TD
224
.M2
M68
1990

AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

Maine Coastal Zone Management Program
TD224.M2 A4 1990

THE MOUSAM RIVER GREENWAY PLAN

Kennebunk, Maine

A Study by The Kennebunk Conservation Commission

July 1990

"Financial assistance for preparation of this document was provided by a grant from Maine's Coastal Program through funding provided by the U.S. Department of Commerce, Office of Ocean and Coastal Resource Management, under the Coastal Zone Management Act of 1972, as amended."

purpose

...this study is conducted in response to the need to conserve and enjoy the significant resource that is the Mousam River. Our intent is to satisfy this need for present and future generations who value this resource. The Kennebunk Conservation Commmission has directed this study in response to that need...

US Department of Commerce
NOAA Coastal Services Center Library
2234 South Hobson Avenue
Charleston, SC 29405-2413

The Kennebunk Conservation Commission

Chairman:
Nancy Naimey

Vice Chairman:
Mary Cook

Sharon DuBois

Lynda Breary

Gregory Pargellis

Jan Kristof

Junior Member:
Robert Underwood

Honorary Member:
Wayne Roberts

Associate Member:
Nathalie Lloyd

Secretary:
Barbara Storer

Study Consultant:
Sebago Technics, Inc.
William T. Conway

Westbrook, Maine
Scott R. Brown

the commission wishes to acknowledge the following individuals and organizations in response to their interest and contributions to this study...

the people and the town of kennebunk

landowners within the study area

judy bernstein, kennebunk town planner

richard erb, kennebunk town manager

mark gunter, ex-officio commission member

richard hogue, ex-officio commission member

carol drake, former commission secretary

brian costello, kennebunk parks & recreation director

kennebunk comprehensive plan committee

terrence j. dewan associates/comprehensive plan consultants

ramanascho land trust

land for maine's future board

kennebunk light and power company

central maine power company

granite state gas transmission company

consolidated hydroelectric company

content

THE RESOURCE . . . . . Page 7

- the study area
- regional influence
- water quality
- water control and safety
- history of the river
- the great fire

METHODOLOGY . . . . . Page 19

INVENTORY . . . . . Page 23

- land ownership
- land cover
- topography
- wetlands

ANALYSIS . . . . . Page 33

- public access
- existing conservation measures
- wildlife
- the river corridor
- riverscape zones
- analysis summary

THE PLAN . . . . . Page 49

- proposed conservation measures
- evaluate regulatory control
- encourage conservation easements
- natural landscape recovery
- education
- recreation use
- greenway parks
- greenway path
- pathway design
- water-based recreation
- greenway signage

IMPLEMENTATION . . . . . Page 75

- value to community
- funding strategies
- legal aspects of the plan
- implementation cost
- maintenance

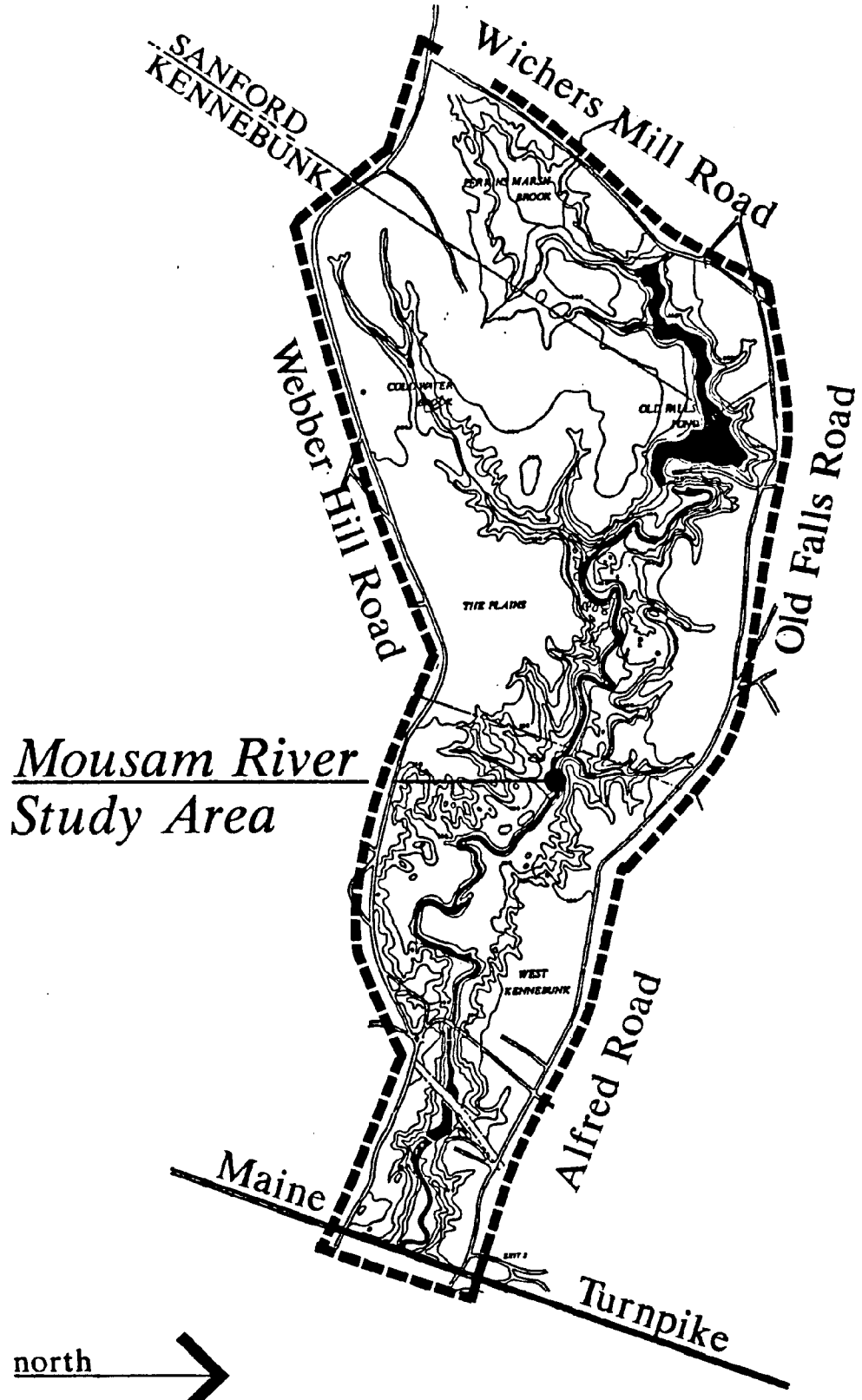
MAPPING . . . . . Page 87

the resource

the resource

THE STUDY AREA

With the understanding of the Mousam River as a regional natural resource, the next step in the process is to define the limits of the study area. For the purpose of understanding the immediate context of the river corridor, the study area has been essentially defined as the extent of the natural landscape containing the river. Based on the rural character of the area, developed areas occur along existing roads and are linear in nature. A second factor considered in the determination of the study area is the presence of the Maine Turnpike. The turnpike edge corridor creates a physical barrier to the natural landscape, and hence defines one edge of the study area. Finally, the political boundary which describes the Kennebunk-Sanford town line is superceded by the natural landscape; therefore, a portion of the Town of Sanford has been included within the study area. In conclusion, the study area may be defined as the natural areas contained by the Maine Turnpike, the Cat Mousam - Webber Hill Road, Wichers Mill Road and Old Falls Road in Sanford, and the Alfred Road.

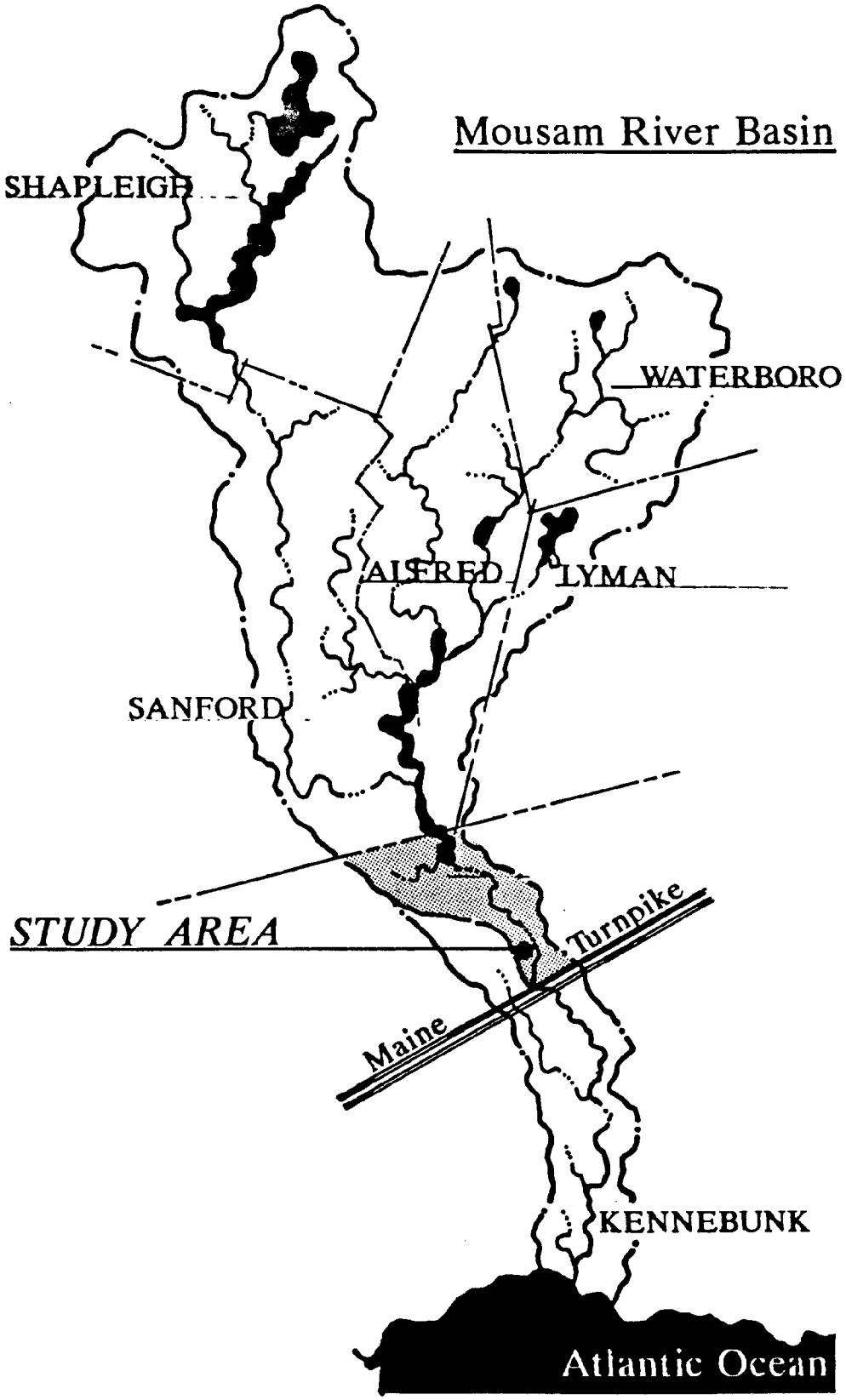

SANFORD
KENNEBUNK
Wichers Mill Road
Webber Hill Road
Old Falls Road
Alfred Road
Maine Turnpike
Mousam River
Study Area
north

the resource

REGIONAL INFLUENCE

"The river under study is the Mousam River which rises on the Maine - New Hampshire border in the southeastern foothills of the White Mountains. From its source, the Mousam flows approximately fifty miles to join the North Atlantic Ocean at Kennebunk, Maine. The river basin encompasses approximately 125 square miles of drainage area. The Mousam River can be described as being in an advanced state of youth as regards the development of its drainage pattern which is post-glacial in age. The relatively early stage of downcutting results in the absence of a signifcant floodplain; instead, relatively deep and steep valleys exist within the river basin."[1] It is important to consider that this study is focused upon only a segment of this significant regional resource. Accordingly, the management, conservation and enjoyment of the river within Kennebunk is dependent upon the regional influence and activity within the entire watershed basin.

[1] Foster-Miller Associates: Feasibility Determination of Low Head Hydroelectric Power Development at Existing Sites, Mousam River Project.


Mousam River Basin
SHAPLEIGH
WATERBORO
ALFRED
LYMAN
SANFORD
STUDY AREA
Turnpike
Maine
KENNEBUNK
Atlantic Ocean

the resource

WATER QUALITY

Water quality standards for the Mousam River basin are found in the Maine Revised Statutes Annotated, Title 38, Chapter 3, Classification of Surface Water (Department of Environmental Protection, 1989). "A particular watershed may contain numerous classifications and several categories. The section of the river within the scope of this study receives a B-2 classification which means the waters are acceptable for water contact recreation, potable water supply after treatment, and as fish and wildlife habitat."[2] In recent years, the Kennebunk Conservation Commission and Maine D.E.P. have conducted water quality testing which has shown that the river, in fact, exhibits very clean water. As aforementioned, the protection of this water quality can only be realized through a regional effort involving the entire Mousam River Watershed.

[2] Foster-Miller Associates: Feasibility Determination of Low Head Hydroelectric Power Development at Existing Sites, Mousam River Project.

WATER CONTROL AND SAFETY

Water flow characteristics within the study area are largely controlled by three dam structures and impoundment basins. The Old Falls Dam, owned and operated by Consolidated Hydroelectric Co., Inc., is 63 feet in height. The Lane Perkins Dam and Twine Mill Dam, operated by the Kennebunk Light and Power District, are 8 feet and 18 feet in height, respectively. The presence of these facilities represents the need for safety precautions associated with the use of the river and the sites immediately adjacent to the dam structures. In consideration of the feasibility of public use of the river, it is necessary to coordinate such use with the flow needs of these two power companies.

the resource

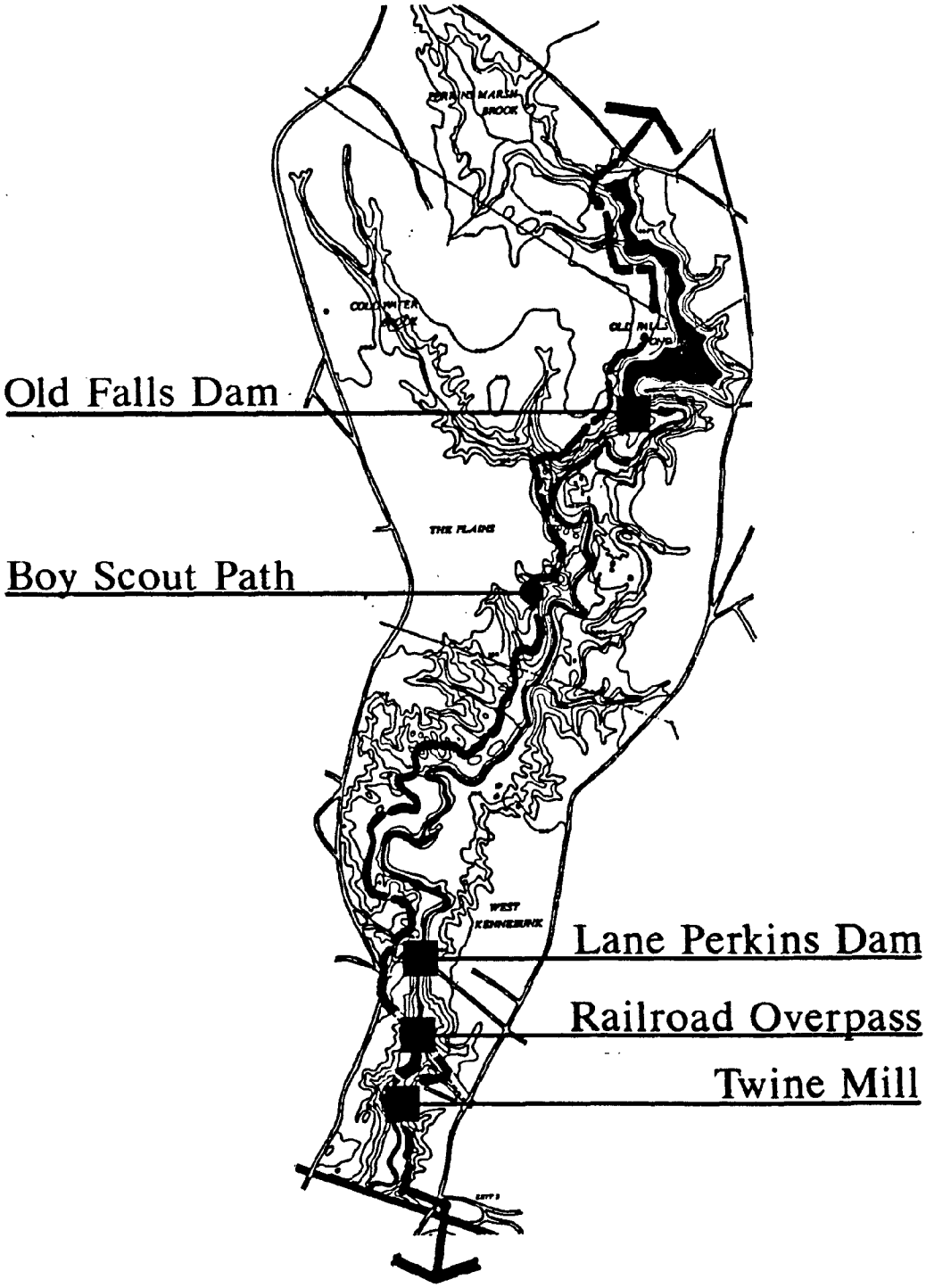
HISTORY OF THE RIVER

... "the Indian name for the then so-called Cape Porpus was Mousam...

... The forest in all its stateliness and gloom stood there, as it had for centuries before, and the land it covered was a part of the great Indian hunting-ground. Indians and wild beasts had hither tho held entire and undisturbed possession of the domain. With such surroundings, the first white settlers commenced the work of improvement; brought to the ground the first tree...obstructed the free flowing of waters where they had rolled along for centuries unimpeded..."[3]

The Mousam River, once called Cape Porpus River, has played a major role in the development of Kennebunk. As Colonial settlement progressed from the seacoast inland, several mills were established on the river to harvest timber and, later, to provide for electricity. These mill sites, as well as further developments of man, are evident today. Also of interest is the establishment of a walking path along the river, established by the Boy Scouts, portions of which are currently in use.

