

Natural Resources Inventory and Assessment

February 1998



Listing of Valley Sites

John H. Chafee

BLACKSTONE RIVER VALLEY

National Heritage Corridor Commission



VALLEY SITES

HIGH VALUE VALLEY SITES WITH PAST AND ON-GOING INITIATIVES

1. Daniel's Farm (32)

Description

Daniel's Farm is a 188+ acre 18th century farm still owned by the original family. It is a significant historic site, representing a typical New England farm. Cultivated fields and undeveloped woodlands provide good habitat and critical open space within a belt of rapidly suburbanizing farmland that stretches from northern Blackstone to Mendon Center. Situated along an outermost Valley ridge, it also has a tremendous view of Boston. In addition, the land and farm buildings (where a cider press still exists) have excellent interpretive value.

Issues

The owner wishes to preserve the farm, but it is uncertain whether the appropriate legal mechanisms are in place. Previously, the Commission brought the FDIC, the Metacomet Land Trust, and MA Fish & Wildlife together to purchase an adjacent FDIC property and a portion of the Daniel's land. The sale went through and was transferred to MF&W as a preserve.

Recommendations

- Continue to work with the property owner, Metacomet Land Trust, and the Town toward a comprehensive preservation solution.
- As an interim step, collaboratively develop a management plan for the property assuming a life estate for the owner.

2. Chase Farm (56)

Description

Chase Farm, owned by the Town of Lincoln, RI is located along the historic Great Road. The area is known for its preserved landscapes and historic sites related to colonial times, early industry, and dairy farming. These historic sites along the Great Road are preserved and managed by Town and State agencies, and by private parties, such as The Society for the Preservation of New England Antiquities. A trail system (away from the road) has been suggested to connect protected properties with open space at Chase Farm.

Issues

Several years ago, the Town requested that the Corridor Commission assist with the design of appropriate landscaping at the Farm and adjacent sites. Concerned that the farm not lose its agricultural setting to suburban landscaping and programmatic elements, such as parking, the Commission developed a Historic Landscape Assessment for all Town properties along Great Road. It included a series of recommendations for improving recent landscape additions and development of a master plan recommending how the Farm and related sites might be used by the public in the future.

Recommendations

- Promote the Historic Landscape Assessment Report to the Town and relevant agencies in order to address preservation of the agricultural landscape.
- Collaborate with the Town and other property owners to establish a trail network to connect sites along Great Road and interpret the area.

3. Intact Western Forests (60)

Description

The forests of Douglas, MA, western Burrillville and Glocester, RI are extensive 2nd and 3rd growth stands. None of them have been logged since the 1950's, and some have not been touched since 1910. They include the Douglas State Forest, Sprague Hill and other areas protected by the two states. The Rhode Island portion is the largest contiguous forest in the state. The North/South Trail (in Rhode Island) is now being developed through this area to connect to the Mid-State Trail traversing the Douglas State Forest.

Issues

The Douglas State Forest is threatened by a proposal for a regional landfill. The same project would also threaten the forested areas of Rhode Island due to its size and potential for groundwater contamination. Encroaching development in the Rhode Island forests poses another serious threat.

Recommendations

- Continue to oppose the proposed sanitary landfill in Douglas State Forest as a direct threat to natural and cultural resources significant to the Heritage Corridor.
- Support continued land protection of the forests and adjacent properties by the Towns, conservation organizations, and State DEMs.
- Support the development of the North/South Trail by RIDEM as an important recreational feature in the Corridor, and encourage a link to northern portions of the forest.

4. Waters Farm (25)

Description

Waters Farm is a well-preserved 18th-Century farm where many heritage programs linked to the Corridor are carried out in partnership. This hilltop farm offers striking views out over Manchaug Pond.

Issues

The key issue for Waters Farm is development within the viewshed of Lake Manchaug.

Recommendations

- Encourage the Towns of Sutton and Douglas to explore early planning tools to avoid the visual intrusions that infringe on River Bend Farm in Uxbridge.

5. Purgatory Chasm (18)

Description

This small state park is situated within the Sutton State Forest. The chasm is a unique geologic feature in southern New England, and is protected.

Issues

Private development poses some threat to the quality of the resource and experience.

Recommendations

- Support continued land protection by MADEM and others around and within the State Park to better secure the resource.
- Develop interpretive opportunities.

SUBREGIONS

Subregion 1: Worcester/Leicester

The City of Worcester and the Town of Leicester are two new additions to the Blackstone River Valley National Heritage Corridor. They comprise much of the headwaters of the Blackstone River and are the northern most towns in the Corridor. This subregion is somewhat higher terrain than the Valley communities, and is characterized by many brooks and waterways which drain together to form the beginning stretch of the Blackstone River.

As the largest urban area within the Corridor, Worcester's challenge will be to reclaim and improve its water resources by mitigating water pollution. Preserving existing greenways along river corridors and creating new corridors in the headwater communities will improve water quality flowing into the upper Blackstone. Sites like Coal Mine Brook & Worcester Coal Mine, Cider Mill Pond and Park and Cascade Waterfall are examples of natural resources in Worcester that host endangered wildlife, but are threatened due to pollutants and development impacts.

Commission Recommendations:

- Support the City of Worcester, Massachusetts Audubon and others for river restoration projects to "daylight" or open brooks and waterways now in culverts. Support, in particular, the continued investigation to open up Beaver Brook and Broad Meadow Brook.
- Encourage the City to continue to correct problems associated with illegal sewer connections and sewage overflow leading into the Blackstone River.
- Assist the Town of Leicester and the Worcester Airport in determining mitigation for impacts from airport surface runoff on the surrounding waterways, such as silting and the release of deicing chemicals into the water stream.
- Coordinate and assist communities, like Worcester, within the Route 146 corridor to manage land use issues, and seize opportunities for greenway and neighborhood development.

