. This Certificate of Incorporation may not be amended to permit any action which would prevent the corporation from qualifying as an exempt organization under Section 501 (c) (3) of the Internal Revenue Code, as it now exists or may hereafter be amended.

Dated at Lyme, Connecticut, this _____ day of _____, 1966.

STATE OF CONNECTICUT }
COUNTY OF NEW LONDON } SS. Lyme, Connecticut , 1966.

Personally appeared _____, and _____, made oath to the truth of the foregoing certificate by them signed before me.



LYME LAND CONSERVATION TRUST, INC.

BY-LAWS

ARTICLE I.

Name, Seal and Address

1. *Name.*—The name of this corporation is Lyme Land Conservation Trust, Inc.
2. *Seal.*—The seal of the corporation shall be circular in form and shall bear the words "Lyme Land Conservation Trust, Inc."
3. *Address.*—The address of this corporation shall be P.O. Box, Hadlyme, Connecticut, or such other address as the Board of Directors may designate from time to time.

ARTICLE II.

Meetings of Members

1. *Annual Meeting.*—The annual meeting of the members of the corporation shall be held in Lyme at such place and on such day in the month of June as the Board of Directors (or the President in the absence of action by the Board of Directors) may determine, for the purpose of electing directors and officers and the transacting of any other business which may legally come before the meeting.
2. *Special Meeting.*—Special meetings of the members of the corporation may be called at any time by the President, by the Board of Directors, or upon a petition in writing signed by fifteen (15) members of the corporation entitled to vote.
3. *Quorum.*—At any annual or special meeting of the members of the corporation, twenty-five percent of the members of the corporation entitled to vote shall constitute a quorum. There shall be no voting by proxy, except on resolutions providing for (a) amendment of the certificate of incorporation, (b) approval of a plan or merger or consolidation, (c) sale of all or substantially all the assets of the corporation, and (d) dissolution of the corporation.
4. *Notice.*—Not less than ten days prior to all annual and special meetings the Secretary shall mail a notice thereof to all members entitled to vote at such meeting. The notice shall set forth the time, date and place of such meeting and the business to be transacted thereat.

ARTICLE III.

Directors

1. *General Powers.*—The property, affairs and activities of the corporation shall be managed by a Board of Directors consisting of not fewer than three and not more than seven persons, as may be determined from time to time by the members. Directors shall be regular members of the corporation. The Board of Directors may and shall exercise all of the powers of the corporation except such as are by law, by the Certificate of Incorporation, or by these By-laws expressly conferred upon or reserved to the members.
2. *Election of Directors.*—The first Board of Directors shall be elected at the organization meeting of the corporation. The first Board of Directors shall consist of five directors, the terms of two of whom shall expire at the annual meeting to be held in June, 1967, the terms of two of whom shall expire at the annual meeting to be held in June, 1968 and the term of one of whom shall expire at the annual meeting to be held on June, 1969. Thereafter, at each annual meeting there shall be elected a number of directors equal to the number of directors whose terms expire as of that annual meeting, and each director so elected shall serve a term of three years. A director shall serve for the term for which he is elected and until his successor is elected and qualifies. If a director ceases to be a regular member of the corporation, his term as director shall immediately terminate.
3. *Vacancies.*—In case of any vacancy in the Board of Directors by death, resignation, disqualification, or any other cause, the remaining directors may elect a successor for the balance of the vacant term by affirmative vote of a majority of them.
4. *Meetings.*—The Board of Directors shall meet upon call by the President or upon written request filed with the Secretary by any two or more directors. The Secretary shall give to each director reasonable notice, oral or written, of the time and place of each meeting of the Board of Directors. A quorum shall consist of a majority of the Board of Directors.

ARTICLE IV.

Officers

1. *Election.*—The officers of the corporation shall be a President, a Vice President, a Secretary, and a Treasurer, all of whom shall be regular members of the corporation. They shall be elected by the Board of Directors. The first officers of the corporation shall be elected by the Board of Directors at a meeting held as soon as convenient after the organizational meeting of the corporation. Subsequent officers shall be elected by the Board of Directors at a meeting held as soon as convenient after each annual meeting of the corporation. Officers shall serve until their successors are elected and qualify. If an officer ceases to be a regular member of the corporation, his term as such officer shall immediately terminate.

2. *Powers and Duties.*—The various officers shall have such powers and duties as customarily appertain or are incident to their respective offices and, in addition, such powers and duties as the Board of Directors confers and designates.

3. *Vacancies.*—In case of any vacancy among the officers by death, resignation, disqualification, or any other cause, the Board of Directors may elect a successor to hold office until the next annual meeting. In addition, the Board of Directors may elect from time to time such Assistant Secretaries and Assistant Treasurers as in its judgment, may be necessary, to hold office until the next annual meeting.



ARTICLE V

Nominations for Directors and Officers.

At least one month before the annual meeting the Board of Directors shall appoint a nominating committee which shall nominate one person for each director to be elected. Additional nominations for directors may be made by petition signed by five members entitled to vote.

ARTICLE VI.

Fiscal Year

The fiscal year of the corporation shall end on January 31st in each year.

ARTICLE VII.

Prohibition Against Sharing In Corporate Earnings.

No member, officer, director or any other private individual shall receive at any time any of the earnings or pecuniary profit from the operations of the corporation, provided that this shall not prevent the payment to any such person of reasonable compensation for services rendered to or for the corporation in carrying out any of its tax-exempt purposes; and no such person or persons shall be entitled to share in the distribution of any of the corporate assets upon the dissolution of the corporation.

ARTICLE VIII.

Prohibited Activities.

Notwithstanding any other provision of these By-laws, no member, officer, employee, director or representative of this corporation shall take any action or carry on any activity by or on behalf of the corporation not permitted to be taken or carried on by an organization exempt under Section 501(c)(3) of the Internal Revenue Code and its Regulations, as they now exist or may hereafter be amended, or by an organization contributions to which are deductible under Section 170(c)(2) of such Code and Regulations, as they now exist or as they may hereafter be amended.

ARTICLE IX.

Amendments

These By-laws may be amended by adoption of an amendment resolution, either before or after adoption thereof by the members, by the Board of Directors and adoption of such resolution by the affirmative vote of at least two-thirds of the members present and entitled to vote thereon at a meeting called for that purpose at which a quorum is present.

Photo Credits

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10. Massachusetts Division of Fish and Game
11. BOR #68-209
12. New Hampshire Division of Economic Development
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28. BOR #68-214
29. BOR #68-213
30. Mario Marino
31. BOR #68-202
32. Mario Marino
33. Connecticut Development Commission
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35. Mario Marino
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54. BOR #68-225
55. Mario Marino
56. BOR #68-201
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66. Mario Marino
67. Mario Marino
68. Mario Marino
69. BOR #68-228
70. Dick Smith, No. Conway, N.H.
71. Mario Marino
72. Mario Marino
73. Adrian Bouchard, Dartmouth College
74. BOR #68-204
75. Mario Marino
76. Mario Marino
77. Mario Marino
78. BOR #68-229

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- 8-9 BOR #68-207
- 14-15 Northeast Utilities
- 32-33 BOR #68-206
- 82-83 BOR #68-200