[3] History of Kennebunk; Daniel Remich

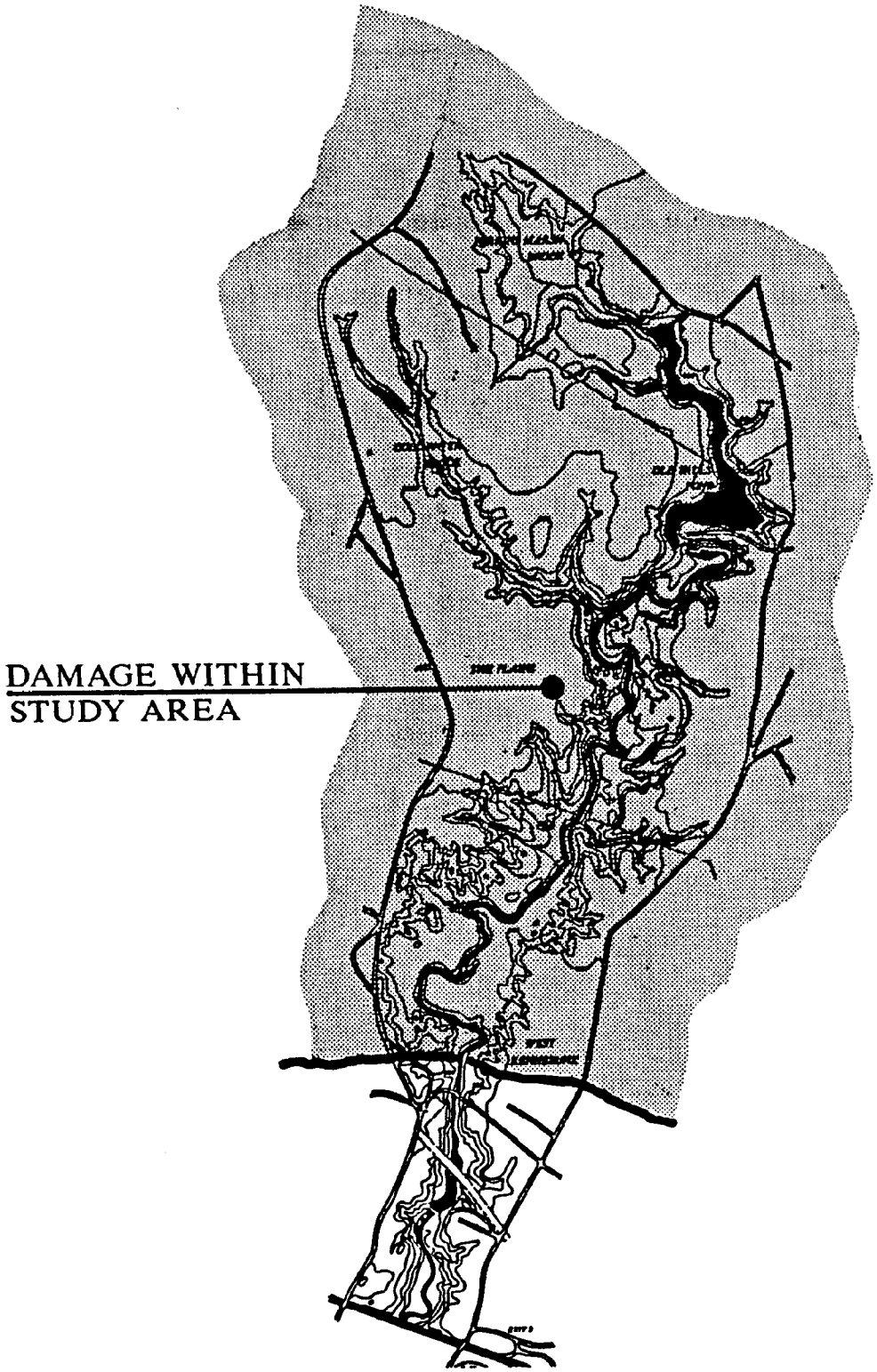

Old Falls Dam
Boy Scout Path
Lane Perkins Dam
Railroad Overpass
Twine Mill

the resource

THE GREAT FIRE

"A major fire occurred in southwestern Maine during October of 1947. Initial estimates of the extent indicated that 130,000 acres of forested land had been damaged out of a total of 150,000 acres. Maps illustrative of the fire of 1947 designate that the Mousam River drainage basin was affected by the fire, and the area in the vicinity of Old Falls Pond and from Twine Mill to the Kennebunk Plains were burned with unspecified density."[4] It is likely that the deep valleys and steep slopes which contain the river limited the extent of fire damage immediately adjacent to the river. As a result, impressive stands of old growth timber exist today in some areas along the river which have not been affected by dam impoundment projects.

[4] Foster-Miller Associates: Feasibility Determination of Low Head Hydroelectric Power Development at Existing Sites, Mousam River Project.

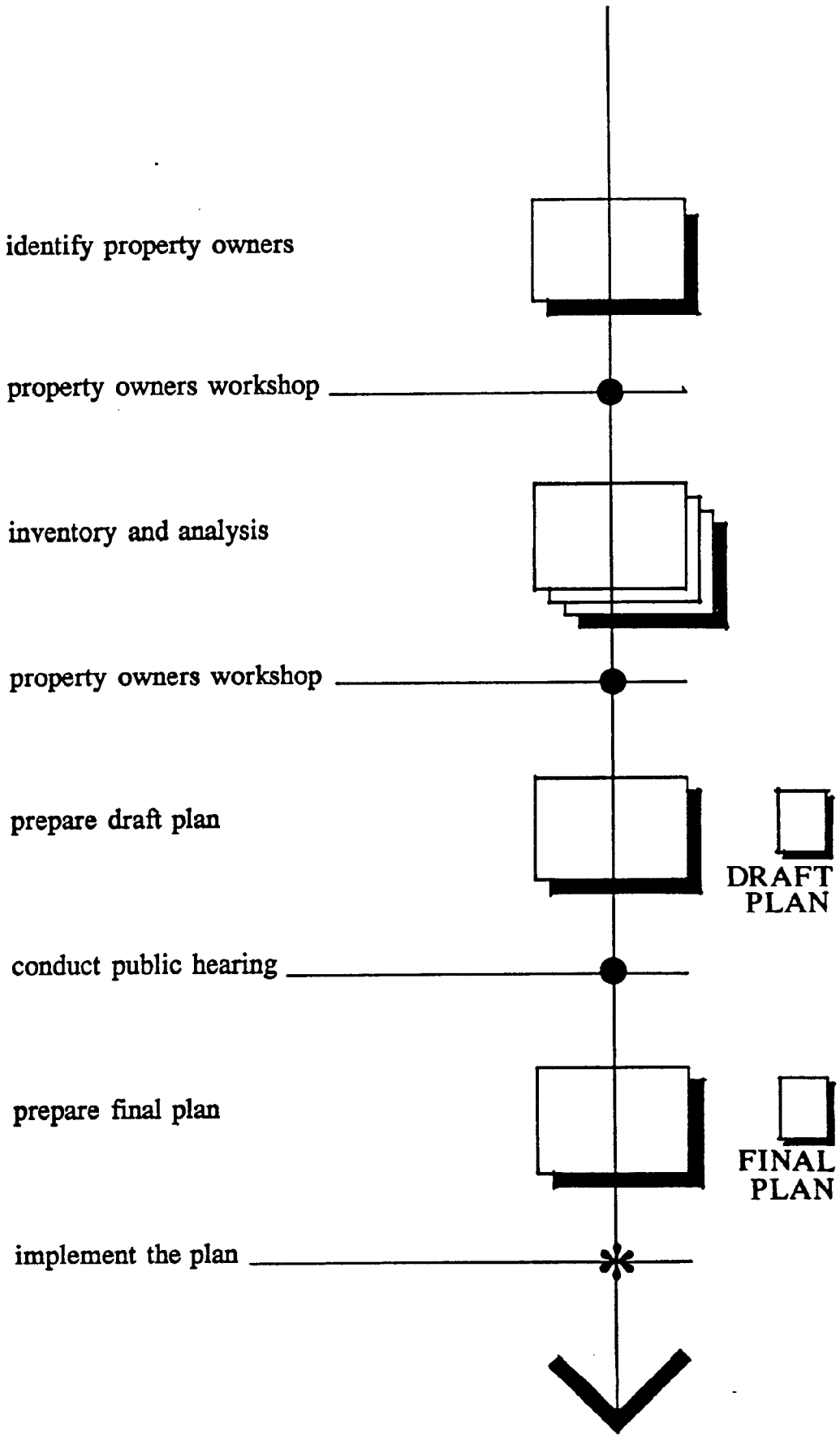


Southwestern Maine 1947 Forest Fire

methodology

methodology

...this study is funded through a grant from the Maine Coastal Program to the Town of Kennebunk. Sebago Technics, Inc. was retained to assist the Conservation Commission with the technical aspects of this study. In accordance with grant funding requirements and with the Commission's respect for landowners within the study area, our methodology is based on a process focused on public participation and comment. The illustration of this process is depicted in accordance with the chronologic order of events associated with the study. A detailed account of the inventory, analysis and recommendations of this study are provided herein...

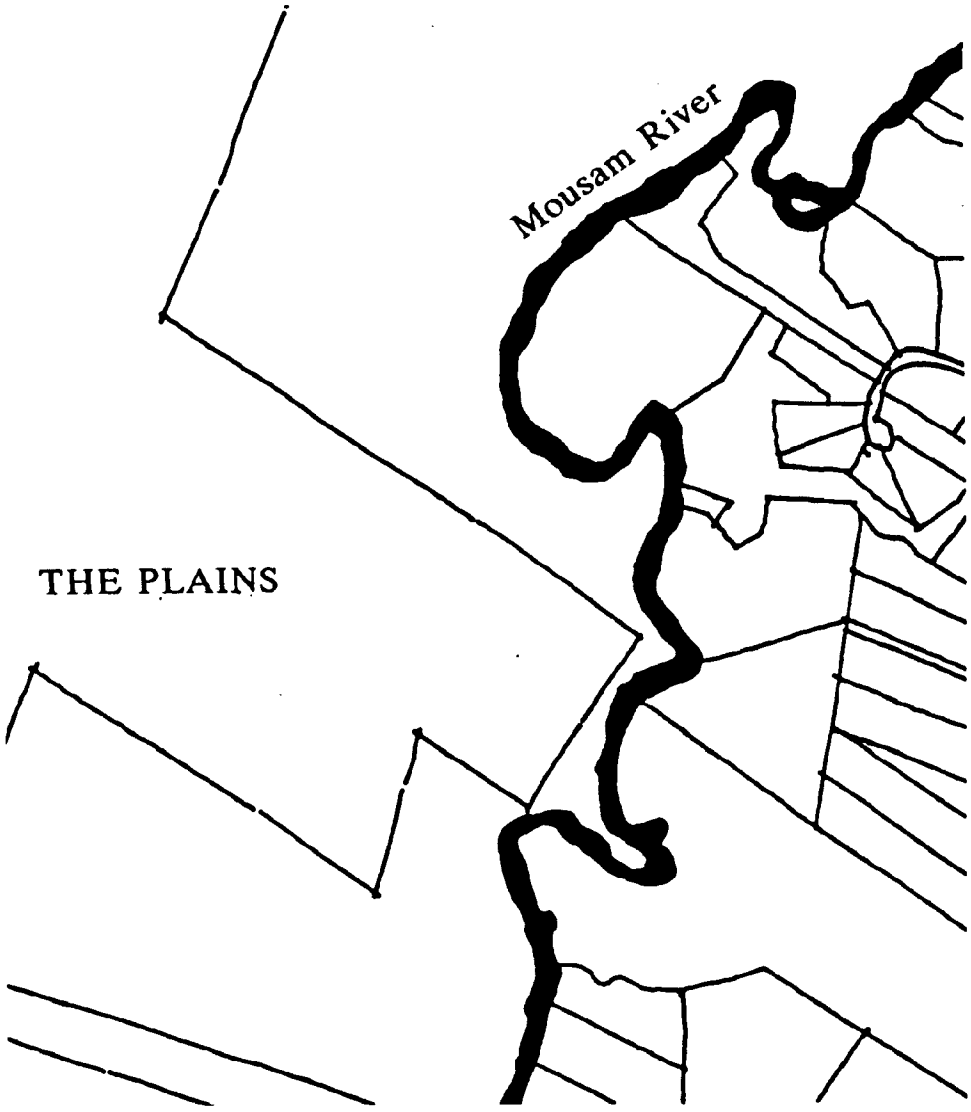

identify property owners
property owners workshop
inventory and analysis
property owners workshop
prepare draft plan
DRAFT PLAN
conduct public hearing
prepare final plan
FINAL PLAN
implement the plan

inventory

inventory

LAND OWNERSHIP

The Mousam River is a river body which is owned by the State of and people of Maine. The Town of Kennebunk, and the Kennebunk Light and Power District, Consolidated Hydroelectric Company and the Granite State Gas Transmission Company own a portion of the land adjacent to the river. The land within the study area, however, is almost exclusively owned by private individuals or business corporations. Within the river corridor, less than one percent of the land is publicly owned and available for public access to the river. As an important component of this study, the landowners within the study area were contacted and encouraged to participate in the planning process. A complete inventory of existing ownership parcels is depicted on Map 1.



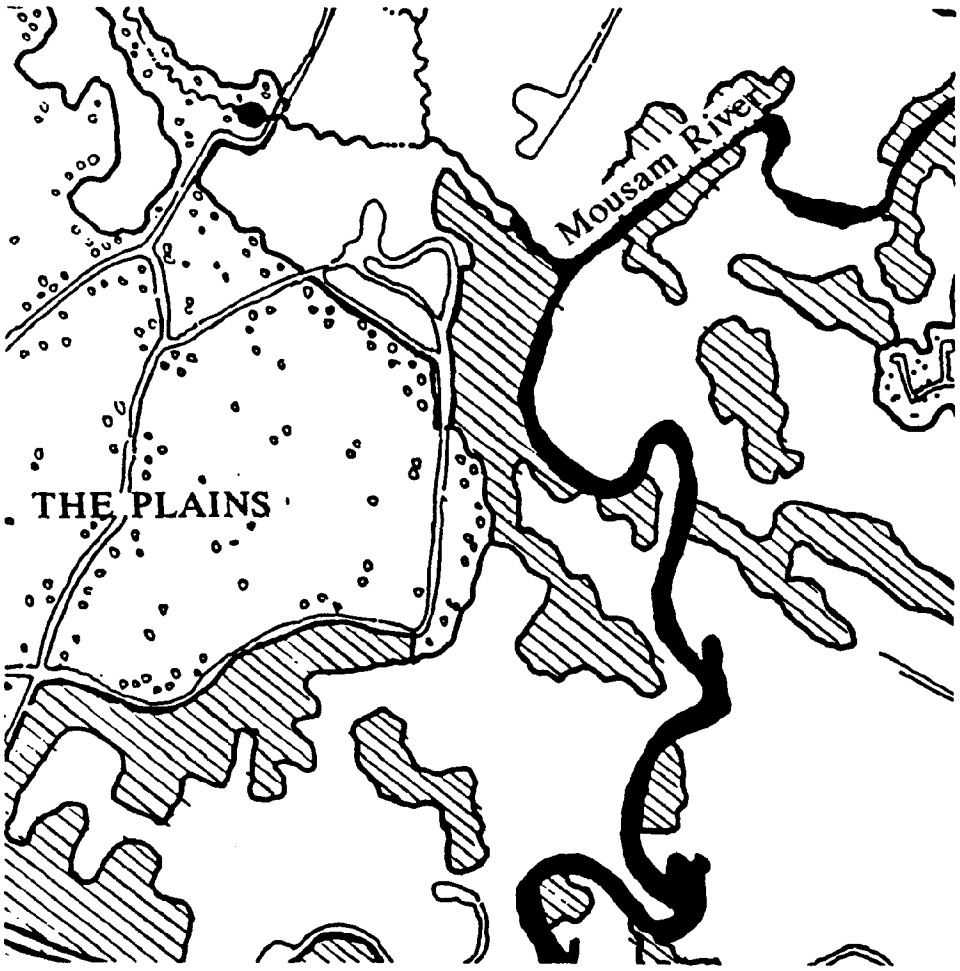
LAND OWNERSHIP

inventory

LAND COVER

Within the study area, the land use patterns are diverse and comprised of many components. To begin to define the place, it is first necessary to examine the various land cover types. With the aid of aerial photographs,* it is possible to identify the surface characteristics of the landscape. For a complete analysis of the study area, refer to Map 2.