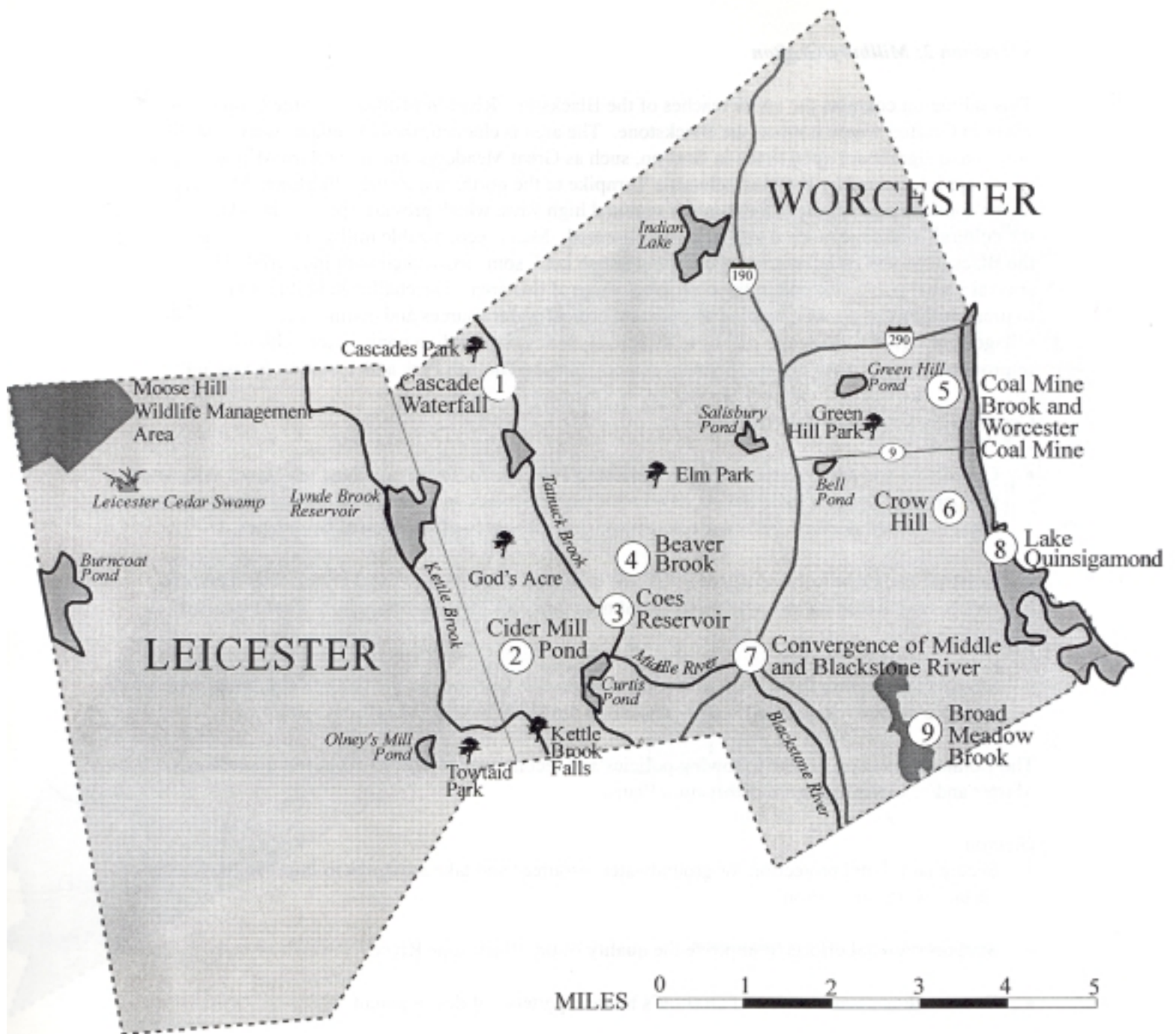
The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Leicester

- Prevent development from encroaching around Kettle Brook and its connecting ponds; educate homeowners and businesses about keeping waterways clean.

Worcester

- Support the protection of the 30 acre parcel known as Cascades East to link a several hundred acre open space greenbelt in northern Worcester.
- Support the development of a trails system and interpretive opportunities in Cider Mill Park.



Subregion 1 Leicester/Worcester

Subregion 2: Millbury/Grafton

This subregion contains the upper reaches of the Blackstone River in Millbury and the Quinsigamond River in Grafton where it meets the Blackstone. The area is characterized by upland farms, suburban homes and significant open space in Grafton, such as Great Meadows, and in western Millbury. Both towns are intersected by the Massachusetts Turnpike to the north, and Route 146 bisects Millbury. The towns contain connections to these major regional highways, which provide opportunities but also put the cultural landscape more at risk of being obscured. Many recognizable mill villages are dotted along the Blackstone and its tributaries. Ponds and marsh land, some associated with industrial landscapes, and several vernal pools also add to the ecological value of this area. The challenge in this subregion will be to preserve key open space, helping to maintain critical water sources and distinctive edges of mill villages. Part of this challenge will be to effectively manage growth in conjunction with Route 146 improvements and emerging employment centers, like the Biotech Park and T Station in Grafton.

Commission Recommendations:

- Coordinate and assist communities in the Route 146 corridor to manage land use issues associated with growth: the new interchange, new employment centers, increased land demand for different uses, increased demand for water resources and preservation of traditional landscapes.
- Promote the Technical Assistance Program funded by the Environmental Protection Agency to reduce toxins coming into wastewater treatment facilities through community awareness and participation.
- Support the Grafton Land Trust in its efforts to protect land around the Grafton Common, which will preserve natural resources as well as enhance a landmark setting for cultural resources.

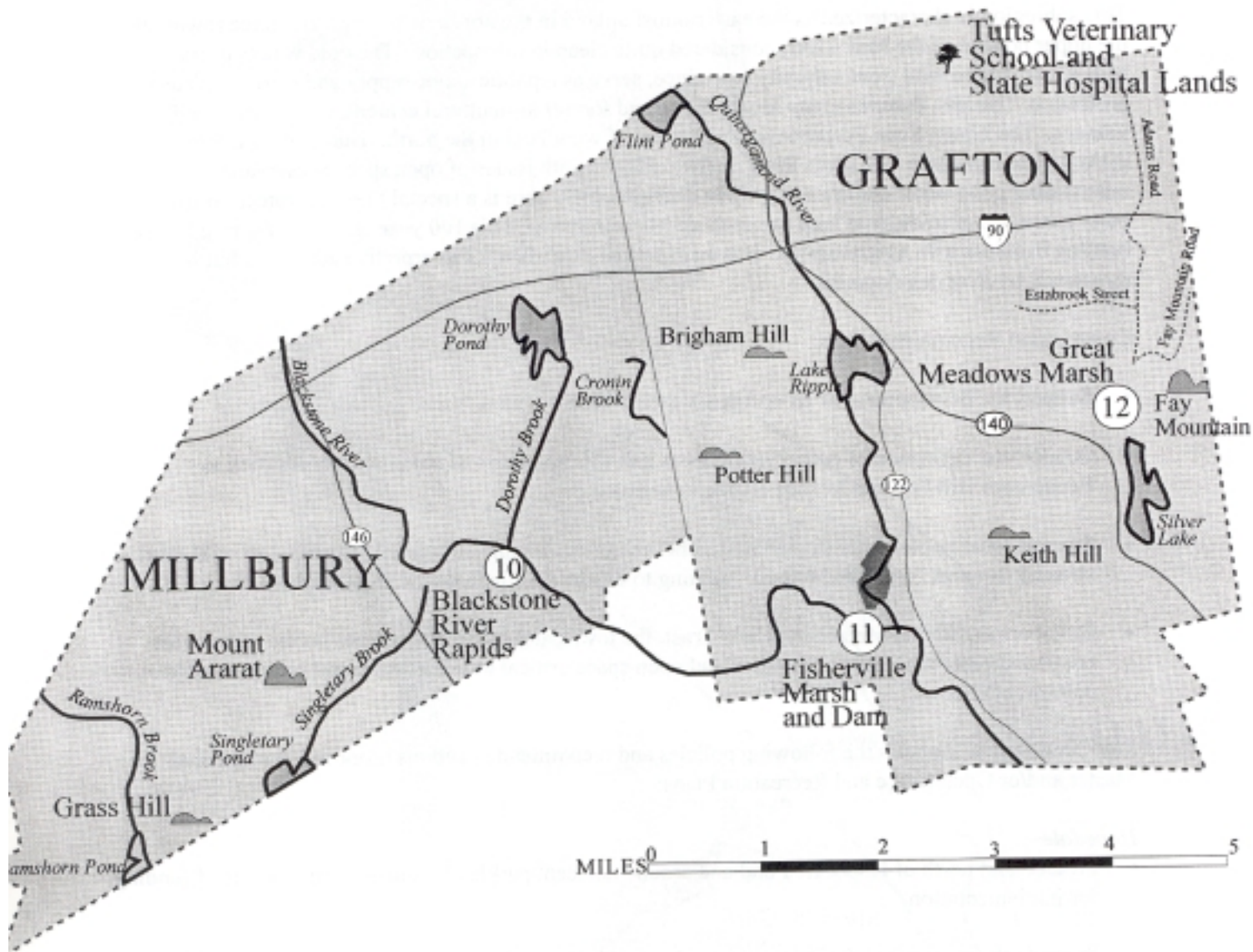
The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Grafton

- Secure additional protection for groundwater resources and take measures to improve the quality of surface water in Grafton.
- Support regional efforts to improve the quality of the Blackstone River.
- Encourage the continuation of Grafton's historic patterns of development.
- Protect farms through local actions, and protect ecologically sensitive lands.