* Source: Aerial Survey, Inc.; aerial photography. April 1989



LAND COVER

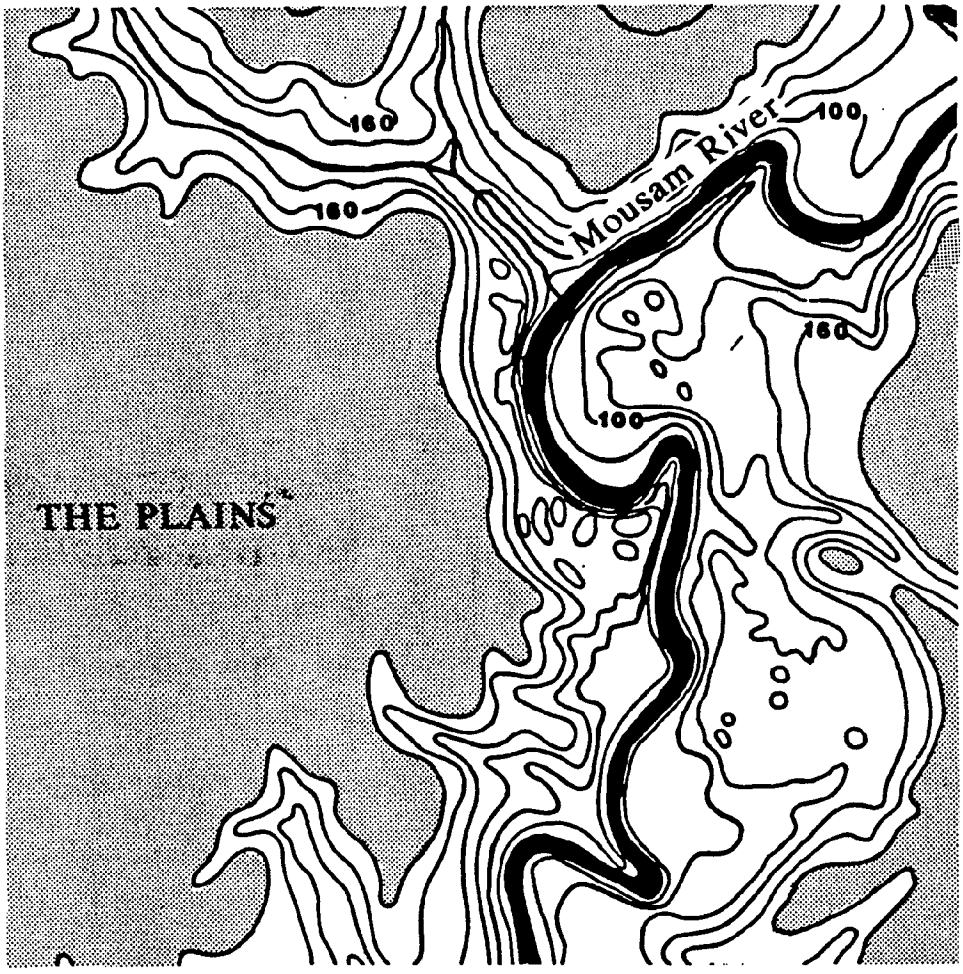
- mixed forest cover
- open/agriculture
- urban/residential
- pure evergreen forest

inventory

TOPOGRAPHY

In association with land cover types, landform patterns complete the observable landscape character within the study area. Utilizing topographic contours,* elevation zones are delineated based on the height of land above mean sea level. The elevation above sea level ranges from approximately 60 feet to 200 feet within the study area, creating a vertical change of 140 feet. The spatial configuration of the landscape may then be defined by the horizontal relationship of vertical elevation change. Steep slopes and topographic enclosure within the river basin are identified by this process. For a complete inventory within the study area, refer to Map 3.

*Source: U.S.G.S. Datum, Kennebunk Quadrangle.



TOPOGRAPHY

UPLAND AREAS
(terrace areas)

RIVER CORRIDOR
(sloping areas)

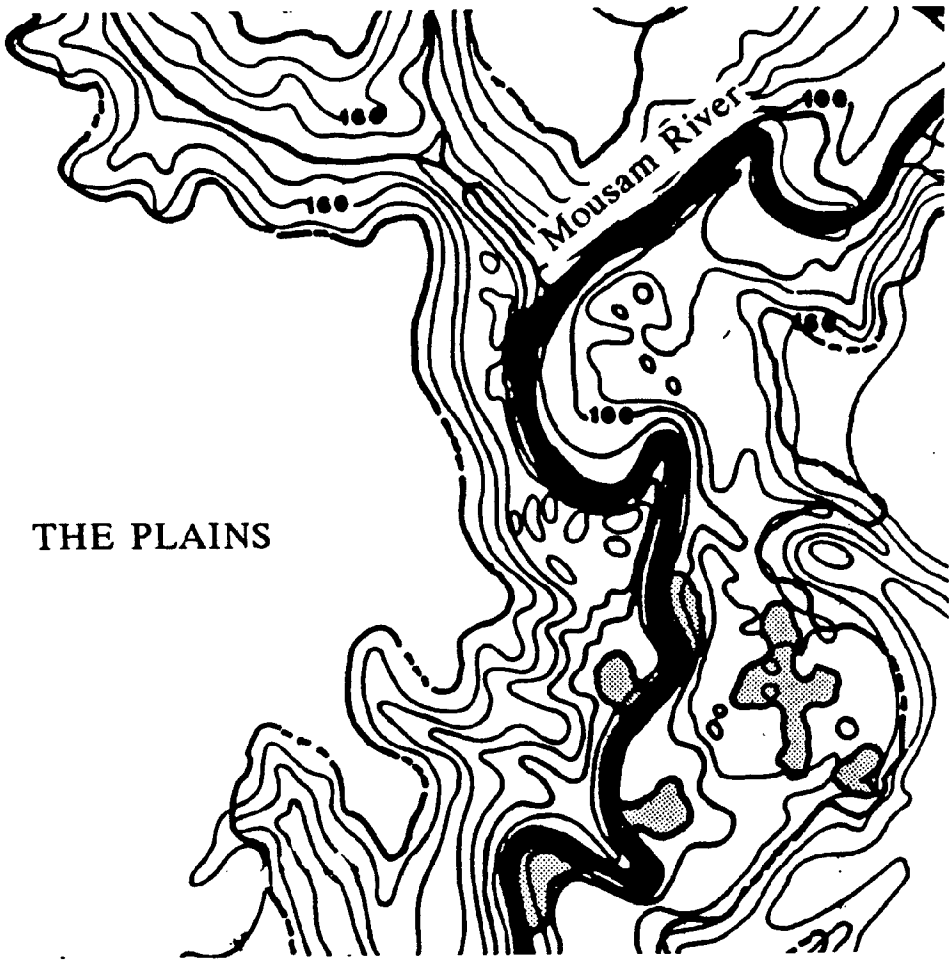
inventory

WETLANDS

Our knowledge of the importance of wetland areas today is far better than it was many years ago. Unfortunately, many of our wetland areas have been compromised or irretrievably lost by past development activities. Wetland areas provide excellent habitat for wildlife and plant communities and serve as an important component of the river environment.

Wetland communities are prevalent within the study area and are most often associated with the edge condition of the Mousam River. Various types of wetland associations occur according to hydrology, soil conditions and vegetation types. For the purposes of this study, mapping is based on the National Wetlands Inventory.* It is important to note that this information is not thorough and accurate to actual site conditions; however, this mapping is useful for analysis and planning applications. Wetland mapping based on this information is provided on Map 4.

* 1982, Map 4, Kennebunk



WETLAND AREAS

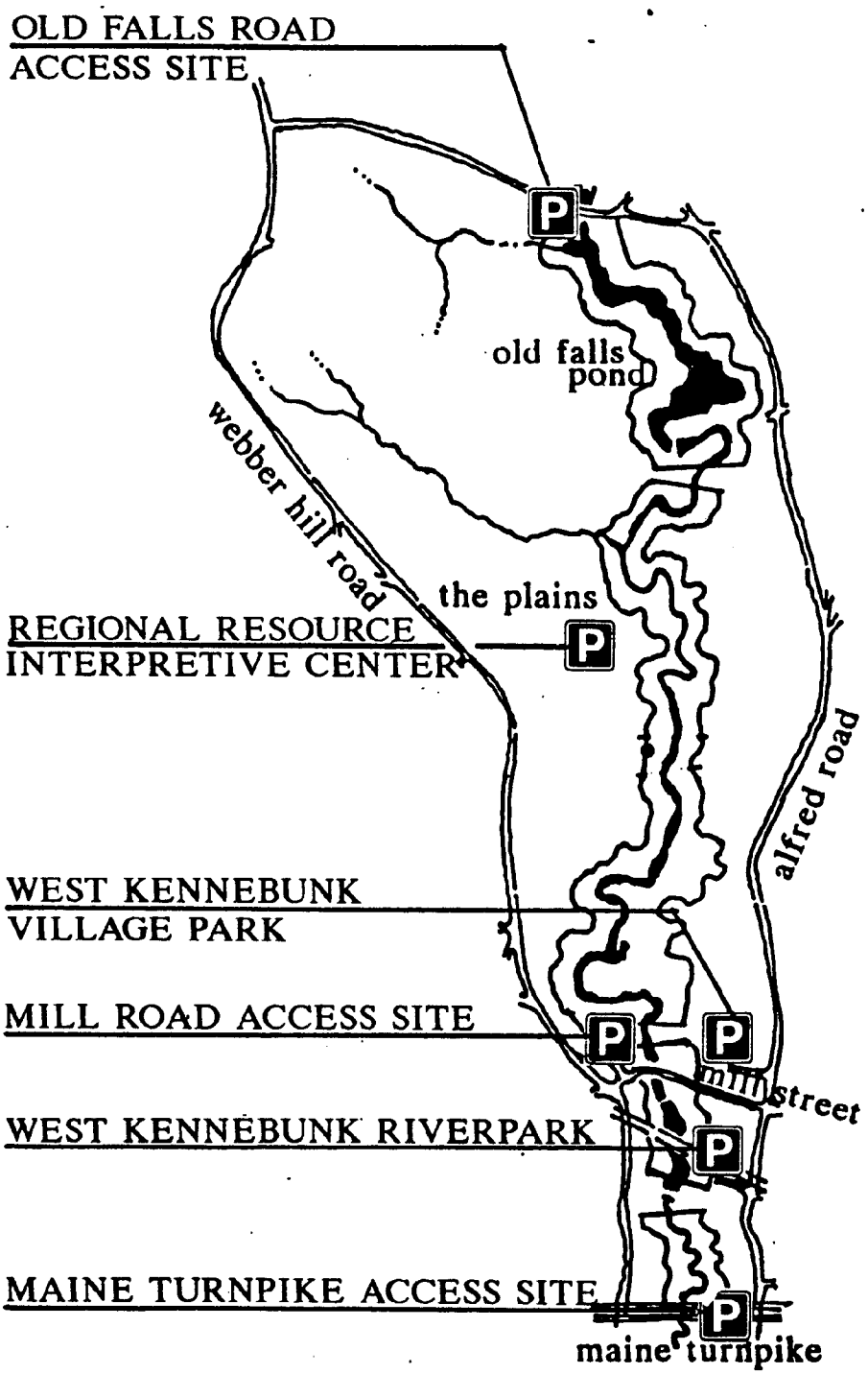
analysis

analysis

PUBLIC ACCESS

During the course of this study, many access locations have been considered. Due to the ownership conditions within the study area, the objective to minimize impact on landowners, and to control the amount of use within the Greenway, proposed access points are limited. Phased implementation of the proposed access locations will provide for the evaluation of impacts of recreation use in the river corridor. Proposed access points are as follows:

- Old Falls Pond/Old Falls Road (Sanford)
- Regional Resource Interpretive Center
- Mill Road/Mousam River Crossing
- West Kennebunk Village Park
- West Kennebunk Riverpark
- Maine Turnpike/Mousam River Crossing

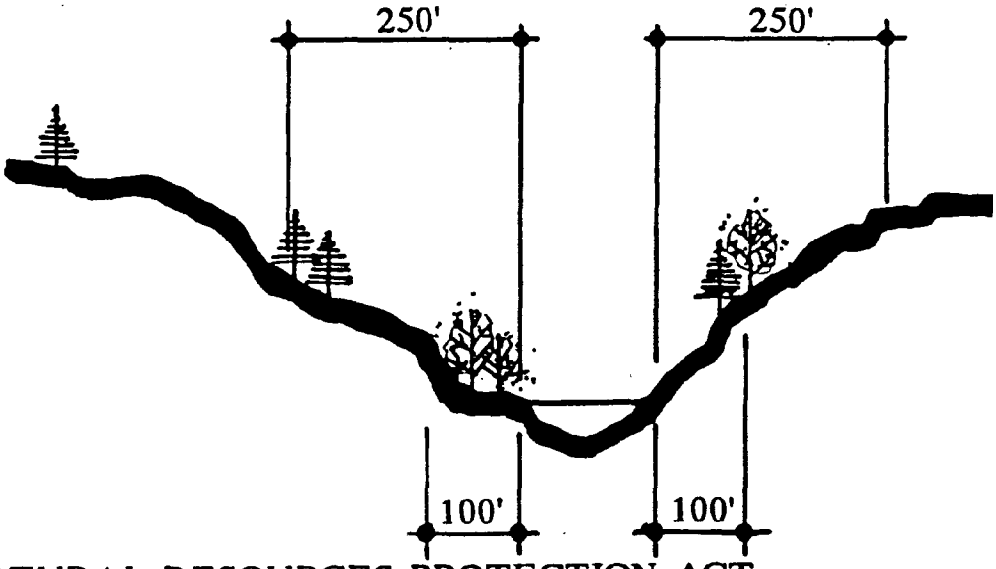

OLD FALLS ROAD
ACCESS SITE
P
old falls
pond
webber hill road
the plains
REGIONAL RESOURCE
INTERPRETIVE CENTER
P
alfred road
WEST KENNEBUNK
VILLAGE PARK
MILL ROAD ACCESS SITE
P
P
mill street
WEST KENNEBUNK RIVERPARK
P
MAINE TURNPIKE ACCESS SITE
P
maine turnpike

analysis

EXISTING CONSERVATION MEASURES

Present resource protection regulations which serve to protect the Mousam River exist in the form of the Kennebunk Municipal Ordinances, Resource Protection District (RP); and further by the State of Maine Natural Resources Protection Act (NRPA). While these measures serve to conserve existing resources in the river basin, they are based on standard 100 foot and 250 shoreland dimensions from the river or associated wetlands; they do not relate to the diversity of terrain exemplary within the river corridor. In most cases, the overall river landscape is subject to further compromise from human activity.

KENNEBUNK SHORELAND ZONING



NATURAL RESOURCES PROTECTION ACT

analysis

WILDLIFE

... "that portion of our territory now known as the Alewives and The Plains, as well as the region roundabout ... abounded with game and the streams with fish; deer, moose and all the smaller wild animals usually found in the northern woods; otter, muskrat and beaver ... and birds in countless variety built their nests in the trees and shrubs as well as on the ground. The scenery - forest, meadow and water - was delightful." [4]

Much of the wildlife habitat recounted in this turn of the century passage is still available to see within the river corridor. During the course of this study, numerous sightings of wildlife include the great blue heron, red-tailed hawk, numerous ducks, waterfowl and songbirds. Beaver activity is particularly noticeable along the river today. Plant communities are equally diverse and numerous. The Wild Garlic, a rare plant in Maine, occurs within the river corridor. The adjacent Kennebunk Plains provides habitat for endangered animal species, including the Black Racer Snake and Grasshopper Sparrow.

As a natural river corridor, the Mousam River and adjacent lands provide for both wildlife habitat and wildlife movement free from roadways and developed areas. In planning for the future of this river corridor, wildlife protection should be assigned a high priority.

[4] History of Kennebunk; Daniel Remich

analysis

THE RIVER CORRIDOR

By analysis of the topographic configuration within the study area, it is possible to define that portion of the landscape which is directly associated or influenced by the Mousam River. Through the application of cross-sectional analysis, the river corridor is hence defined as the extent of the landform which contains the river. The **river corridor** area is depicted on Map 5 and its components are further described as follows:

- edge transition zone

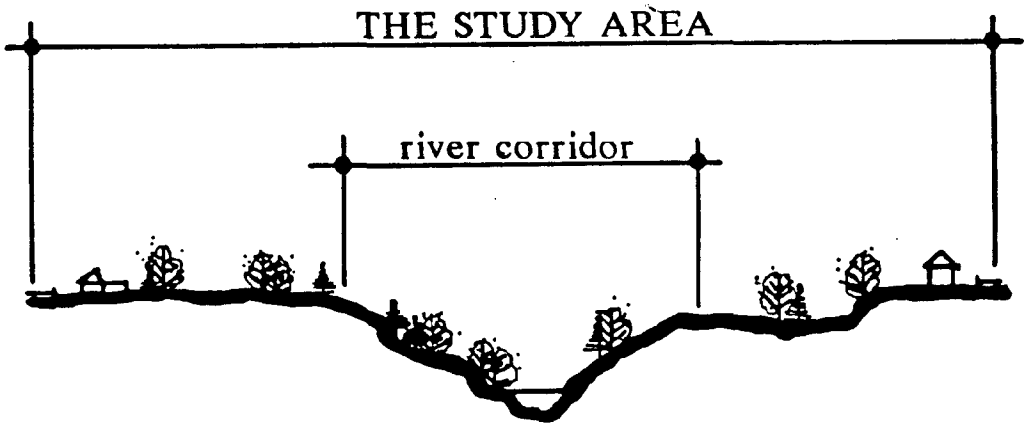
  ...this zone contains the topographic "edge" which descends from the upland terraces within the study area into the river bottom.

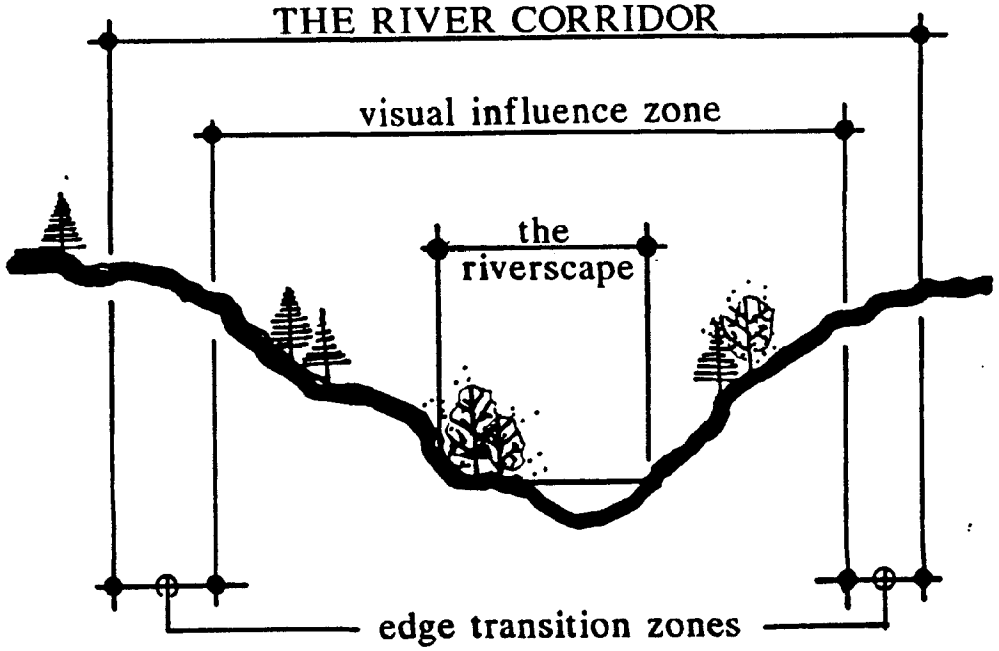
- visual influence zone

  ...this zone is comprised of the sloping terrain between the edge transition zone and the river bottom and may be described as the area potentially visible from the river or from within the river container.

- the riverscape

  ...this area includes the river itself, as well as islands within the river, sand bars, river meanders and associated wetlands.


THE STUDY AREA
river corridor


THE RIVER CORRIDOR
visual influence zone
the
riverscape
edge transition zones

analysis

RIVERSCAPE ZONES

The inventory and analysis to this point has been organized on a descending order of scale: the study area; land cover types; topographic configuration; the river corridor. The riverscape has been previously defined as the river itself, as well as islands, sand bars, river meanders, and associated wetlands. Within the river corridor, the river expesses many different conditions which contribute to formulate the character of the river basin. Within the study area, distinct riverscape zones are evident between Sanford and the Maine Turnpike, based on the following criteria:

- sinuousity

  ...describes the degree of meander or linear configuration of the river channel; many sections meander often, while other sections are straight and linear.

- enclosure

  ...describes the topographic relief upland from the river; some sections feel very enclosed by topography, other sections feel wide open.

- water movement

  ...dam impoundments have significantly altered and slowed water movement in some sections; other sections flow naturally or contain rapids.

- influence of man

  ...the upper reaches of the river are very natural, while lower sections contain dams, road crossings and proximate population areas.

* RIVERSCAPE ZONES:

Zone 1: Old Falls Pond

Old Falls Pond is broad and approaches the scale of a lake rather than a pond.

Zone 2: The Narrows

The river is narrow and exhibits a strong sense of enclosure; water movement is moderate to rapid below Old Falls Dam

Zone 3: The Lagoon

Water movement is slow with a high degree of sinuousity; very little sense of enclosure; linear lagoon character due to impoundment.

Zone 4: The Village

Mill Road crossing, dam structures, railroad crossing, proximate West Kennebunk population; this is where the village meets the river.

Zone 5: The River

Within the study area, the only section with water movement, old growth timber, and topographic enclosure which exhibit the character of a natural river.

* See Map 5

analysis

ANALYSIS SUMMARY

The inventory presented herein has been conducted to gain an understanding of land ownership patterns, vegetation, topography, wetlands, wildlife, historical aspect, and existing conservation measures within the Mousam River Basin study area. The analysis presented in the preceding pages has provided an understanding of the overall character and essential components of the river. This analysis has identified that the Mousam River, within the study area, is composed of distinct segments, referred to as **riverscape zones**. The analysis summary further evaluates each riverscape zone with respect to existing conditions and potential future use. The analysis criteria is described as follows:

- proximity of existing developed areas

  ...evaluates the adjacency of existing residential or commercial development to the river.

- sensitivity to future development

  ...evaluates the potential for future development within the river corridor.

- diversity of land cover

  ...measures the diversity and complexity of various land cover types.

- degree of topographic enclosure

  ...measures the degree to which the river is enclosed by sloping terrain.

- water movement

- incidence of wetlands

- wildlife potential: terrestrial

  ...evaluates the potential for terrestrial wildlife habitat and wildlife movement within the river coridor.

- wildlife potential: aquatic

  ...evaluates the potential for aquatic wildlife habitat within the river corridor.

- river overlook potential

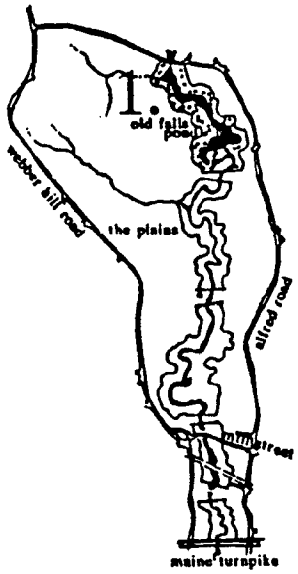
  ..evaluates the potential for overlook sites within the river corridor.

- river access potential

  ...evaluates the potential for public access to the river.

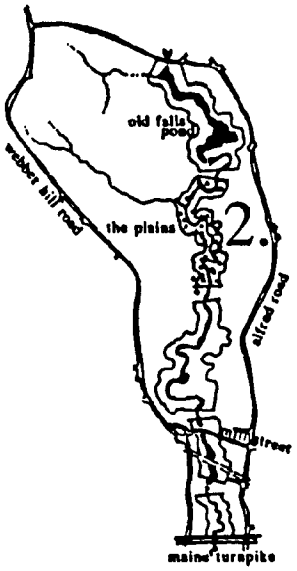
analysis

RIVERSCAPE ZONE 1: OLD FALLS POND



ANALYSIS CRITERIA :	high	medium	low
proximity of existing developed areas	●		
sensitivity to future development		●	
diversity of land cover		●	
degree of topographic enclosure		●	
water movement			●
incidence of wetlands			●
wildlife potential: terrestrial		●	
wildlife potential: aquatic	●		
river overlook potential			●
river access potential		●	

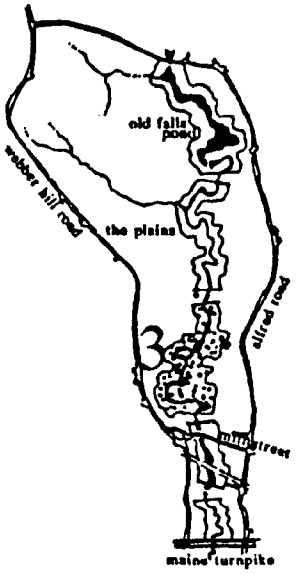
RIVERSCAPE ZONE 2: THE NARROWS



ANALYSIS CRITERIA :	high	medium	low
proximity of existing developed areas			●
sensitivity to future development	●		
diversity of land cover		●	
degree of topographic enclosure	●		
water movement		●	
incidence of wetlands		●	
wildlife potential: terrestrial	●		
wildlife potential: aquatic			●
river overlook potential	●		
river access potential			●

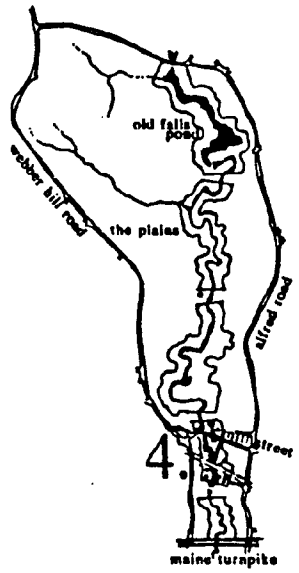
analysis

RIVERSCAPE ZONE 3: THE LAGOON



ANALYSIS CRITERIA :	high	medium	low
proximity of existing developed areas			●
sensitivity to future development	●		
diversity of land cover	●		
degree of topographic enclosure			●
water movement			●
incidence of wetlands	●		
wildlife potential: terrestrial		●	
wildlife potential: aquatic	●		
river overlook potential			●
river access potential			●

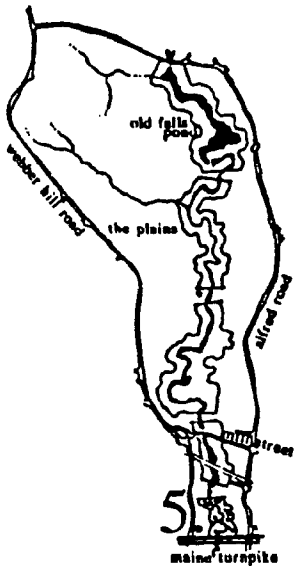
RIVERSCAPE ZONE 4: THE VILLAGE



ANALYSIS CRITERIA :	high	medium	low
proximity of existing developed areas	●		
sensitivity to future development			●
diversity of land cover		●	
degree of topographic enclosure	●		
water movement		●	
incidence of wetlands			●
wildlife potential: terrestrial			●
wildlife potential: aquatic			●
river overlook potential	●		
river access potential	●		

analysis

RIVERSCAPE ZONE 5: THE RIVER



ANALYSIS CRITERIA :	high	medium	low
proximity of existing developed areas		●	
sensitivity to future development		●	
diversity of land cover	●		
degree of topographic enclosure	●		
water movement	●		
incidence of wetlands			●
wildlife potential: terrestrial		●	
wildlife potential: aquatic		●	
river overlook potential	●		
river access potential		●	

the plan

the plan

PLAN COMPONENTS

The analysis conducted concludes that the Mousam River is a significant regional resource with great value to the people of Maine. This study further concludes that the particular section of the river within the study area largely remains in its natural state and exhibits wild and scenic characteristics. Finally, this study area has experienced, and continues to experience, a rapid rate of residential and commercial development. In response to the intent of this study and to the analysis presented herein, the Conservation Commission has identified three components of the Mousam River Greenway Plan...

- conservation
- education
- recreation and public acess

As a transition step between the study area analysis and the proposed plan for the Mousam River Greenway, a Greenway Framework Plan has been prepared. This plan depicts the river corridor, its sensitive areas, points of interest, and public access locations. See Map 7.

the plan

PROPOSED CONSERVATION MEASURES

"In virtually every community, parcels of undeveloped land provide important benefits that accrue from the protection of scenery, farmland, wildlife habitat, recreation lands and watershed areas. Unless these lands and their uses are protected, nothing will prevent their succumbing to the pressure of development."[1]

A community effort is required to maintain the current natural quality of the Mousam River Basin. Private landowners, utility companies, land developers and the Town of Kennebunk should work together towards a common goal of conserving the significant resource that is the Mousam River. The Kennebunk Conservation Commission should act as the "umbrella" for overseeing the implementation of the folowing conservation measures:

- further evaluate the adequacy of existing shoreland protection ordinances and environmental review criteria

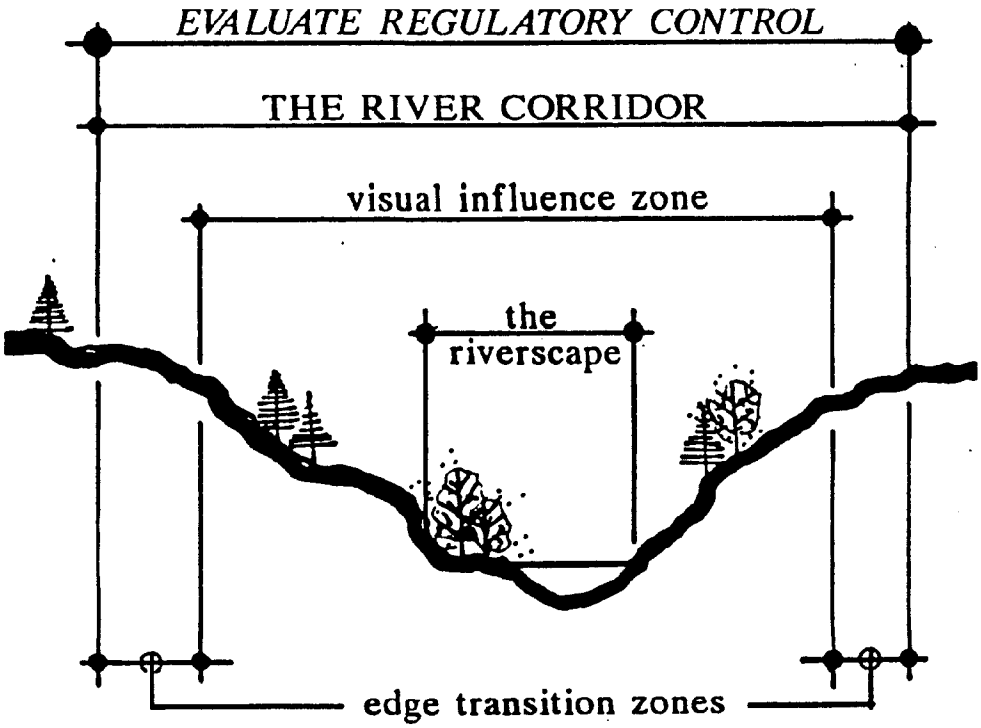
- encourage the creation of conservation easements along riverfront properties and, if warranted, recommend Town purchase of those lands which are most in need of protection

- encourage the recovery of the natural landscape

[1] The Landowners Options, Janet Milne, 1985

EVALUATE REGULATORY CONTROLS

The inventory and analysis of the natural landscape which has been conducted concludes that standard setbacks established by existing regulations do not adequately address the diversity of terrain within the river corridor. It is not within the scope of this study to recommend specific regulatory ordinance amendments. However, it is recommended that local review boards carefully examine any activity within the river corridor zone. Specific review criteria should include groundwater protection, phosphorus mitigation, erosion and sedimentation control, wetland protection, wildlife habitat protection, protection of old growth timber, and visual impact assessment required to retain the existing integrity of the place.



the plan

ENCOURAGE CONSERVATION EASEMENTS

"Maine possesses not only an outstanding natural environment, but caring people with the will to conserve it. The tradition of land conservation by private citizens is strong in Maine. The decision to permanently protect land is a decision that requires careful thought. Financial realities, personal desires and family needs must be considered, along with the type of land and the reasons for wanting to conserve it. This often difficult decision can be simplified by understanding the options available to a landowner who is interested in land protection." [1] Preservation of conservation lands within the Mousam River Basin is dependent upon the private landowners within the study area whose options for preserving the river corridor include the following:

- cluster development
- conservation easements
- mutual covenants with neighboring landowners
- long-term conservation leases
- donations of land to land trusts of public agencies
- purchase of land

[1] The Landowners Options, Janet Milne, 1985

- cluster development

  Cluster development for currently undeveloped tracts can preserve natural areas within the river corridor. Developers are encouraged to grant conservation/ recreation easements associated with new development projects.

- conservation easements [1]

  Conservation easements are legal means by which landowners voluntarily set permanent limitations on the future use of land, thus protecting their land's attributes. An owner can still use the land and can still sell it. But, if the land is sold, it remains subject to the terms of the easement. Landowners can realize property tax benefits for land placed in conservation easements.

- mutual covenants [1]

  If the landowner does not wish to enter into an agreement with an outside agency, he may limit future use of the land by exchanging mutual covenants with neighboring landowners interested in protecting their property from uncontrolled development.

- long-term conservation lease [1]

  The long-term lease provides an alternative for those who do not wish to transfer their land to a conservation agency or organization, but who want to see it used or protected by such a group for a period of years.

- donations of land [1]

  Donations of land are generally transferred to land trusts which are private, non-profit organizations devoted to protecting land. [1] In Kennebunk, the Ramanascho Land Trust has achieved great success in protecting valuable open space lands.

- purchase of land [1]

  Purchase of land may be appropriate for landowners who need or prefer to sell their property, yet wish to see it protected. The landowner has the option of selling at fair market value, at a "bargain price" or in installments.

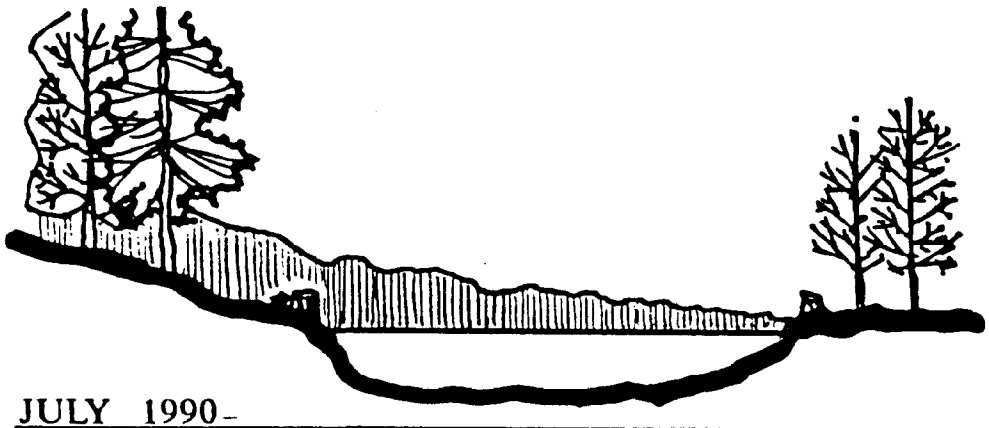
[1] The Landowners Options, Janet Milne, 1985

the plan

NATURAL LANDSCAPE RECOVERY

Conservation by right does not include management of natural resources. The purpose of conservation is to allow the dynamic ecological process involving natural resources to occur on its own accord. Recent water impoundment projects on the Mousam River have dramatically altered the natural landscape. Old growth pine, hemlock and hardwoods, which contribute to the river's landscape character, have been removed. Much remaining vegetation has been inundated by the raised water elevation associated with dam construction.

It is now time to allow the natural landscape succession to renew and restore itself. Through the non- management of this process, the river will regain its sense of natural landscape character.



JULY 1990

JULY 2025

the plan

EDUCATION

Understanding natural resources and their importance to a community begins with the process of education. Conservation, protection, and wise use of our remaining natural resource base can be greatly enhanced through achieving an understanding of what natural resources are and what they mean to a community.

Some aspects of education which are important concerning the Mousam River include the following:

- Understanding that a particular segment of the river that we may be familiar with is only a part of a River System of regional significance. Where does the river start and end? What other communities share the river? What is a watershed basin?

- Understanding that the management, conservation and enjoyment of the river within Kennebunk is dependent upon the regional influence and activity within the entire watershed basin. What are the effects of development activities and water pollution from other communities on our segment of the river?

- Learning about the specific natural resources within the river basin. What is a wetland? What is the importance of old growth timber? Why is the river so important to wildlife? What is the history of man and influence of man within the river corridor?