Millbury

- Utilize the acres of land presently dedicated to power transmission lines for wildlife corridors, trails and paths for recreation and use as linear borders.
- In recognition of residents' strong preference to keep West Millbury open, explore zoning revisions and land protection strategies for open space preservation.
- Create smaller mixed-use commercial village areas in designated suitable locations, and increase the population densities around Millbury Center to retain businesses and provide convenient residential locations for older age groups.



Subregion 2 Millbury/Grafton

Subregion 3: Upton/Hopedale/Mendon

This subregion is characterized as the easternmost upland in the northern Valley. The three towns share the upper portion of the Mill River, considered quite clean in this section. The cold waters of the upper Mill River, where wild trout naturally reproduce, serve as a public water supply and warrant adequate protection. The area features many lovely farms and former agricultural centers, in addition to mill villages. The Upton State Forest covers vast areas of woodland in the north. Due to their close proximity to Interstate 495, these three towns are faced with issues of open space preservation, maintaining good water quality and growth management. There is a special need to protect farmland and other examples of traditional land use such as Miscoe Spring. This 100 year old natural spring is an old bottling business with a rich history. It is an excellent candidate for interpretive activities, but is threatened by over development.

Commission Recommendations:

- Support the development of an updated Master Plan for Upton.
- Support the expansion of conservation areas and the protection of unique resources such as Peppercorn Hill Fen and Miscoe Spring in Mendon.
- Support local implementation of the Rivers Protection Act and additional protection of wild trout streams; support “catch and release” angling to ensure sustainable wild trout populations.
- Collaborate with the Metacomet Land Trust, the towns and others to generate public support for continued protection of key farmland and open space critical to interpreting and preserving the cultural landscape.

The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Hopedale

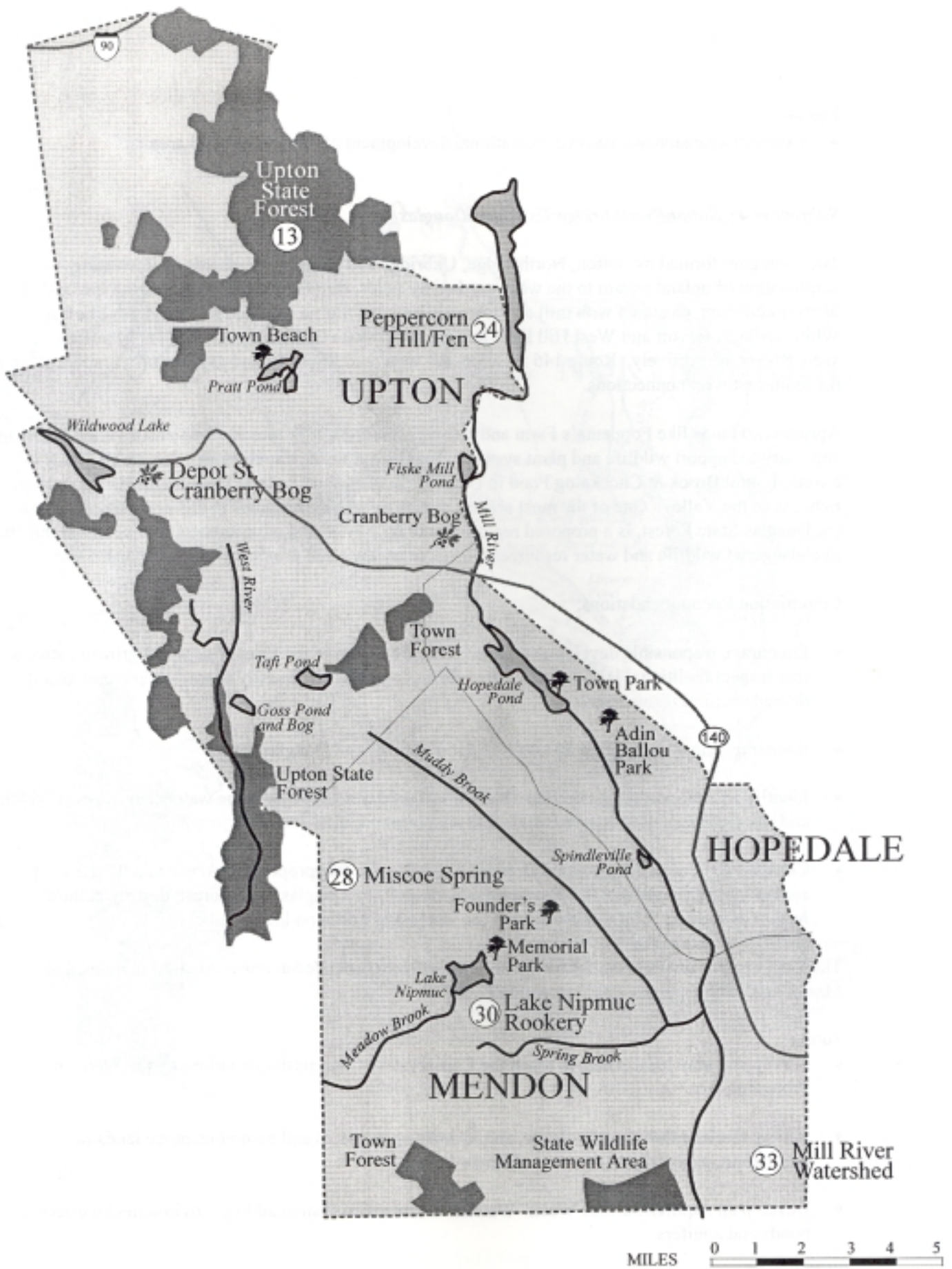
- Protect land north of Hopedale Pond and around adjacent parklands, and develop sources of funding for implementation.
- Promote the protection of water resources by developing a riverway conservation program for the entire course of the Mill River, certifying vernal pools, and developing a multi-town flowage plan for the North Pond Dam.

Mendon

- Implement actions to prevent overbuilding on sensitive aquifers, and to further delineate critical resources for protection.
- Pursue various funding options for protecting open space and encouraging the continuation of farming.

Upton

- Explore expansion and passive recreational development of Peppercorn Hill area.



Subregion 3 Upton/Mendon/Hopedale

Subregion 4: Sutton/Northbridge/Uxbridge/Douglas

The subregion formed by Sutton, Northbridge, Uxbridge and Douglas represents an interesting combination of upland terrain to the west, marked by fields, farmland and forests, and the lowland areas of river corridors, clustered with mill and town settlements. Large dammed river systems like the Whitinsville Reservoir and West Hill Dam join the Blackstone in this subregion as the Mumford and West Rivers, respectively. Route 146 transects this area, and Route 16 and the Central Turnpike serve as the main east/west connections.

Agricultural lands like Foppema's Farm and Keown's Farm offer treasured views and a varied landscape necessary to support wildlife and plant systems. Significant water resources like Stockwell Ponds in Sutton, Laurel Brook & Chockalog Pond in Uxbridge and Wallum Lake in Douglas add to the ecological richness of the Valley. One of the most serious threats to natural resources in this area, specifically to the Douglas State Forest, is a proposed regional landfill. Visual and odor impacts, and potential threats to endangered wildlife and water resources are feared by the close proximity of the proposed site.