These and many other aspects of education about the Mousam River are important to Kennebunk, particularly to the children of this community. With increased awareness and knowledge, the objectives of management, conservation and enjoyment can be more successfully met. Potential methods of implementing the education objective include the following:

- education of children through school programs.
- education and activities organized by Kennebunk Department of Parks & Recreation.
- installation of interpretive signage and other interpretive features within the river environment.
- publication and distribution of this study.
- encourage cooperative education and interpretation of the Mousam River and adjacent Kennebunk Plains.

the plan

RECREATION

"Ten minutes drive from my apartment, there is a long, grassy ridge from which you can look out over parkland and sprawling metropolis, over bay and ocean and distant mountains. I often walk along this ridge in order to think uncluttered thoughts or to feel with accuracy or to achieve some other worthy end, recognized or submerged." [1]

This quotation concisely describes the type of recreation envisioned within the Mousam River Greenway: passive, low key, an opportunity to relax and contemplate life in a natural setting. The Kennebunk Conservation Commission has strived to create a plan which is consistent with its goals of conservation, fosters understanding and education of natural resources, and is sensitive to potential impacts of private landowners. The recreation aspects of the Greenway Plan, as noted below, are further described on the following pages:

- recreation use
- greenway parks
- river pathway
- water recreation
- public access

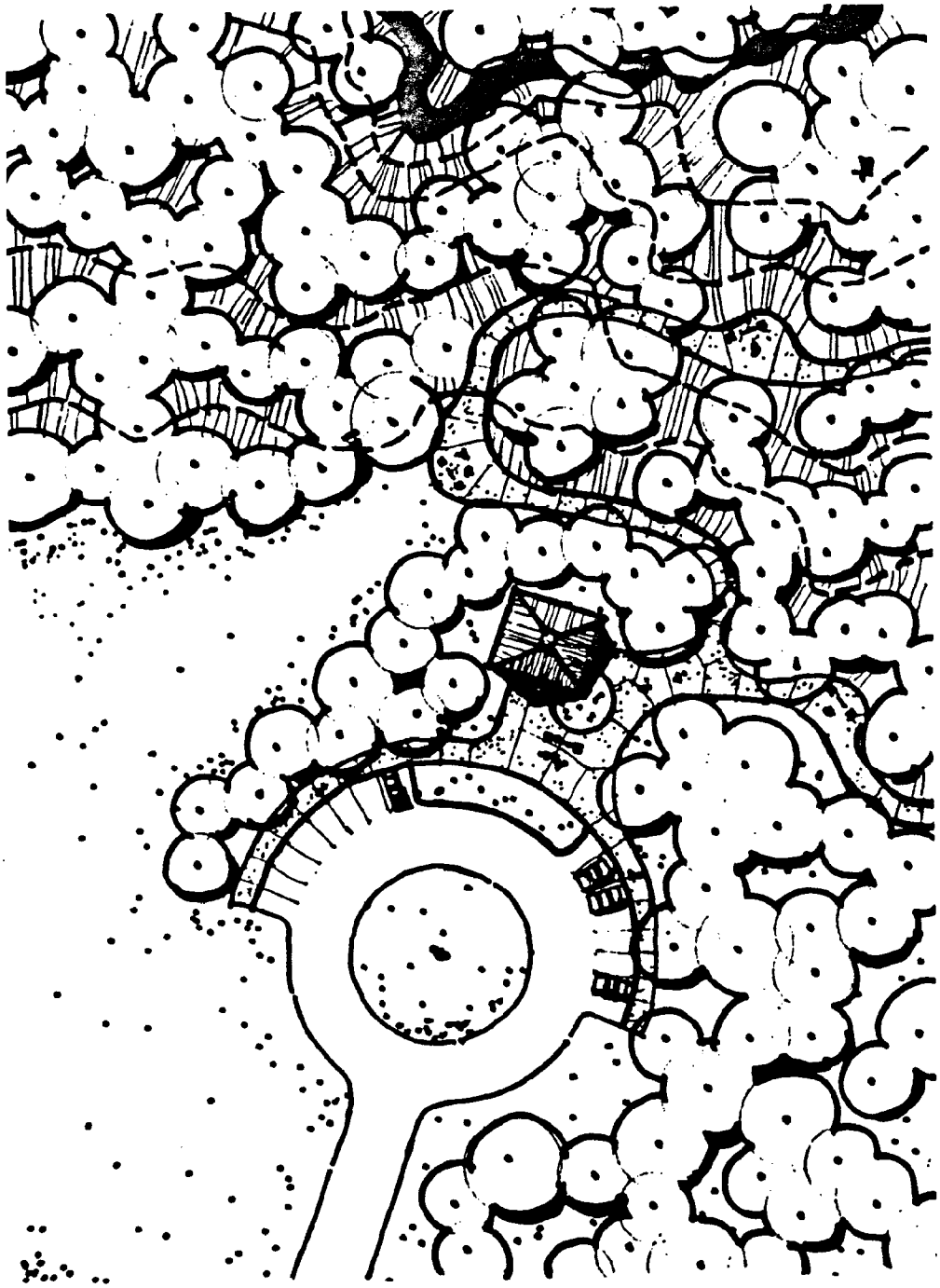
[1] The Complete Walker, Colin Fletcher, 1978

RECREATION USE

- Suggested Uses which would be permitted within the Mousam River Greenway are as follows:
  - walking
  - jogging
  - fishing
  - boating*
  - hunting**
  - cross-country skiing
  - nature interpretation
  - wildlife observation
  - conservation
- Suggested Prohibited Uses within the Mousam River Greenway are as follows:
  - snowmobiles
  - motorized vehicles (including ATVs)
  - horseback riding
  - fires
  - trespassing
  - overnight camping
- Hours of Use within the Mousam River Greenway should be limited from sunrise to sunset. Management and maintenance of recreation facilities should be assumed by the Town of Kennebunk. Use restrictions should be posted, and access control devices should be provided at all access points within the Greenway.

* boating limited to non-motorized boats, excepting electric trolling motors

** pathway would be closed during hunting season



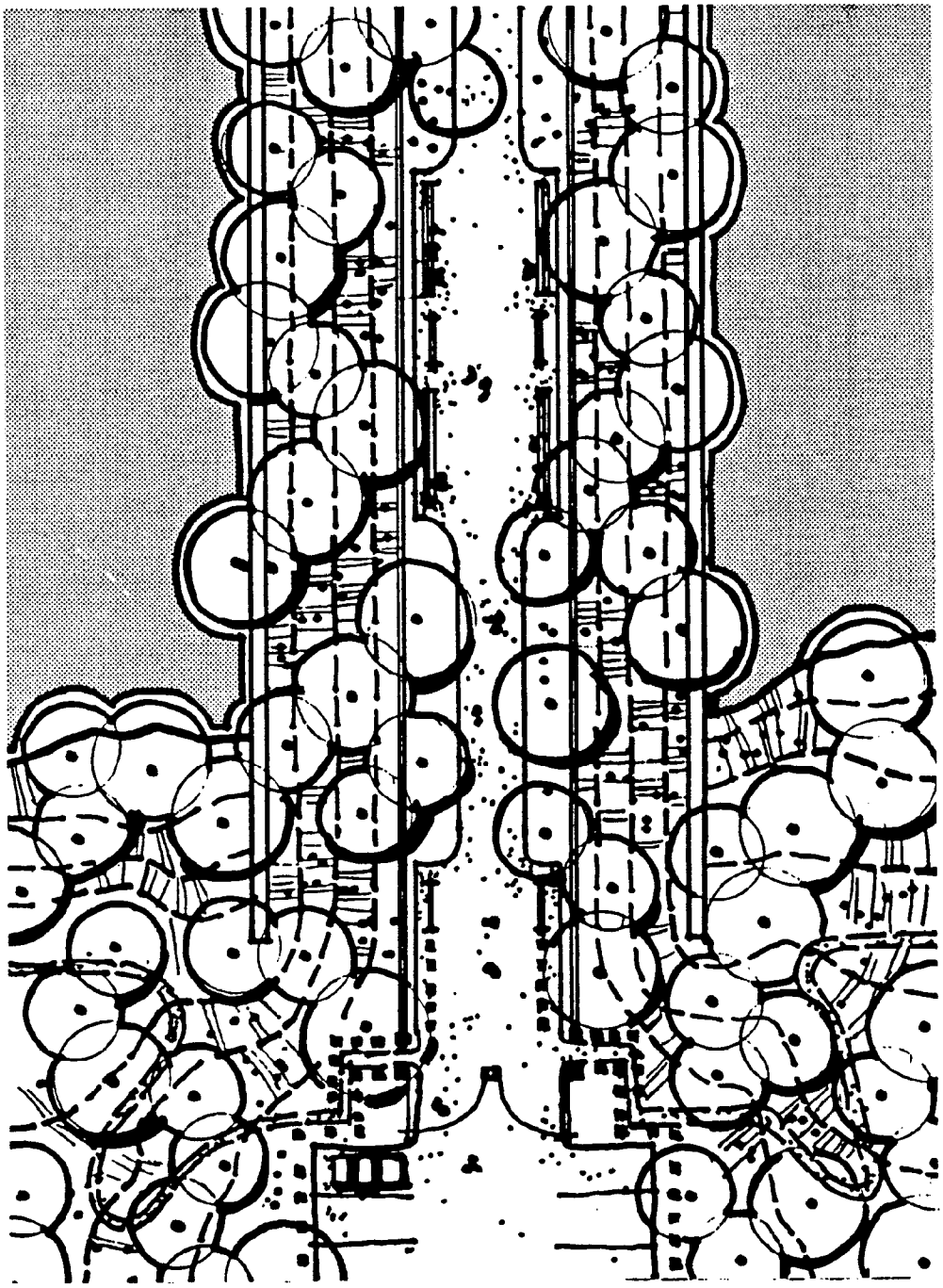
GREENWAY PARKS

- regional resource interpretive center

  ...located at the interface between the Mousam River and the Kennebunk Plains, this facility is envisioned to provide an opportunity to experience both of these important regional resources. The Kennebunk Plains has been purchased by the State of Maine for preservation and, as such, this facility would be developed in conjunction with State authorities. Proposed potential uses include a small visitors center building housing maps and interpretive information about the Kennebunk Plains and the Mousam River; exterior facilities proposed are handicapped pathways, river overlooks, nature interpretive signage, and linkage with the Mousam River Greenway Path.

- west kennebunk riverpark

...this park, located on the abandoned Boston and Maine Railroad overpass over the river, would provide passive recreation opportunities to the residents of West Kennebunk Village. The location of this park on the former railroad overpass provides easy access for area residents and a dramatic setting overlooking the river. The site is generally isolated from, yet within walking distance of, the West Kennebunk Village residential district. This linear park, approximately 100 feet above the river, provides excellent views both upriver and downriver, and is located in an historical context, including river dams, the Twine Mill, and the overpass structure itself. Proposed facilities include limited parking, complete handicapped accessibility, and linkage to the Mousam River Greenway Path.



the plan

MOUSAM RIVER GREENWAY PATH

The primary component of recreation use within the study area is the proposed River Pathway. Serving as the backbone for recreation use of the river corridor, the pathway is planned to provide pedestrian access for 5.5 miles along the river between the Maine Turnpike overpass in Kennebunk to Old Falls Pond in Sanford. In addition, a one mile loop trail is proposed along the river immediately adjacent to West Kennebunk Village. Descriptive elements of the pathway plan are as follows:

- location criteria

  ...as a result of the inventory and analysis conducted as part of this study, the major criteria for the pathway location were identified as:

  - avoid wetlands and other sensitive areas
  - minimize impact on landowners
  - avoid dam structures and other hazard areas
  - maximize the diversity of experience along the path afforded by the diversity of land cover, topographic conditions, riverscape character, overlooks, and other points of interest

- pathway linkage

As the major recreation spine within the Mousam River Greenway, the path provides pedestrian linkage between greenway parks, river overlooks, and access points within the river corridor. The pathway, as planned, would also provide linkage to private properties and create improved pedestrian access to the river for area landowners. Private trails would be clearly signed as prohibited for public use.

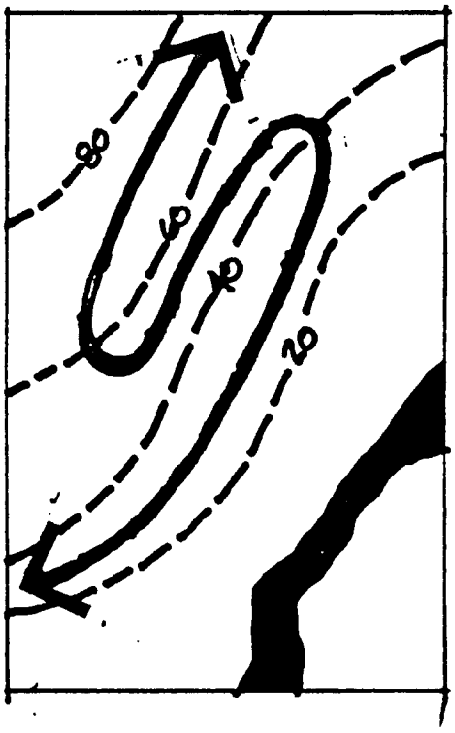
At a municipal and regional scale, this section of the proposed river pathway may be extended in the future. For example, a future linkage could be implemented with the bridle path currently used along the Mousam River below Kennebunk Village. In turn, the pathway may be extended west into Sanford. In the future, it may be possible to follow the river from its headwaters to its confluence with the Atlantic Ocean.

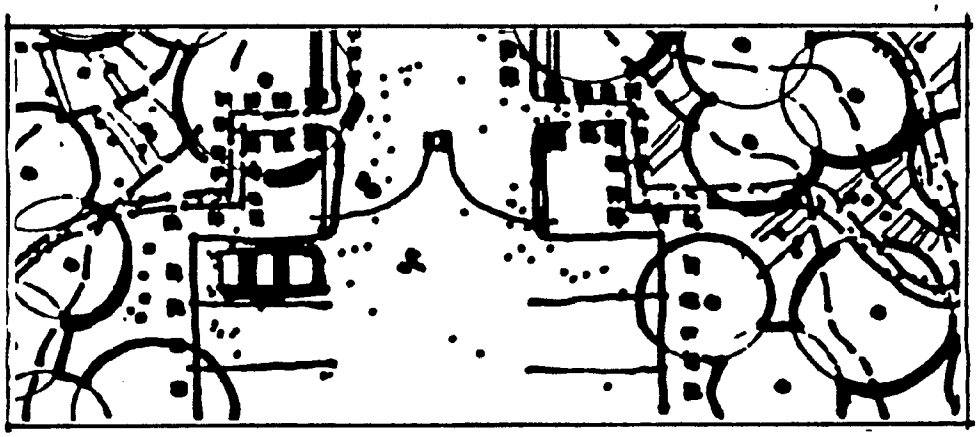
the plan

PATHWAY DESIGN

Map 7 depicts the location and design for the river pathway in conformance with the location criteria cited herein. It is recommended that, prior to the implementation of the path, the route be marked in the field to account for the detailed and isolated conditions of the natural landscape.

With the exception of canoe portage sections and the one-mile loop trail proposed near West Kennebunk Village, the pathway is designed at a width of two feet, with natural forest litter forming the trail surface material. Portage sections and the one-mile loop trail are designed at a width of five feet, with stone dust or granite screenings forming the trail surface. In all cases, the trail is designed to follow the natural ground configuration. Switchbacks are proposed for locations where the trail ascends and descends sloping areas. All trailheads should include timber or stone barriers to prevent motorized vehicle use.


80
60
40
20



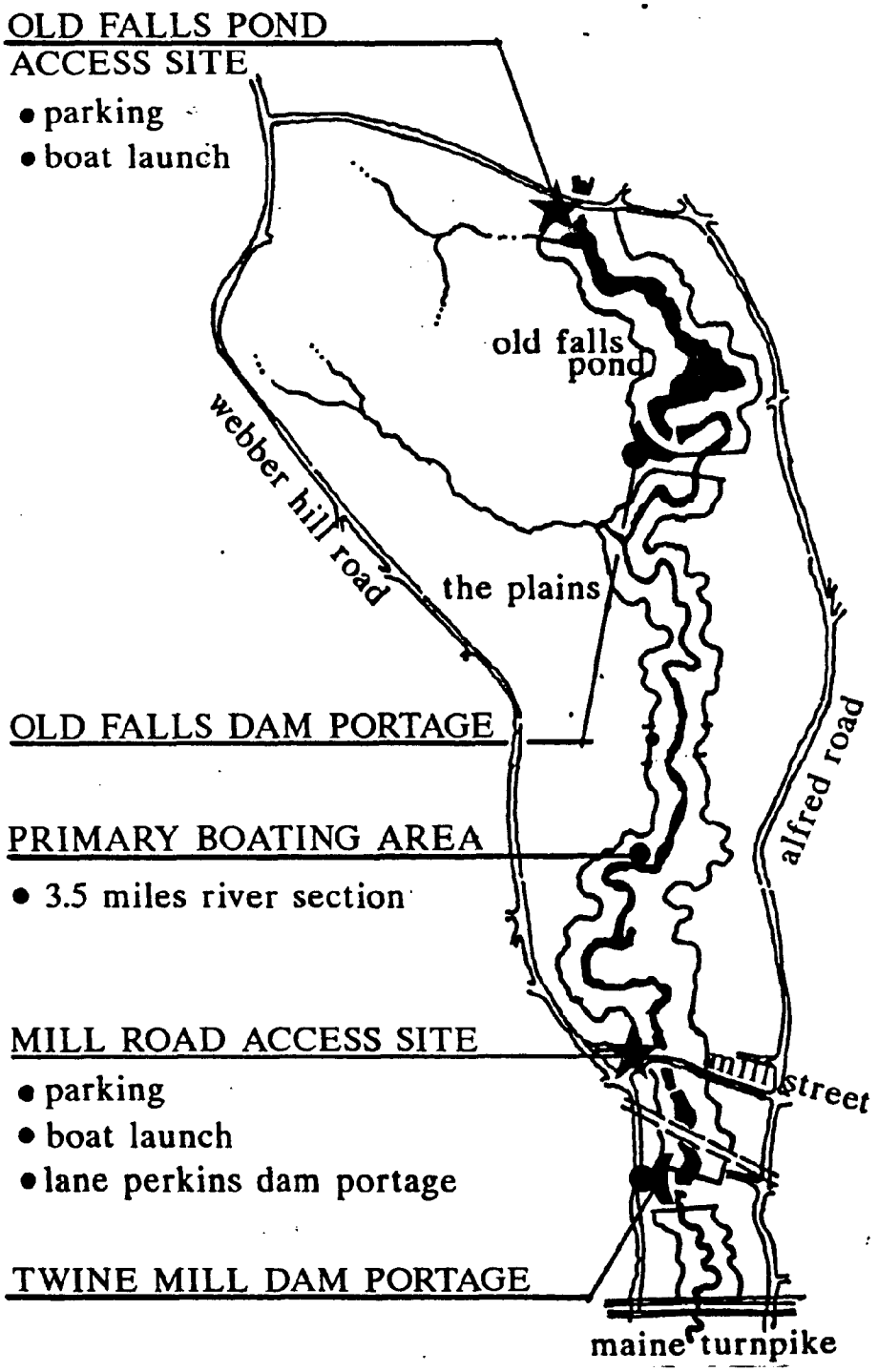
the plan

WATER BASED RECREATION

Light watercraft, such as canoes, kayaks or small fishing boats are permitted to use the river for pleasure boating and fishing use. Vehicular access and parking for these purposes are suggested at the Mill Road river crossing near West Kennebunk Village and at Old Falls Pond in Sanford.