Commission Recommendations:

- Encourage responsible development throughout the region in the form of compact growth patterns that respect traditional landscapes, built scale that respects community character, and uses that do not degrade natural resources.
- Encourage the adoption of a Master Plan for Uxbridge and Douglas.
- Identify and support the protection of additional wild trout streams in the watershed; support "catch and release" angling to ensure sustainable wild trout populations.
- Continue to oppose the proposed Douglas Landfill as an inappropriate land use that threatens to contaminate groundwater in two watersheds, despoil the Douglas State Forest, destroy cultural resources and add solid waste trucks to the increasing traffic on local roads.

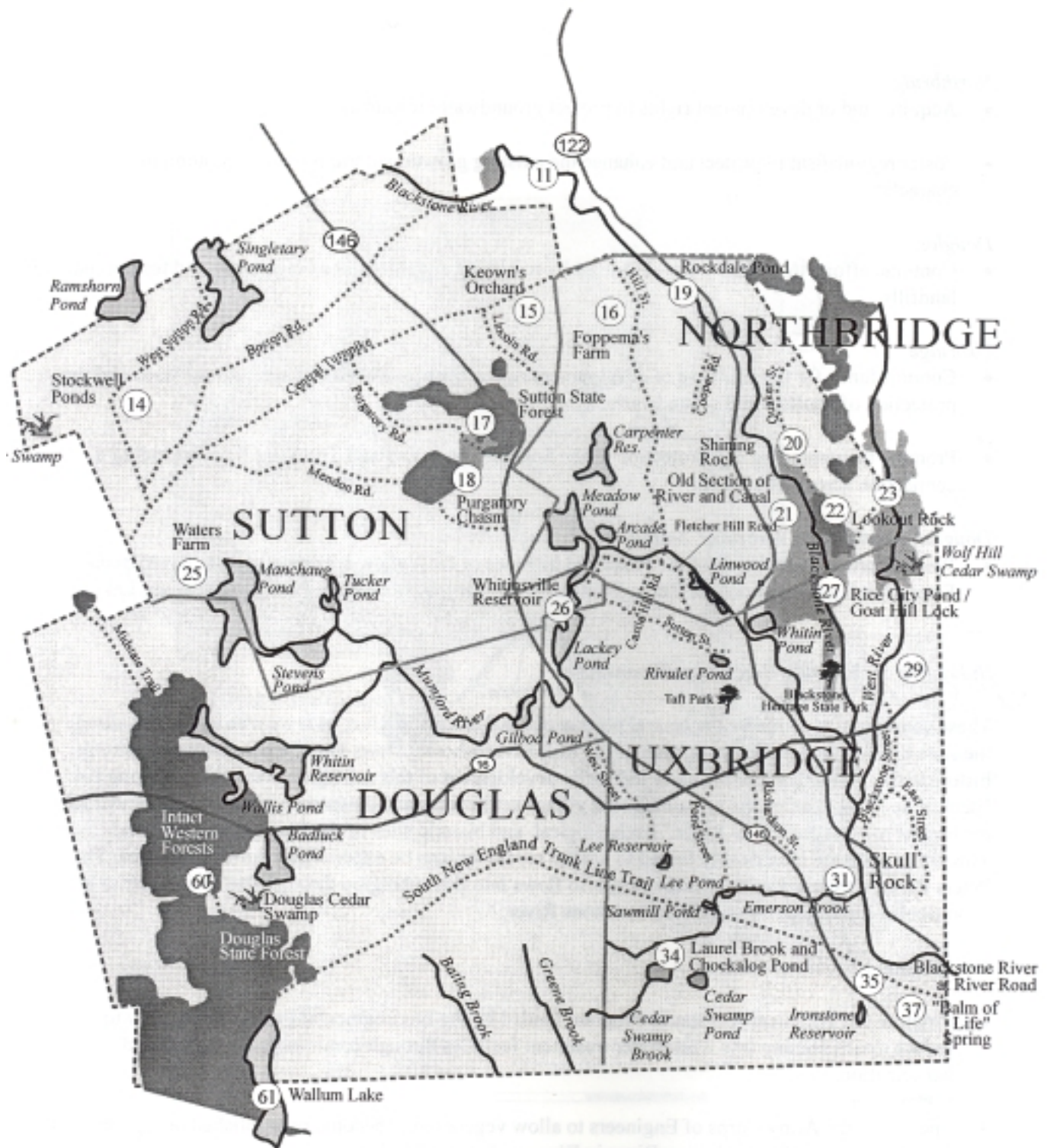
The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Sutton

- Survey and map local ponds to assist the Conservation Commission in enforcing the Wetlands Protection Act.
- Survey rare and threatened wildlife, and identify open spaces and natural resource lands for acquisition, especially to the west of Route 146.
- Develop an Aquifer/Surface Water/ Watershed Protection Plan to address environmental effects on ponds and aquifers.

Northbridge

- Acquire land or development rights to protect groundwater resources.
- Foster regionalism to protect and enhance the existing growth pattern, promoting community character.



Subregion 4 Sutton/Northbridge/Uxbridge/Douglas

Douglas

- Continue efforts to protect water resources by removing underground storage tanks and testing old landfills.

Uxbridge

- Commit funds for the purchase of development rights, the preservation of agricultural lands and the protection of aquifers and groundwater.
- Promote the upgrading and protection of the Southern New England Trunkline Trail including a connection across Route 146.

Douglas, Northbridge, Uxbridge, Sutton

- Work to protect viewsheds of the River and hillsides of the Valley, specifically from River Bend Farm, Shining Rock, Lookout Rock, Whitinsville Reservoir, Manchaug Pond, and Wallum Lake.

Subregion 5: Millville/Blackstone/Woonsocket

These communities comprise the central portion of the Blackstone River as it weaves in and out along the state borders, and the lower portion of the Mill River where it flows into the Blackstone. A strong historical focus and much of the early industrial development of this subregion was centered along the Blackstone River. Today, the remaining mill village settlements and downtown areas are a reminder of the central role played by the River. Archaeological and historic sites of the Blackstone Canal and Towpath, which are inextricably linked to natural resources, can be experienced through this area. The Peters River, a tributary of the Blackstone, also flows into this subregion through the Social district in Woonsocket just before entering the Blackstone River.

Commission Recommendations:

- Promote the Technical Assistance Program funded by the Environmental Protection Agency to reduce toxins coming into wastewater treatment facilities through community awareness and participation.
- Encourage the Army Corps of Engineers to allow vegetation to become reestablished on rip rap along sections of the Blackstone River in Woonsocket and Blackstone.