Evaluation of boating use within this section of the river concludes that the primary use is most suitable between Mill Road and the Old Falls Dam. The limited length of this river section (3.5 miles) and lack of water movement offset the need for "put in" and "take out" facilities; therefore, the Mill Road crossing is proposed as the only access point for boating use within Kennebunk.

A vehicular access point at Old Falls Pond in Sanford is suggested as an amenity for Sanford residents. Old Falls Pond itself is of sufficient size to accomodate limited boating use independent from the river. In all cases, portage trails are proposed to circumvent structures at Old Falls Pond Dam, Wichers Mill Dam and the Twine Mill Dam.


OLD FALLS POND
ACCESS SITE
• parking
• boat launch
old falls pond
webber hill road
the plains
OLD FALLS DAM PORTAGE
PRIMARY BOATING AREA
• 3.5 miles river section
alfred road
MILL ROAD ACCESS SITE
• parking
• boat launch
• lane perkins dam portage
mill street
TWINE MILL DAM PORTAGE
maine turnpike

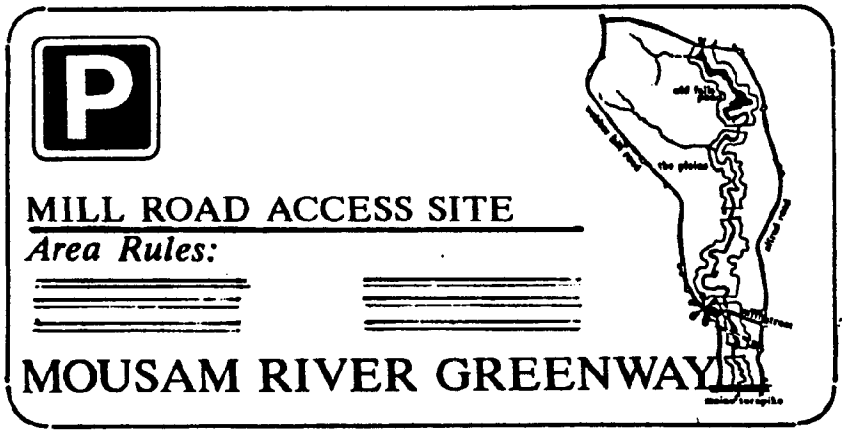
the plan

GREENWAY SIGNAGE

Consistent signage is recommended throughout the Mousam River Greenway in order to establish a uniform understanding of the river corridor. A standard logo should be developed to provide a major theme for the Greenway; this logo should remain as a standard feature throughout the Greenway, most importantly at proposed access locations. Specific signage within greenway parks, access facilities, and along the river pathway should incorporate or be designed as compatible with the Greenway logo. Basic signage program elements should be used to convey the following messages:

- greenway access points
- permitted and prohibited uses
- hours of use
- handicapped facilities
- trail markings
- overlook sites
- boat launch sites
- nature interpretation components

MOUSAM RIVER
GREENWAY
MOUSAM RIVER
GREENWAY
P


P
MILL ROAD ACCESS SITE
Area Rules:
MOUSAM RIVER GREENWAY

implementation

implementation

SUMMARY

Implementation of the Mousam River Greenway Plan is an evolutionary process which will require participation and cooperation at the local level. The Kennebunk Conservation Commission, Kennebunk Planning Office, Kennebunk Parks and Recreation Department, Greenway area landowners, and residents of the Town must all cooperate for the ultimate plan to be realized.

The objectives of the plan to be implemented have been defined as conservation, education and recreation, in order of priority. In order to achieve these objectives, more specific implementation steps are as follows:

- implement proposed conservation measures
- develop greenway education programs
- incorporate greenway plan into Comprehensive Plan update
- establish funding strategies
- encourage greenway easements
- construct recreation facilities

VALUE OF THE PLAN

"Affection for and commitment to the cause of natural corridors is growing in spirit and in fact all across the United States. Called greenways, these corridors link open spaces and tie an increasingly urbanized population to experiences in the outdoors. Greenways may be as elaborate as a hiking-biking-riding route, but they can also be as simple and natural - and ecologically important - as a stretch of stream bank left wild."[2]

The above passage illustrates the activity of greenway implementation nationwide and describes the basic objectives of the Mousam River Greenway Plan: conservation, education, and recreation within a natural river corridor. Similar to other communities, implementation of this greenway is dependent upon the use of private lands. The National Geographic article describes the experiences of other communities, in part, as follows:

> "The community really got behind it...thirty-two landowners agreed to let the path run through their property." ... Anne Lusk, Stowe, Vermont
>
> "The trail played a part in our deciding to buy this house." ... Marty Eichinger, Portland, Oregon (A Seattle study showed that property sold faster when it faced a recreation corridor).
>
> "I found that 90 percent of the areas with outstanding natural and cultural features were around water, wetlands and steep topography."
> ... Phil Lewis, Madison, Wisconsin

[2] Paths to the Future, National Geographic Magazine, Article by Noel Grove, June 1990

implementation

FUNDING STRATEGIES

The acquisition of greenway easements and construction of recreation facilities will require further investigation into available funding sources. Potential funding sources are identified herein; however, funding strategies require direction from municipal authorities...

- Private donations
- Private fund raising campaigns
- Municipal bonds
- State bonds
- Maine Coastal Program
- Federal Land and Water Conservation Funds (FLWC)
- Land for Maine's Future Board

IMPLEMENTATION COST

Aside from property or easement acquisitions within the greenway, approximate long-term implementation costs are itemized as follows:

- regional resource interpretive center *

• interpretive center building	$ 50,000.00
• access roads and parking	25,000.00
• walkways and landscaping	5,000.00
• trailheads, signage, miscellaneous	5,000.00
Subtotal	$ 85,000.00

- west kennebunk riverpark *

• access roads and parking	$ 5,000.00
• walkways and landscaping	5,000.00
• fencing, safety guardrails	5,000.00
• trailheads, signage, miscellaneous	5,000.00
Subtotal	$ 20,000.00

- west kennebunk mile loop trail **

• trail construction and signage	$ 20,000.00
Subtotal	$ 20,000.00

- old falls pond access site *

  - access roads and parking $ 5,000.00
  - trailheads, signage, miscellaneous 5,000.00

  Subtotal $ 10,000.00

- mill road/mousam river access site *

  - access roads and parking $ 15,000.00
  - trailheads, signage, miscellaneous 5,000.00

  Subtotal $ 20,000.00

- maine turnpike/mousam river access site *

  - access roads and parking $ 5,000.00
  - trailheads, signage, miscellaneous 5,000.00

  Subtotal $ 10,000.00

- greenway river path **

  - signage, miscellaneous materials $ 15,000.00

  Subtotal $ 15,000.00

* Estimates are based on conceptual planning.

** Pathway construction cost based on volunteer labor.

PHASING

To a great extent, phasing of development of the proposed recreation facilities will be dependent on easement acquisitions and funding success. In support of the Greenway Plan, the following phasing scenario is recommended as follows:

- Encourage land developers to set aside easement areas for conservation and recreation as part of new development plans.
- Acquire easement for areas of particular scenic quality, environmental sensitivity, or vulnerability to development.
- Construct Regional Resource Interpretive Center in cooperation with the Maine Department of Inland Fisheries & Wildlife.
- Acquire easements for contiguous riverpath sections, such as the mile loop trail.
- Construct Mill Road/Mousam River Access Site.
- Construct West Kennebunk Riverpark.
- Acquire remaining easements for completion of greenway path; construct additional access sites as appropriate.

MAINTENANCE

Maintenance of greenway parks and public access points should be undertaken by the Kennebunk Parks and Recreation Department. Maintenance of the river pathway could be organized and underaken by volunteer groups, perhaps local Boy Scout and Girl Scout troops. Trail maintenance should include routine inspections of the trail and the maintenance of the trail surface and trail signage.

LEGAL ASPECTS OF THE PLAN

(prepared for the Kennebunk Conservation Commission
by Robert Furbish, Town Attorney, July 16, 1990)

You have asked for some general legal opinions regarding the proposed Mousam River Greenway Plan which calls for the establishment of a recreational footpath along the Mousam River over land currently owned by private persons. You have indicated two areas of concern: 1. Creation by the Town of the pathway and the means which are to be employed to convey an interest in the land to the Town for recreational purposes; and 2. The legal liability of owners of land over which the pathway will be located and of the Town arising out of its maintenance and operation of the pathway. The opinions expressed in this letter are intended for the guidance of the Town only. Land owners who are contemplating transferring an interest in the land to the Town for the purposes of the Greenway Plan should be advised to seek the opinions of their own counsel.

I. CREATION OF THE PATHWAY

There are several legal means of creating a pathway such as is contemplated by the Greenway Plan. There are three essential ways of doing so: transfer of an easement; transfer of a fee simple interest; and dedication and acceptance.

An easement is simply a right to pass over land of another or to use that land for certain specified purposes. An easement is an interest in land that can be created by deed or by eminent domain taking (although I understand the Town does not wish to consider the latter alternative). Easements of various types can also arise by operation of the law, i.e., without the need for an express creation, but such easements are not within the scope of this letter. Disputes between landowners of holders of express easement over their land typically involve whether the use of the easement exceeds the scope of that granted. Thus, an easement should be created by language which, as specifically as possible, sets forth the purposes for which the pathway may be used and the activities which will be conducted on it. For example, the plan to ban motorized

vehicles from the pathway should be translated into the easement language itself so that the easement is specifically limited to pedestrian traffic. It should be noted that the owner of the land comprising an easement retains the right to use the land for any purpose not inconsistent with the easement. Thus, presumably the landowners would retain the right to cross over the easement from one portion of their land to another.

The second interest which the Town could acquire is a fee interest in the land. This would be no different from a transfer of a lot of land by one owner to another, and would give the Town full right of control over the land deeded. This gives the Town greater control and eliminates any possibility of disputes regarding scope of the use permitted within the pathway; however, there are certain aspects to the fee ownership which may be troublesome. First, the land comprising the path might in many cases divide one portion of the private landowners land from another requiring that the deed retain easements in the property owner over the path. This is not a tremendous obstacle but is obviously somewhat more cumbersome than the granting of an easement rather than a fee to the Town for the pathway. Also, the interest is more costly than an easement. The above may not be serious obstacles; however, at this point, I do not see why an easement interest to the Town would not serve all the purposes that a fee interest would serve. The difference seems to be somewhat analogous to the difference between a Town way in which the Town owns the fee interest in the described roadway as against a Town way in which the Town owns a right-of-way or easement and the abutting landowners continue to own to the centerline. One is no less serviceable as a Town way than the other. The only time the difference becomes important is when the Town way is abandoned and questions of the ownership under the former Town way arise. Obviously, with regard to the pathway, buildings should be located on land owned by the Town and fee.

Whether a fee simple interest or an easement is used, a description of the pathway by metes and bounds should be set forth in the instrument creating the pathway. As we have discussed, this may require a survey. The third

method of creating in the public an interest in land is dedication and acceptance. This does not require a deed and, in fact, does not even require a written instrument. It requires an offer of the land to the municipality for use by the public and an acceptance by the municipality of the land for that purpose. This results in the described land being held in trust for use by the public. Dedication and acceptance is most commonly used in the creation of public parks and the like. I would not advise this method of creating the pathway be used unless the pathway is described by metes and bounds. Therefore, dedication and acceptance, while not requiring a deed, should not be viewed as a means of avoiding a specific description of the pathway, which should be developed in any event.

II. LIABILITY ISSUES

I have reviewed "A Guide to the Liability of Maine Land Owners Providing Public Access" prepared for the Maine Coastal Program, Department of Economic and Community Development dated June 7, 1988 which you forwarded to me. This document is a detailed legal analysis of liability issues for private landowners and governmental entities maintaining recreational land and providing access to such land. The discussion contained in that document is detailed and there is little that I can add although I will summarize the basic principles.

A. LIABILITY OF PRIVATE LANDOWNERS

As noted in the Guide, the Legislature has extended protection to private landowners who provide the public with access to their land for recreational and certain enumerated other purposes. 14 M.R.S.A. Section 159A. This statute relieves such private landowners from the obligation to maintain their property in a safe condition for those whom they allow to use their land for recreation. The issue of what is included in recreational activities is contained in pages 19-21 of the Guide. There are three exceptions, i.e., situations in which a landowner will be liable to persons on his land for recreation: 1. When the landowner engages in willful or malicious failure to guard or warn the user of the land against dangerous conditions.

Such conduct obviously goes far beyond negligence and does require in the words of the Guide "a high degree of malfeasance" on the part of the landowner. Secondly, a landowner who charges persons to use his land for recreation does not receive the protection of the statute. Finally, if the landowner owes a duty of care to a person on his land may be liable if that person is injured by a person on the land for recreation.

Outside of these exceptions, the statute gives broad protection to landowners who allow access to their land for recreation.

B. LIABILITY OF MUNICIPALITIES

While 14 M.R.S.A. Section 159A provides protection only to private persons, the Maine Tort Claims Act does provide broad protection to municipalities in the ownership and maintenance of recreational land. The Tort Claims Act provides immunity from civil actions for damages for tort claims in all but certain specified cases. None of those specified grounds for suit apply to the ownership and maintenance of recreational land. Moreover, the Maine Tort Claims Act specifically states that notwithstanding liability for negligent acts or omissions in the construction, operation or maintenance of any public building, the governmental entity is not liable for any claim which results from the construction, ownership, maintenance or use of unimproved land; and land, buildings, structures, facilities or equipment designed for use primarily by the public in connection with public outdoor recreation. 14 M.R.S.A. Section 8104-A (2) (A) (1), (3). **It would seem clear that the operation and maintenance of the pathway by the Town is unlikely to subject the Town to any liability.**

As pointed out in the Guide, liability of employees stands on a slightly different footing from the liability of the municipality. See Id. at 10 through 12. However, even where liable, the employee would be protected by the $10,000.00 limitation on claims.

As pointed out by the Guide, the Federal Civil Rights Act could potentially result in liability on the part of the Town and/or its employees for violations of Constitutional Rights,

and potentially from gross or reckless actions which result in the deprivation of such rights. However, mere negligence on the part of the Town or its employees is probably not under existing United States Supreme Court case law sufficient to result in liability under the Civil Rights Act.

Because of the nature of the questions asked, this letter is necessarily somewhat general. I would be happy to answer more specific questions as they arise.