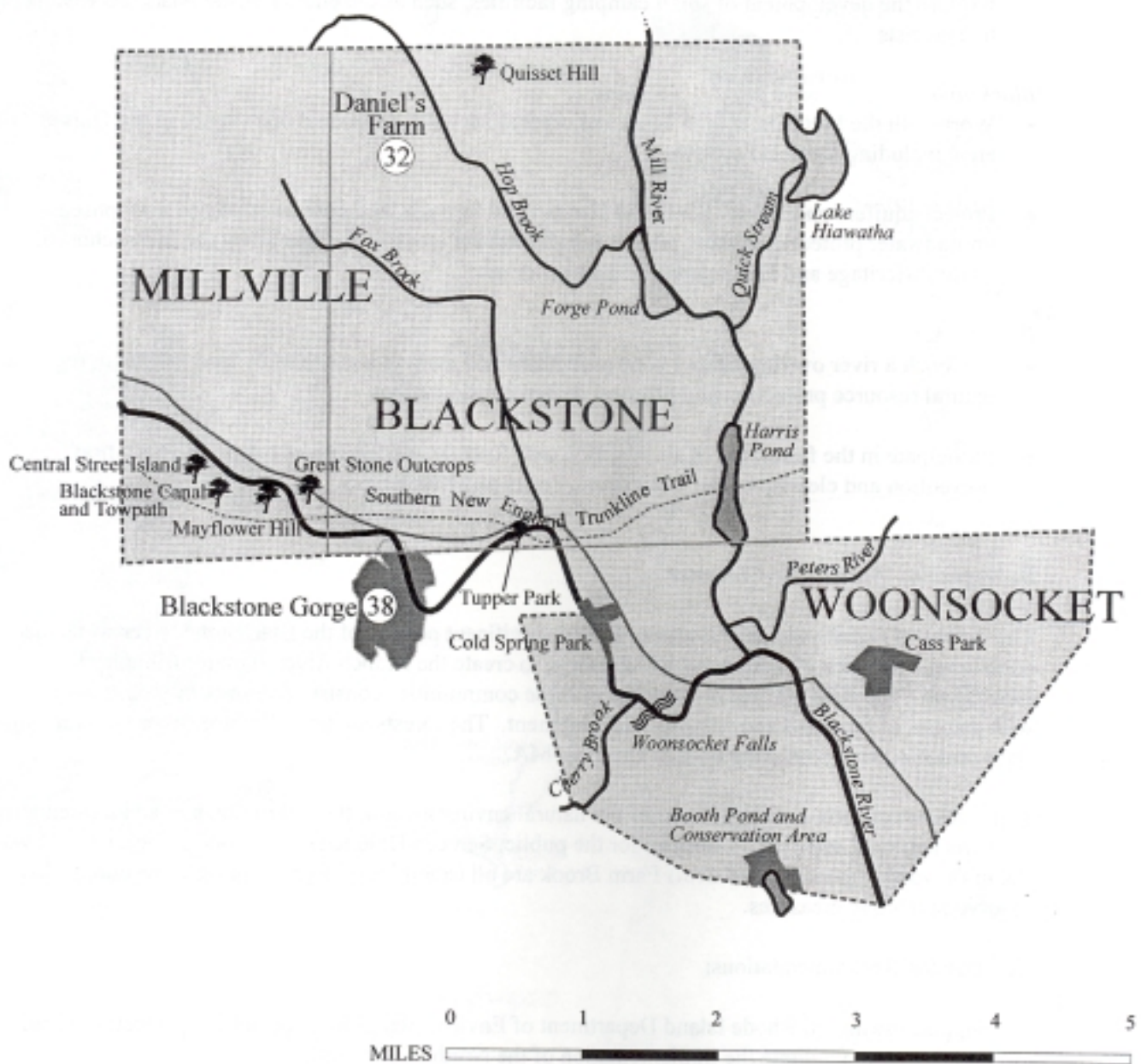
The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Millville

- Work with landowners along the Blackstone River to develop a hiking trail along its length in Millville connecting other nearby natural and historic sites.
- Construct an exhibit and parking area at The Overlook on Route 122 to inform and direct visitors to other sites, like the Millville Lock.
- Explore the development of small camping facilities, such as the one on Turtle Island accessible only to canoeists.

Blackstone

- Work with the Metacomet Land Trust and others to acquire additional open space in the Quisset Hill area, including Daniels Farm.



Subregion 5 Millville/Blackstone/Woonsocket

- Protect aquifers on the Mill River and Harris Pond through land conservation and a proposed groundwater protection bylaw; protect priority habitat areas as designated by the Massachusetts Natural Heritage and Endangered Species program.

Woonsocket

- Establish a river overlay district zone to regulate and remove incompatible land uses with regard to natural resource protection and physical design considerations.
- Participate in the formation of an interstate task force to address issues relating to pollution prevention and cleanup of the Blackstone, Peters and Mill Rivers.

Subregion 6: Burrillville/Glocester

The Towns of Burrillville and Glocester form a significant portion of the Blackstone River watershed, containing a network of waterways which merge to create the Branch River, a major tributary to the Blackstone. The outlying western reaches of these communities consist predominantly of upland forest with patches of farmland and suburban development. The forests are part of a large expanse of mostly state-protected land stretching up into Douglas, MA.

Water resources form an integral part of the natural environment in this subregion and add tremendously to the recreational and visual offerings for the public. Screech Hole fen (also called a bog), Cedar Swamp Pond, Bowdish Reservoir, and Croff Farm Brook are all examples of high value water resources that deserve protective measures.

Commission Recommendations:

- Support towns and Rhode Island Department of Environmental Management in protecting farmland and forests to facilitate the implementation of the North/South Trail.
- Support zoning for aquifer protection in Glocester to improve and protect water quality, and provide assistance in the form of model zoning.
- Recommend the adoption of low impact management methods for recreational resources, such as development of organic turf golf courses designed with indigenous plant materials which require reduced use of fertilizers and pesticides.

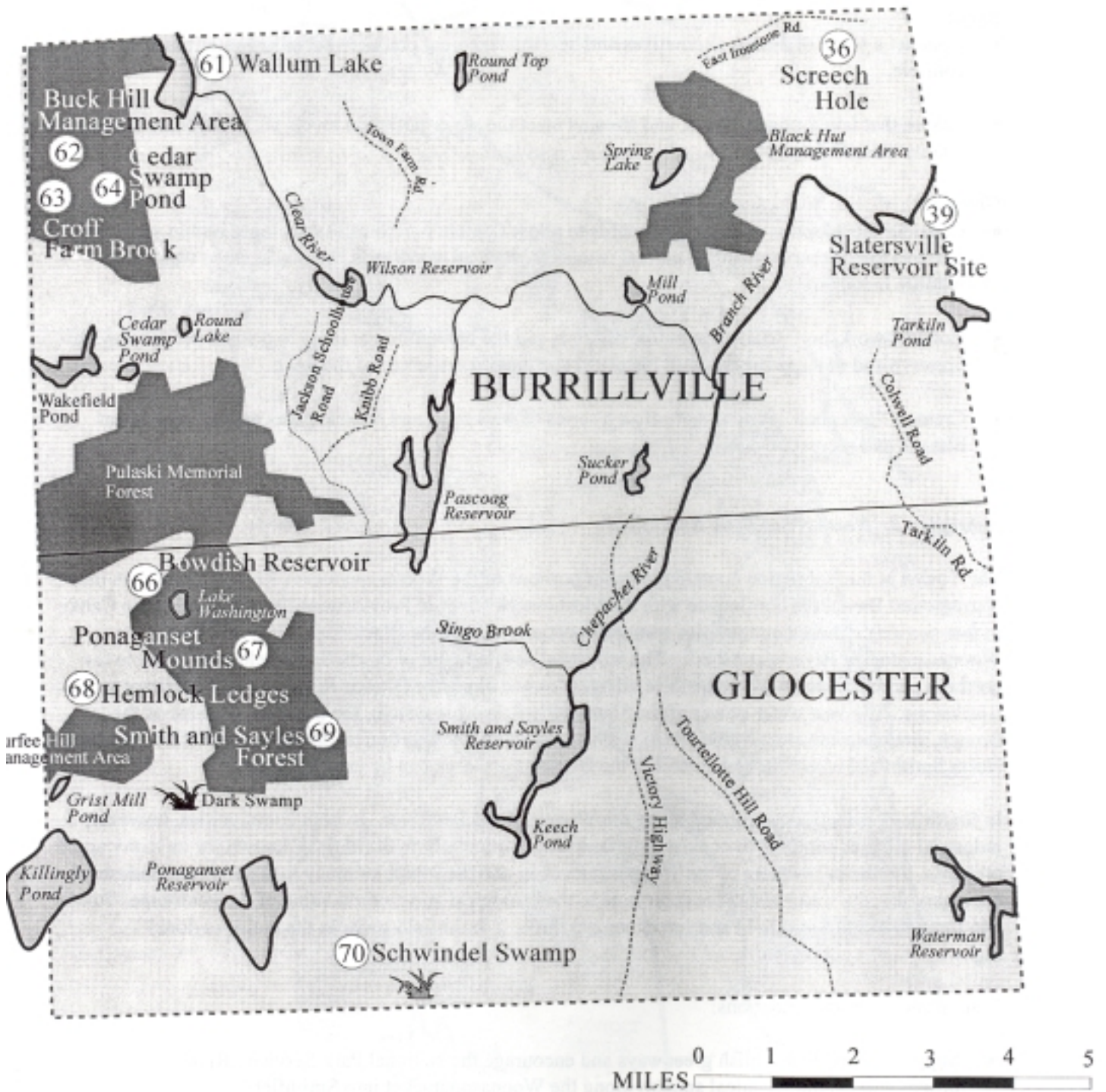
The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Burrillville

- Conduct a study of design alternatives and best management practices for stormwater runoff controls.
- Ensure that lakes, ponds, rivers, and streams meet the water pollution levels set in the State's water quality classification plan.