mapping

MAP INDEX

Map 1: land ownership*

Map 2: land cover

Map 3: topographic configuration

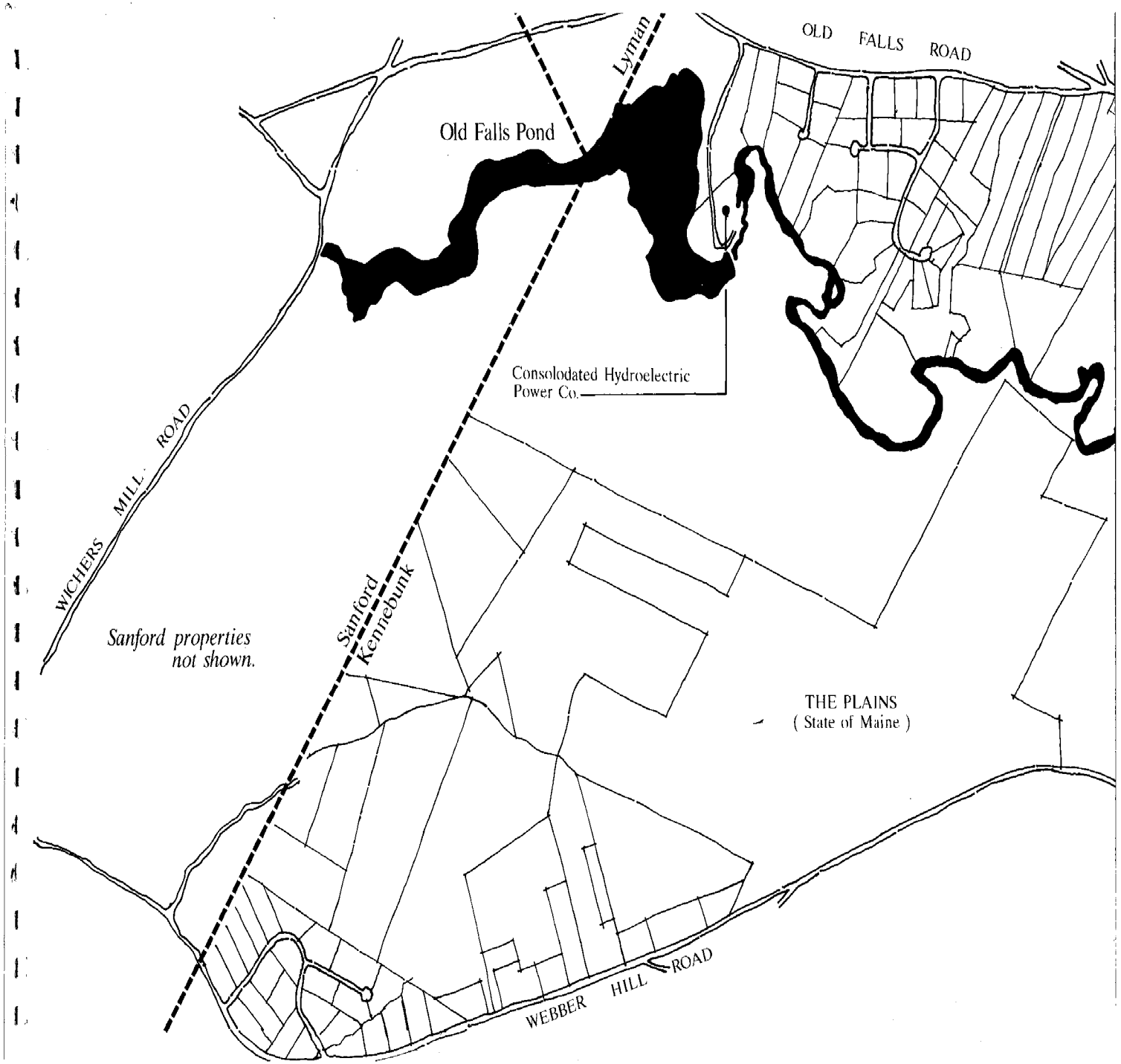
Map 4: wetland areas

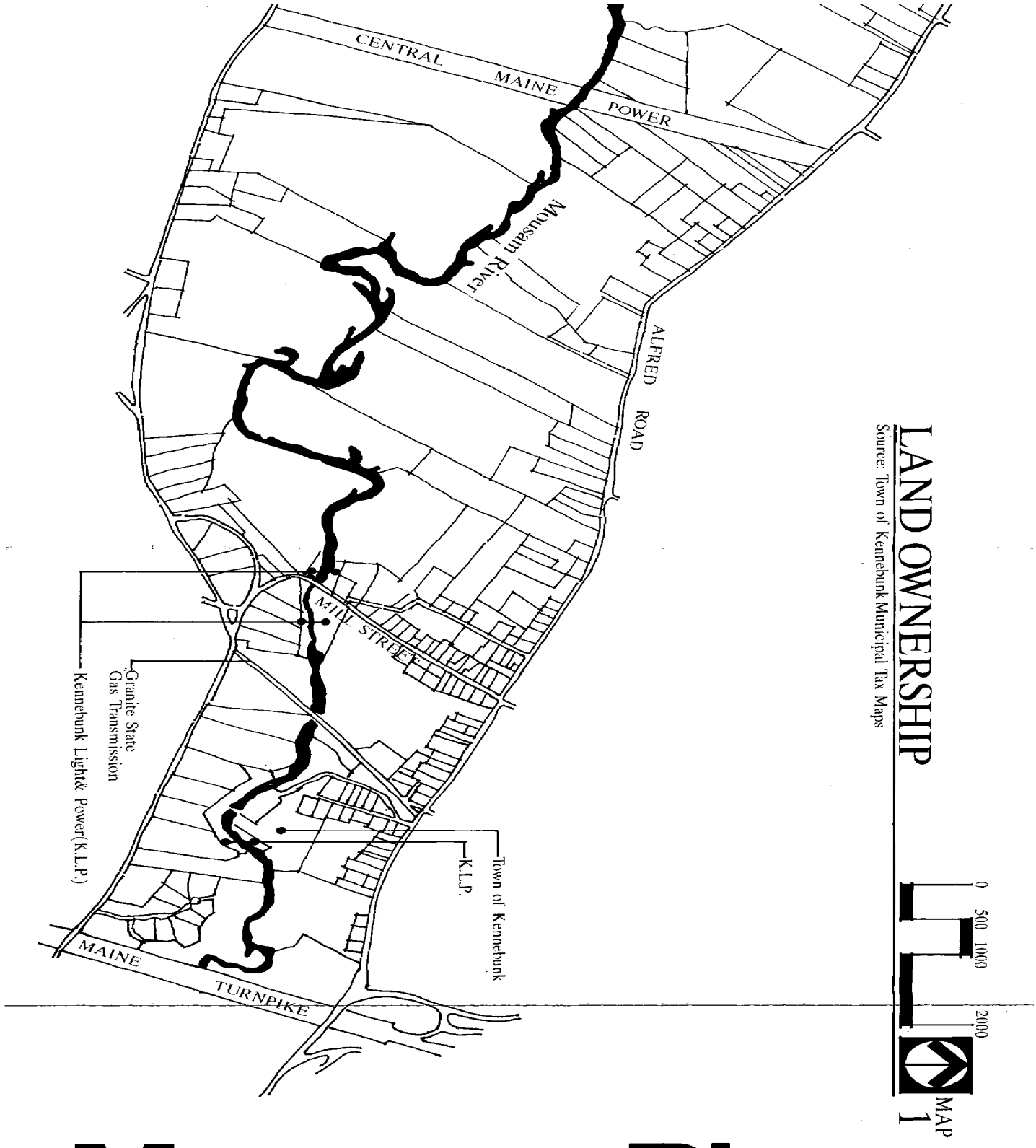
Map 5: the river corridor

Map 6: framework plan

Map 7: greenway recreation plan*

* full size maps are available for inspection at Kennebunk Town Hall.


OLD FALLS ROAD
Lyman
Old Falls Pond
Consolodated Hydroelectric
Power Co.
WICHERS MILL ROAD
Sanford properties
not shown.
Sanford
Kennebunk
THE PLAINS
(State of Maine)
WEBBER HILL ROAD

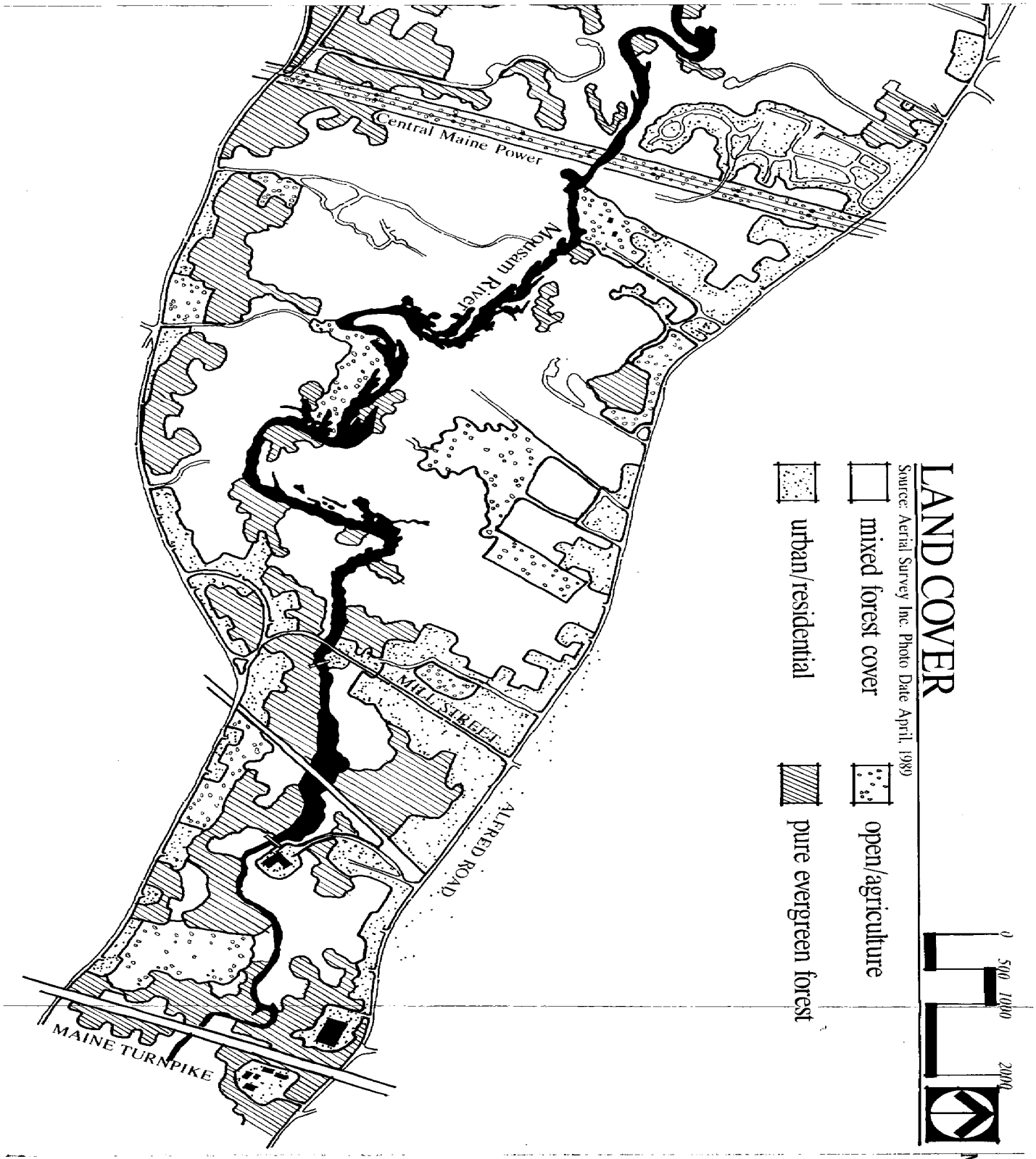


Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.



Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.

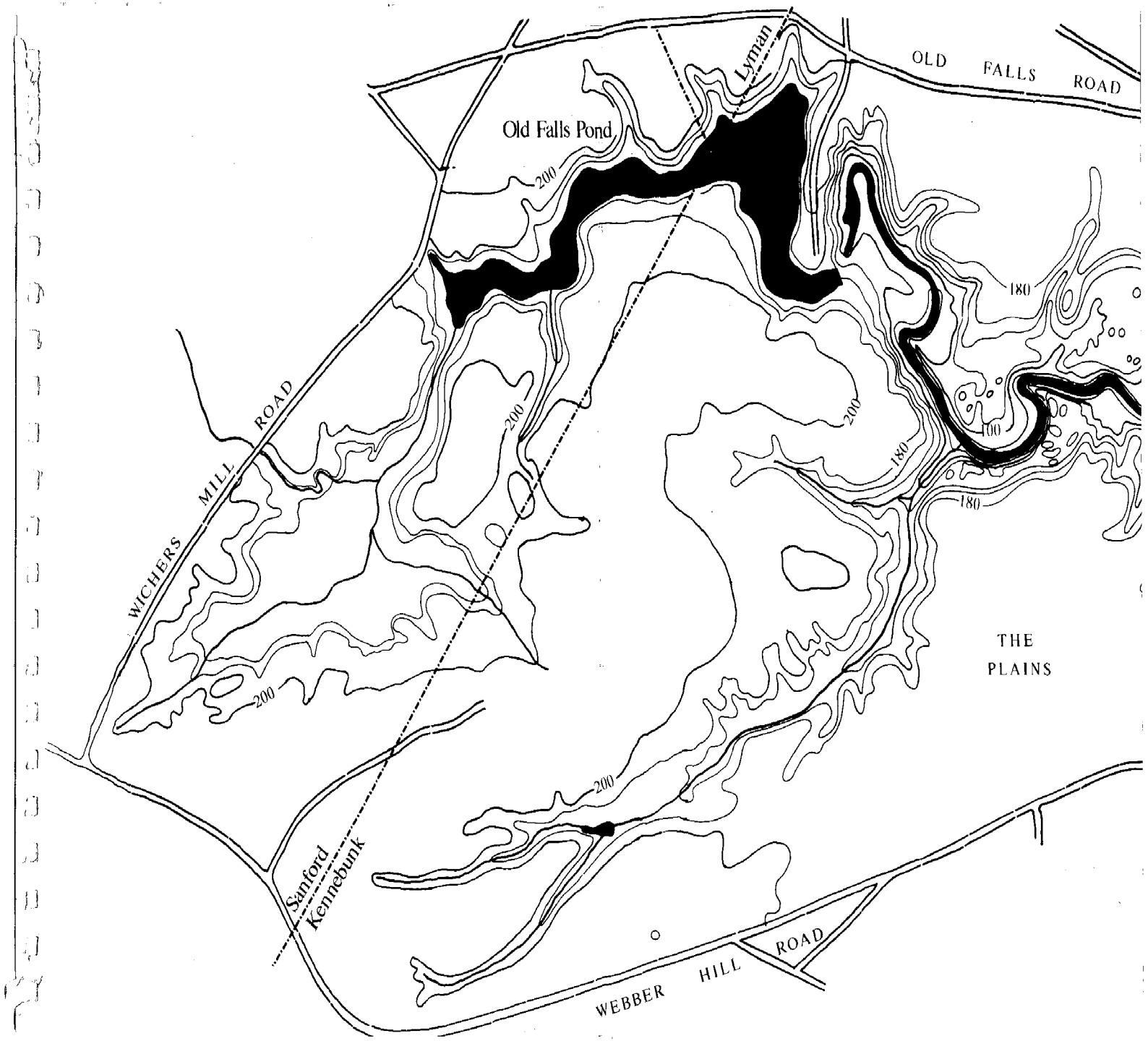
THE PLAINS
WEBBER HILL ROAD
Old Falls Pond
Sanford
Kennebunk
WICHERS MILL ROAD

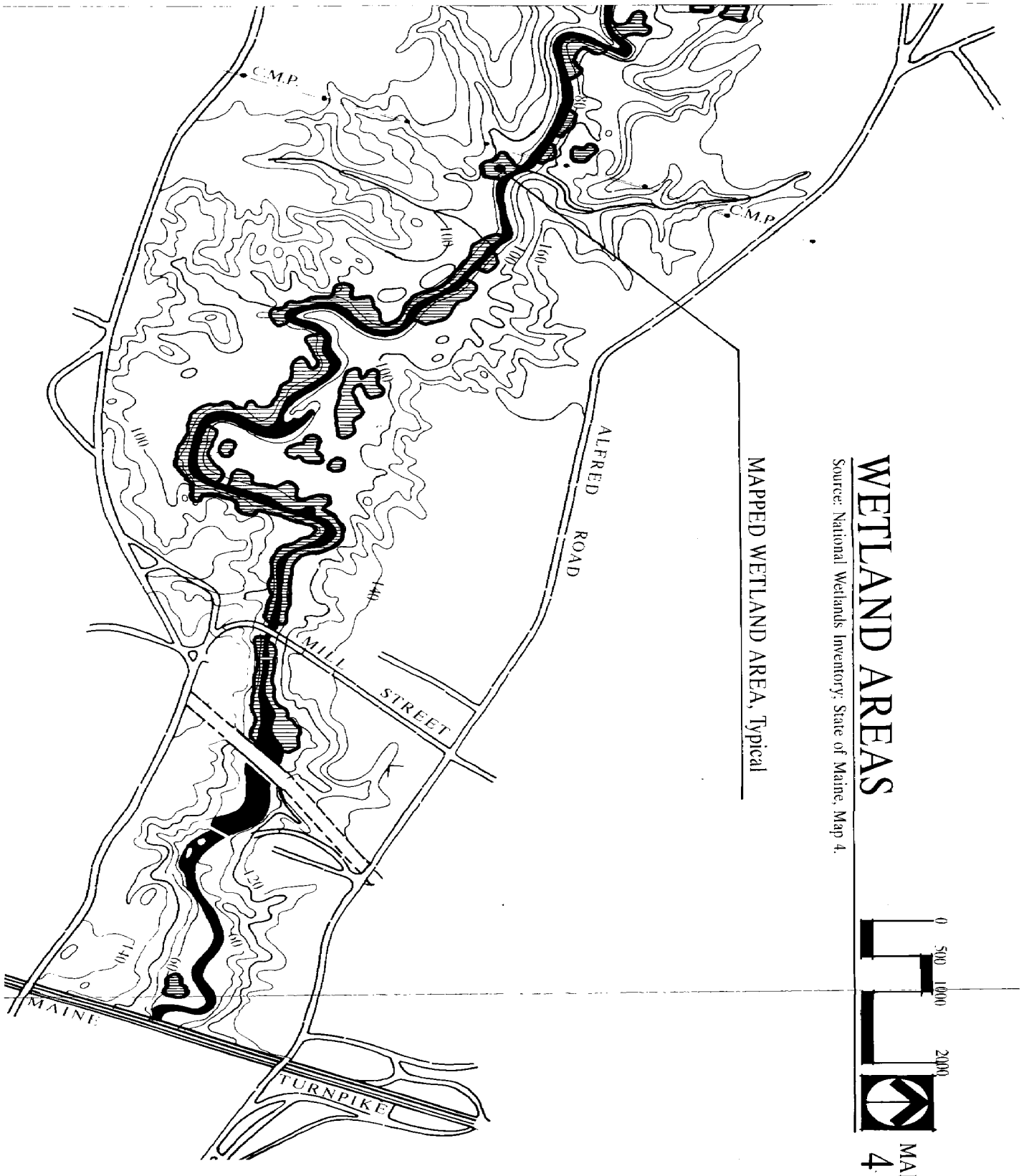
Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.


OLD FALLS ROAD
Lyman
Old Falls Pond
200
180
100
WICHERS MILL ROAD
THE PLAINS
Sanford
Kennebunk
WEBBER HILL ROAD

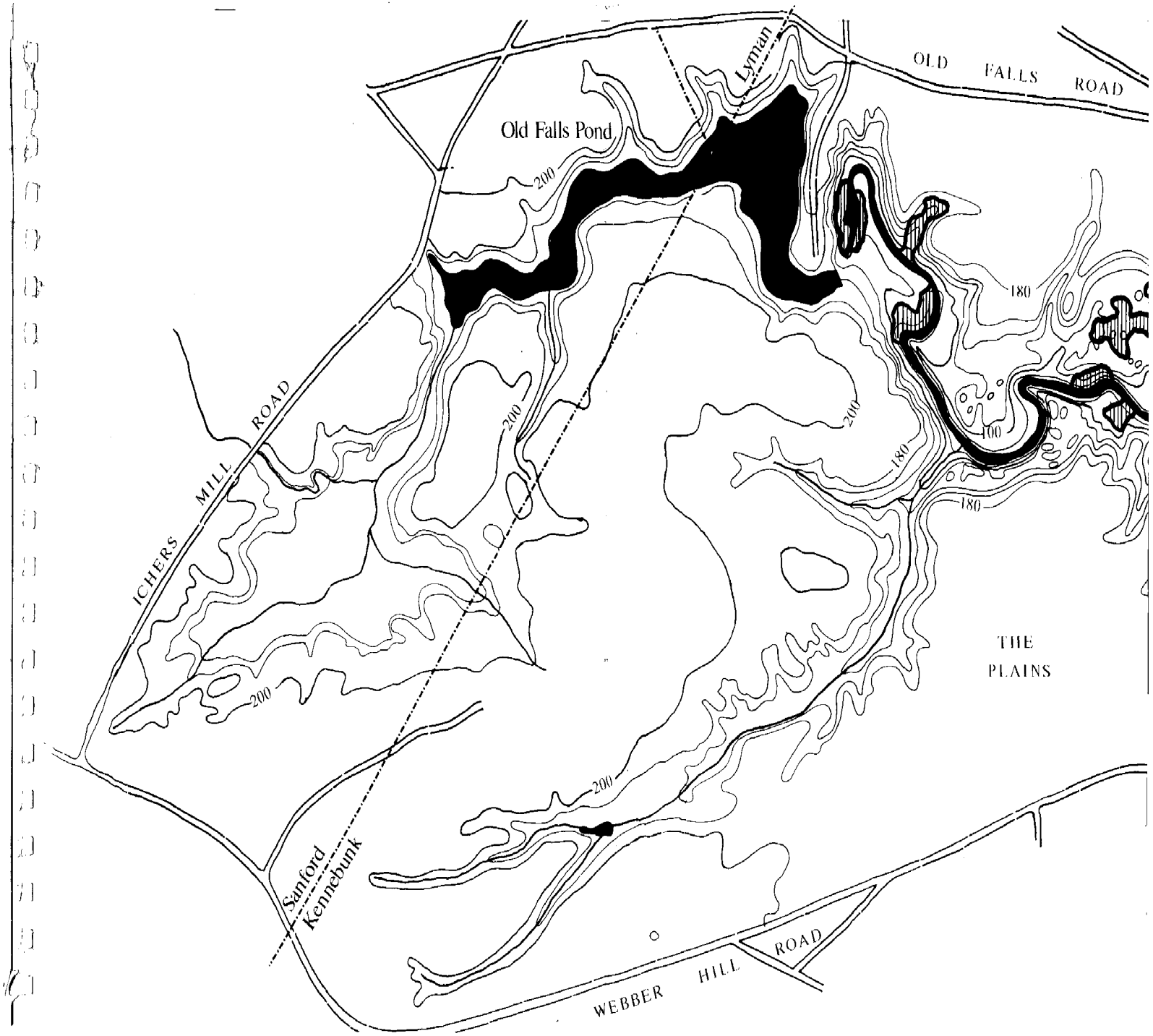


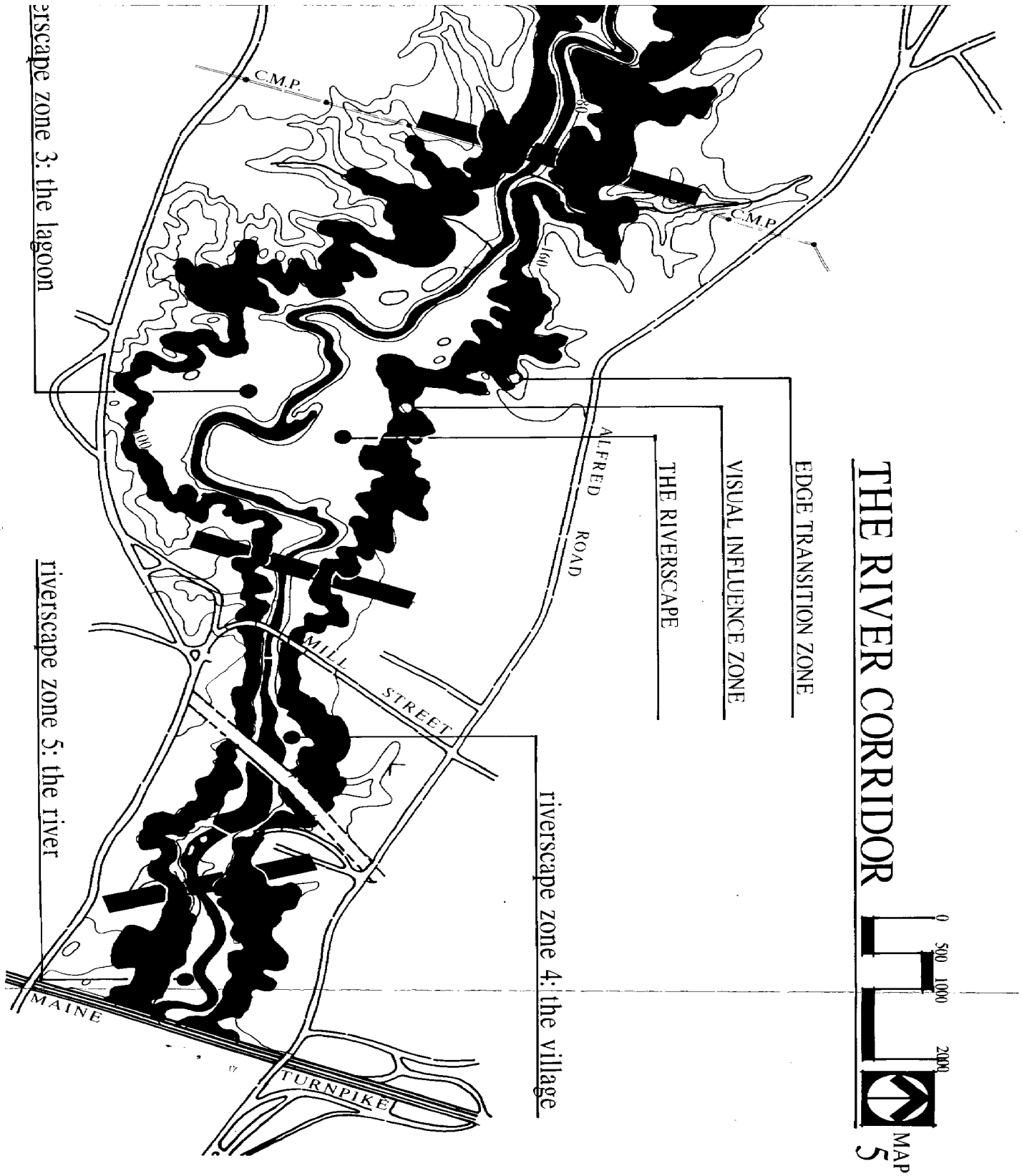
Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.


Old Falls Pond
Lyman
OLD FALLS ROAD
ICHERS MILL ROAD
THE PLAINS
Sanford
Kennebunk
WEBBER HILL ROAD
200
180
100

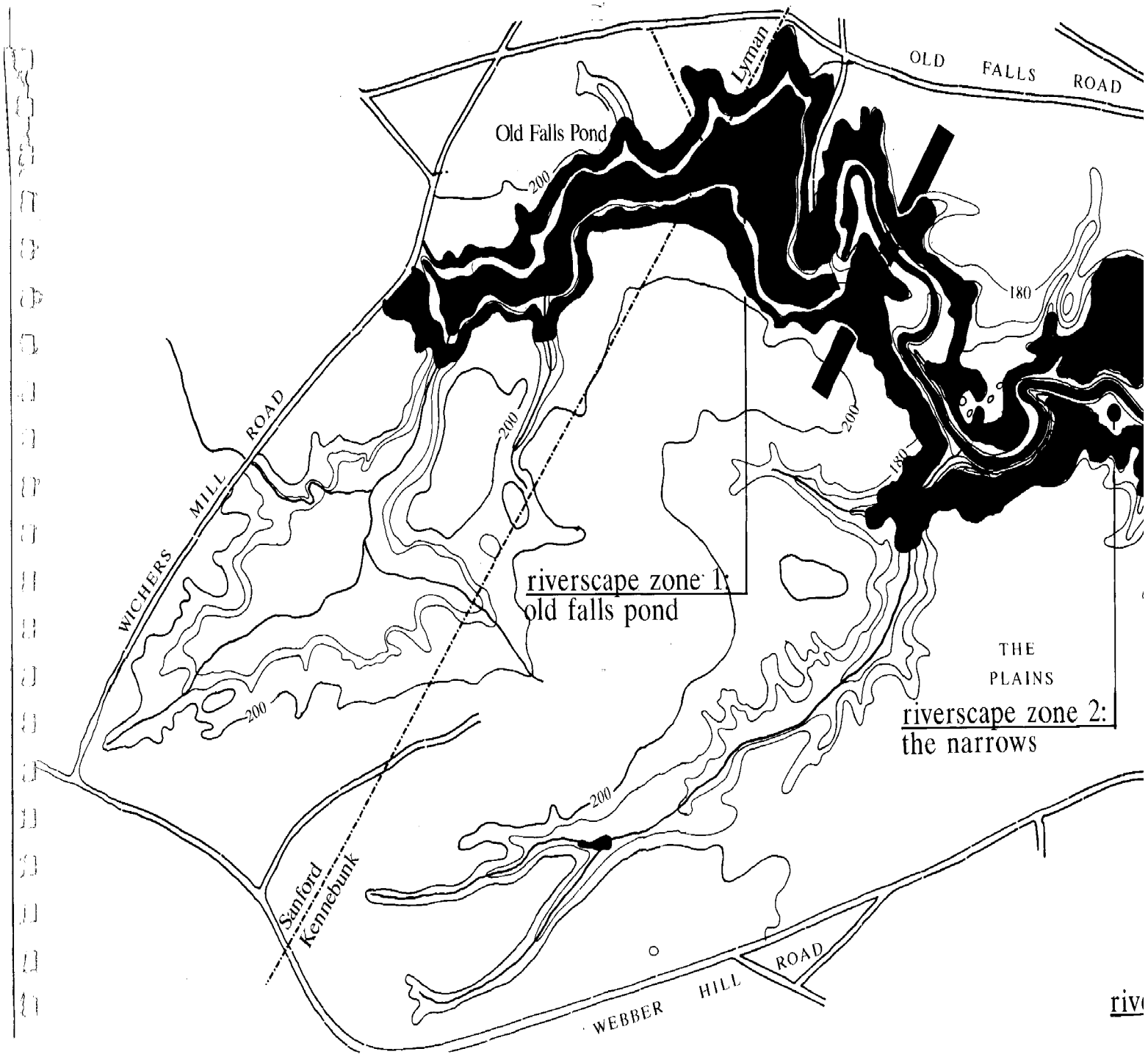


Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.

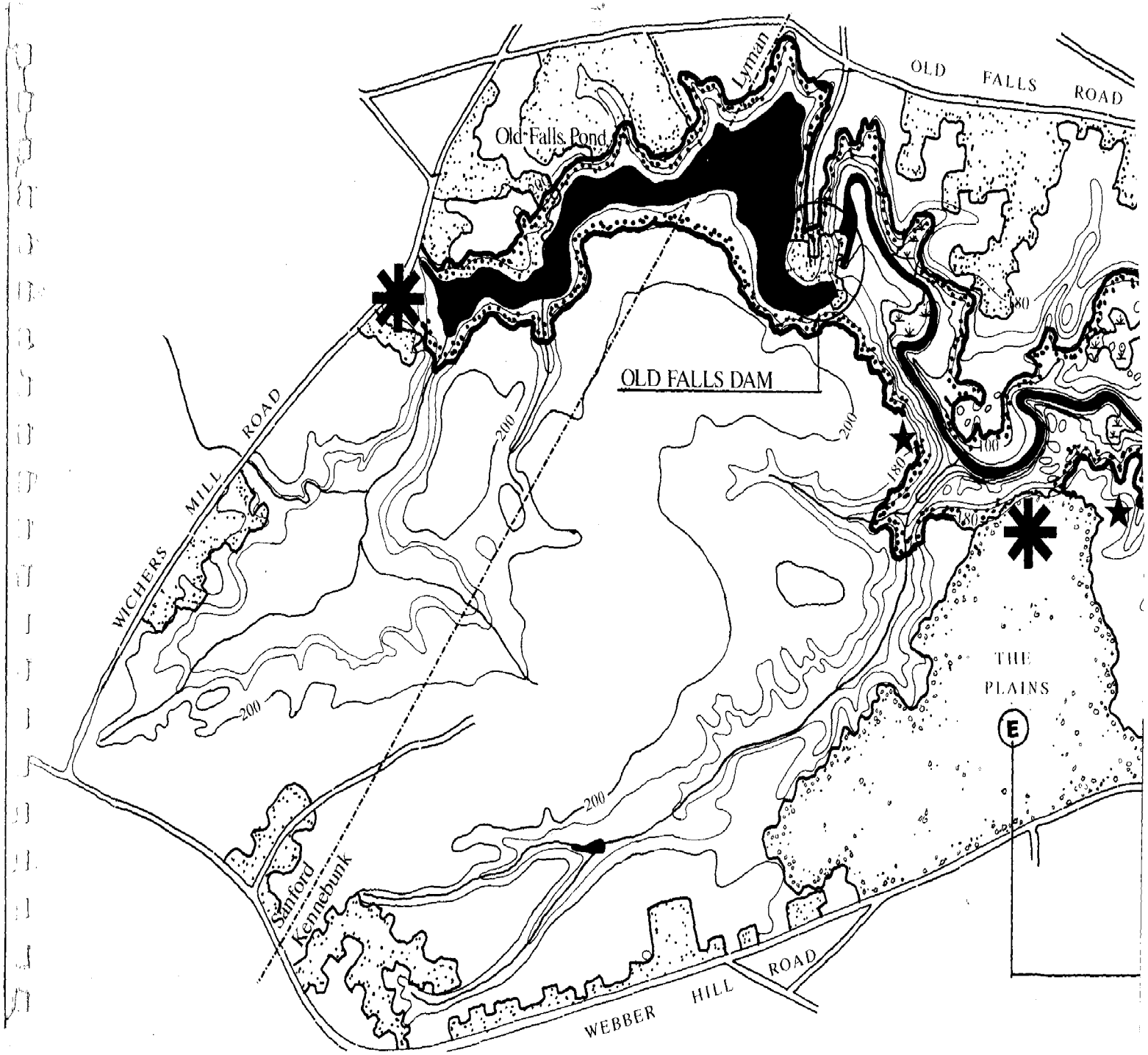

OLD FALLS ROAD
Lyman
Old Falls Pond
200
180
WICHERS MILL ROAD
riverscape zone 1:
old falls pond
THE PLAINS
riverscape zone 2:
the narrows
Sanford
Kennebunk
WEBBER HILL ROAD

Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.

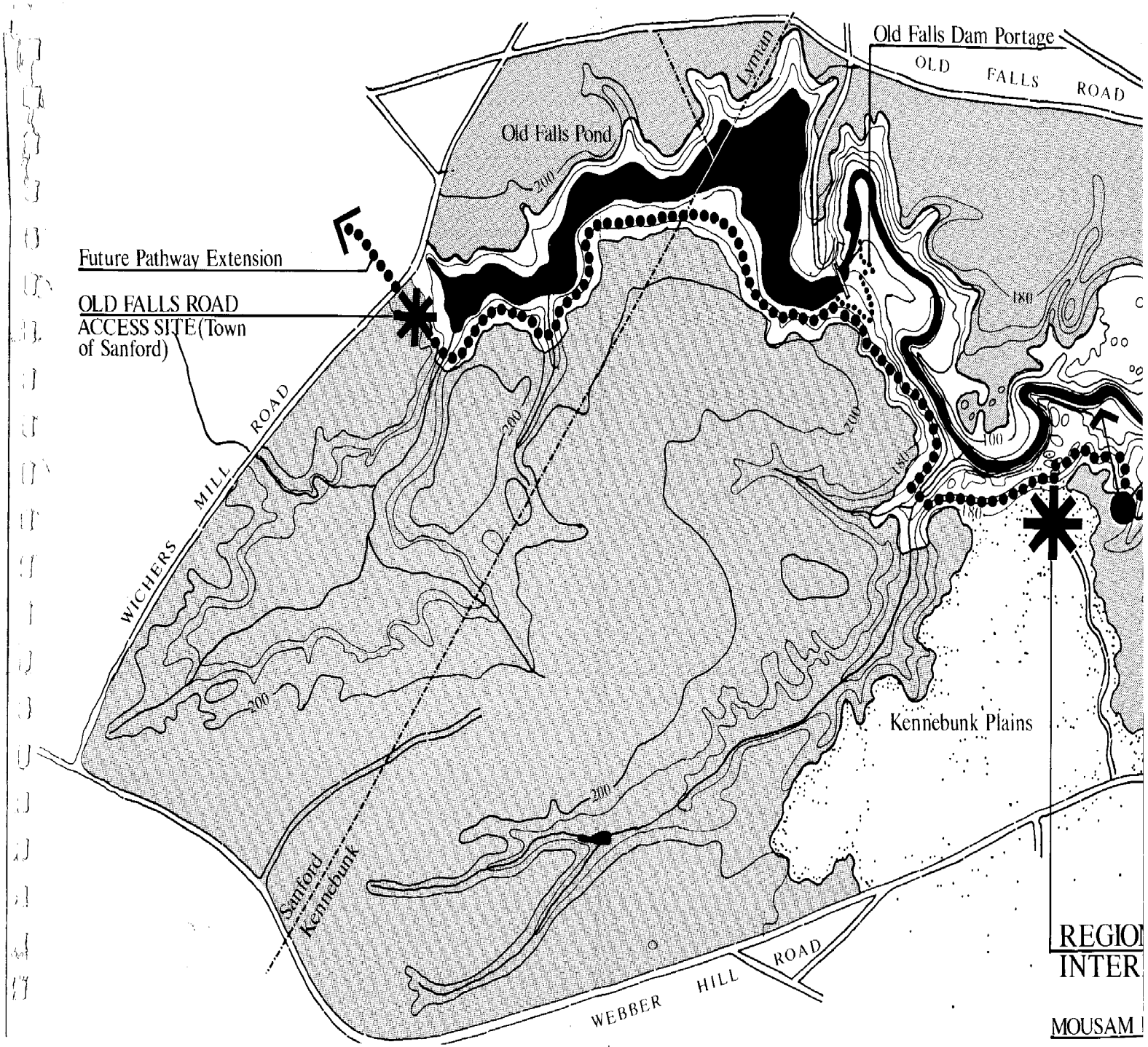

Old Falls Pond
Lyman
OLD FALLS ROAD
OLD FALLS DAM
WICHERS MILL ROAD
THE PLAINS
E
Sanford
Kennebunk
WEBBER HILL ROAD
200
180
100
80

Mousam River Greenway Plan

A Study by The Kennebunk Conservation Commission

July 1990

Study Consultant: Sebago Technics, Inc.


Old Falls Dam Portage
OLD FALLS ROAD
Old Falls Pond
Lyman
Future Pathway Extension
OLD FALLS ROAD
ACCESS SITE(Town of Sanford)
WICHERS MILL ROAD
Kennebunk Plains
Sanford
Kennebunk
WEBBER HILL ROAD
200
180
160
100

NOAA COASTAL SERVICES CENTER LIBRARY
3 6668 14102 9647