Glocester

- Consider the adoption of design standards to allow flexible building-lot envelopes within standard-size lots that preserve sensitive natural resources, such as woodlands, wetlands, stone walls and wildlife habitats.



Subregion 6 Burrillville/Glocester

- Conduct workshops to involve public officials and the community at large to discuss proper ways to preserve and manage the cultural, historical and natural resources of the town.
- Create a “greenbelt” system that offers a series of walkways and bicycle paths among significant historic and recreation sites.

Subregion 7: North Smithfield/ Smithfield

The Towns in this subregion contain the upper portions of the Woonasquatucket River which flows into Narragansett Bay at the confluence with the Moshassuck River in Providence (also the Blackstone Canal in that section). These communities comprise portions of both the Blackstone River and Woonasquatucket River watersheds. The industrial development of North Smithfield took place in the northern part of the town where historic villages formed along the Branch River, a major tributary to the Blackstone. The vast water power of the Slatersville Reservoir system, the dammed sections of the Branch, stretches into Burrillville. Also, a small but significant portion of the Blackstone River dips into North Smithfield where the raw drama of the Blackstone Gorge can be experienced.

In Smithfield, mill villages formed along the Woonasquatucket River. In both communities, however, industrial villages continue to coexist with farmland, particularly in Smithfield, known for its many apple orchards. As the headwaters of the Woonasquatucket, and the source of many mill ponds and industrial era reservoirs, the water resources contribute to the ecological and cultural value of the landscape. Route 146 through North Smithfield and Interstate 295 through Smithfield serve as the major regional highways in this subregion.

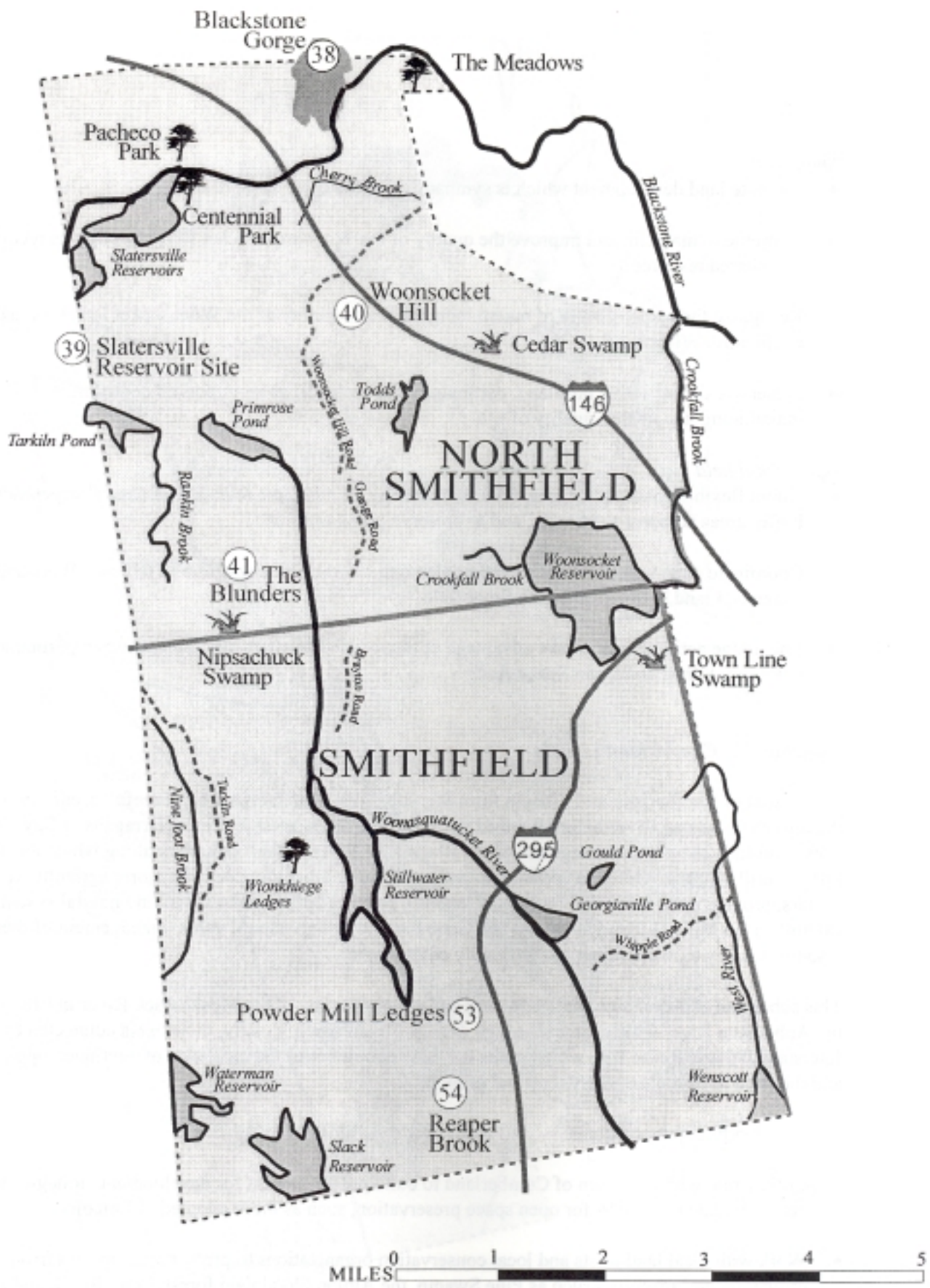
Commission Recommendations:

- Support efforts to establish greenways and encourage the National Park Service’s Rivers and Trails program to extend technical support along the Woonasquatucket into Smithfield.
- Explore the long term protection of apple orchards and other farming activities in Smithfield and North Smithfield.

The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Smithfield

- Promote land development which is sympathetic to the existing landforms.
- Continue to maintain and improve the quality of the Woonasquatucket River through its recognition as a shared resource.
- Recognize the responsibility of maintaining the water quality of the Woonsocket Reservoir as a cooperative effort.
- Preserve existing active farmland, particularly the orchards, as an important contribution to maintaining the overall quality of life.



Subregion 7 North Smithfield/ Smithfield

North Smithfield

- Adopt flexible zoning measures, such as clustering, to allow the retention of natural vegetation and buffer areas adjacent to streams, and to preserve prime farmland.
- Coordinate open space and conservation planning efforts with a program to increase Woonsocket's watershed land holdings in North Smithfield.
- Encourage active farms to take advantage of the reduced property assessments when participating in the Farm, Forest and Open Space Act.

Subregion 8: Cumberland/Lincoln

The Towns of Cumberland and Lincoln form this subregion characterized by peaceful, scenic stretches of the lower Blackstone River before it winds through more urban areas and into Narragansett Bay. The Towns, in fact, share a major segment of the Blackstone River as their boundary along which are several historic mill villages. Outlying areas of upland, some containing glimpses of historic agricultural centers, provide open space and traditional land use patterns beneficial to sustaining natural systems. For example, Iron Mine Hill and Diamond Hill State Park have high natural value; management of these resources is key to maintaining a high quality environment.

This subregion also contains the headwaters and greater portion of the Moshassuck River in Lincoln, and the Abbot Run River which passes through eastern Cumberland. Finally, this area is connected by Interstate 295 and Route 146, which poses for these communities the challenge of continued opportunity and the need to balance conservation and growth.

Commission Recommendations:

- Collaborate with the Town of Cumberland to build public support for development strategies which accommodate up to 50% for open space preservation, such as those adopted in Lincoln.
- Work with local land trusts and local conservation organizations to protect open space surrounding critical natural resources such as Pine Swamp, the Albion Floodplain forest, Long Brook and Ash Swamp.
- Support the clean-up of contaminated sites along the Blackstone River which threaten the health and enjoyment as a natural resource.

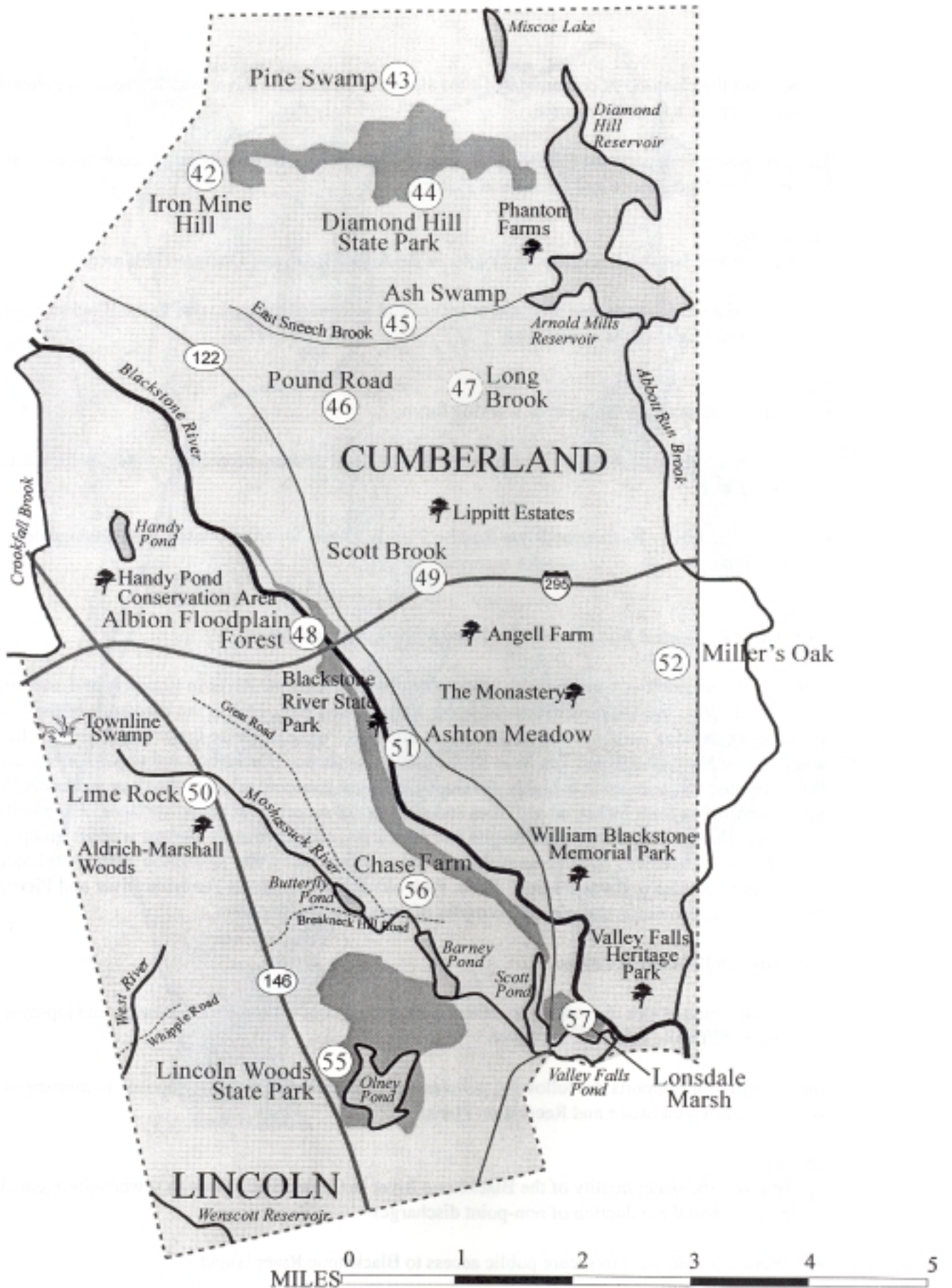
The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Cumberland

- Acquire key farmland development rights in the Angell Road and Diamond Hill areas.
- Develop a riverfront access program to secure and safeguard public access to the Blackstone River and remaining sections of the canal.

Lincoln

- Continue to pursue protection of working farms.
- Explore additional protection for Townline Swamp, and develop protection strategies for the Lime Rock area.
- Utilize the Lower Blackstone River Re-Use Plan as a basis for river-related, land management decisions.



Subregion 8 Cumberland/Lincoln

Subregion 9: Central Falls/Pawtucket/Providence/East Providence

These four communities constitute the urban core of the Blackstone River in Rhode Island and form the mouth as it enters the Seekonk River and upper Narragansett Bay. Due to the hard edge of the river in many areas, existing parkland and public spaces offer surprising access to the average viewer. In addition, the Moshassuck and Ten Mile Rivers converge into the Blackstone and upper Narragansett Bay. Because this subregion is highly developed, primary concerns relate to the river system in the form of pollution from industrial activities and stormwater runoff from paved surfaces. Excellent park systems in these communities offer respite and recreation, and serve more limited wildlife and plant communities. Greenway development along water corridors and water protection measures should be high priority actions in the subregion. Slater Park along portions of the Ten Mile River and Pierce Park along the Blackstone River are good examples of greenway development.

Commission Recommendations:

- Assist communities in working together to encourage cooperation for Greenway development and increased public access to the River.

The Commission supports the following policies and recommended actions proposed in municipal Master and/or Open Space and Recreation Plans:

Central Falls

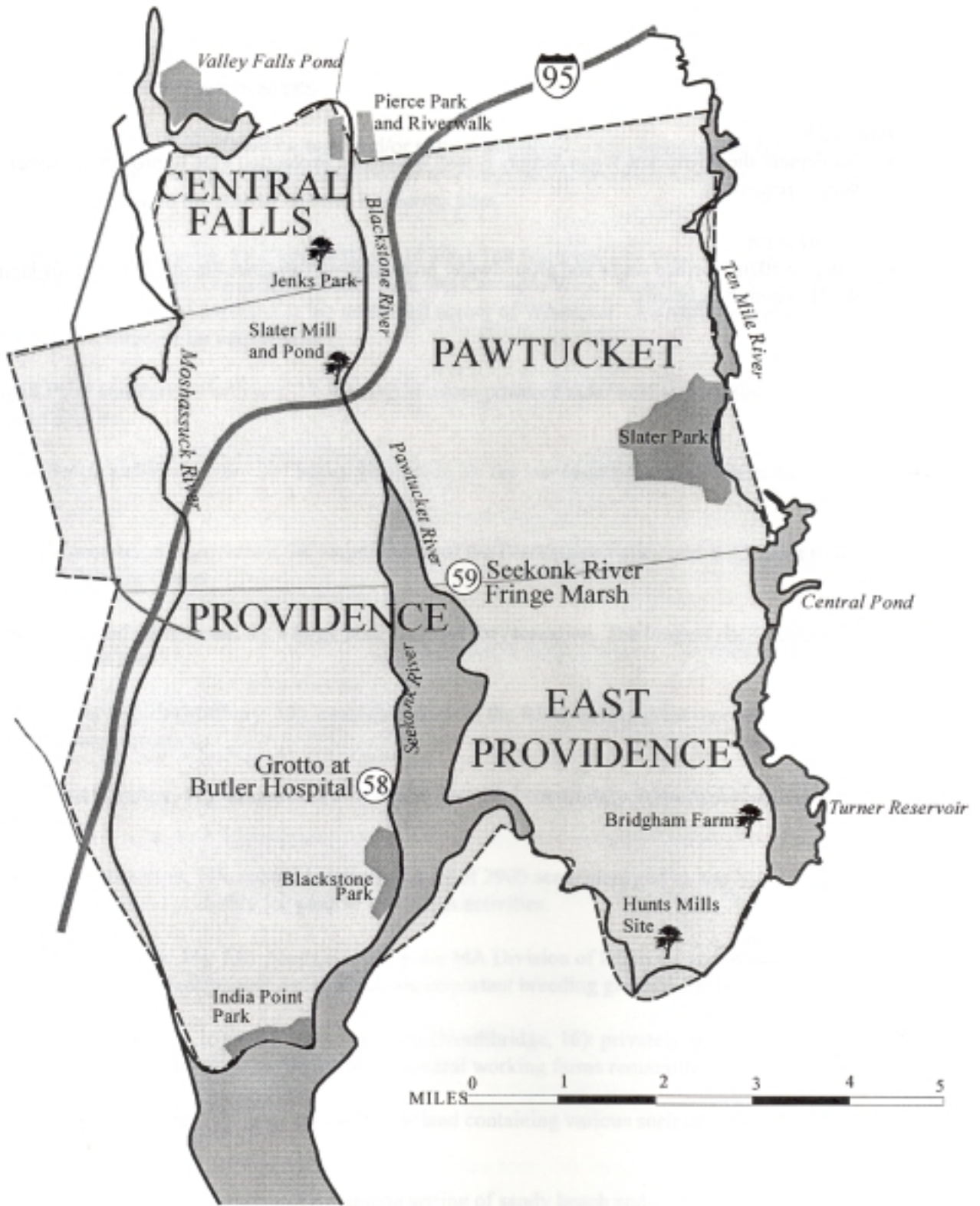
- Improve the water quality of the Blackstone River in Central Falls through sewer improvement projects and the reduction of non-point discharges.
- Work with the State to secure public access to Blackstone River Island.

Pawtucket

- Implement the Pawtucket Water Supply Board Watershed Protection Plan to protect the water supply reservoirs.

East Providence

- Adopt wetland surface water and groundwater protection performance standards as part of land development regulations.



Subregion 9 Central Falls/Pawtucket/Providence/East Providence

OTHER NATURAL RESOURCES SITES

The following sites have significant cultural and/or natural value and are included on the Inventory Matrix. They have not been previously described or received specific recommendations. The number refers to their location on the map of Natural Resources sites.

Cascade Waterfall (Worcester, 1): Cascade Brook plunges 108 feet from a bedrock escarpment. This 19.5 acres of protected land connects Cascades Park and Cascades West. Together with Boynton Park, this area totals 310 acres of parkland in the northwest corner of Worcester. An additional parcel, Cascades East, is targeted for acquisition.

Cider Mill Pond and Park (Worcester, 2): the largest water-powered cider mill in New England, home to endangered species.

Coal Mine Brook and Worcester Coal Mine (Worcester, 5): the last remaining smelt run in New England.

Crow Hill (Worcester, 6): provides a 360-degree view of the Blackstone Valley and is adjacent to the New England Science Center.

Lake Quinsigamond (Worcester, 8): a large lake dammed for recreation. The longest skull boat race in the country is held here.

Blackstone River Rapids (Millbury, 10): a rapids section of the River having great recreational value for water and passive recreation.

Great Meadows (Grafton, 12): example of a freshwater wetland community, important resource for migrating birds.

Upton State Forest (Upton, 13): upland forest consisting of 2900 acres managed by the MADEM. The forest is used year round primarily for passive recreation activities.

Stockwell Ponds (Sutton, 14): four ponds owned by the MA Division of Fisheries and Wildlife in the Merrill Pond Wildlife Management Area, which are important breeding grounds for fish and waterfowl.

Keown's Orchards (Sutton, 15) and Foppema's Farm (Northbridge, 16): privately-owned, fully operational farms which are good examples of the several working farms remaining in the Valley.

Sutton State Forest (Sutton, 17): large tract of forest land containing various surface waterbodies and wetlands.

West River at Mendon (Northbridge, 23): a unique setting of sandy beach and quiet surroundings which lends itself to providing the finish line for the annual Blackstone Canoe Race.

Peppercorn Hill and Fen (Upton, 24): southern New England acidic basin fen in excellent condition consisting of open peatland dominated by sedges. Contains a cave believed to be used by Native Americans.

Miscoe Spring (Mendon, 28): site of a natural spring and 100-year old water bottling operation.

West Hill Dam and Park (Uxbridge/Northbridge, 29): a 1,350-acre area in Uxbridge and Northbridge, MA along the West River offering a natural spring-fed swimming area, a bog, Cedar Swamp, and other important habitats.

Lake Nipmuck Rookery (Mendon, 30): site of a great blue heron rookery.

Mill River Watershed (Mendon/Blackstone/Woonsocket, 33): the entire length of the Mill River, upstream from Harris Pond, provides the public water supply for the town of Blackstone.

Laurel Brook and Chockalog Pond (Uxbridge, 34): ponds are stocked with trout for the Laurel Brooks Club.

Blackstone River at River Road (Uxbridge, 35): important access point for canoeists.

Screech Hole Bog (Burrillville, 36): an acidic level fen with a rare dragonfly species. This bog is threatened by encroaching development and the loss of surrounding forest.

“Balm of Life” Spring (Uxbridge, 37): one of very few natural cold-water springs in the Valley.

Woonsocket Hill (North Smithfield, 40): the only site in Rhode Island for the sedge *Carex polymorpha*.

The Blunders (North Smithfield, 41): a mature forest containing several unique geological and archaeological features, as well as supporting several northern plants.

Iron Mine Hill (Cumberland, 42): refer to Diamond Hill State Park.

Pine Swamp (Cumberland, 43): large forested swamp supporting several northern plants.

Diamond Hill State Park (Cumberland, 44): exposed bedrock outcrops supporting Rhode Island’s only population of a tiger beetle.

Ash Swamp (Cumberland, 45): unique seepage swamp forest.

Pound Road (Cumberland, 46): a rich forest community.

Long Brook (Cumberland, 47): combination of upland forest with several northern plants and an aquatic system that supports RI’s only population of Brook Lamprey.

Albion Floodplain Forest (Lincoln, 48): good example of historical floodplain forest, contains trees approaching 100 years old.

Scott Brook (Cumberland, 49): a mature forest community with several northern plants.

Miller’s Oak (Cumberland, 52): a combination of forest and wetland communities underlaid by a unique “red rock” bedrock. Supports Rhode Island’s only population of bicknell’s geranium.

Powder Mill Ledges (Smithfield, 53): large tract of protected land and headquarters of the Rhode Island Audubon Society.

Reaper Brook (Smithfield, 54): a white cedar swamp natural community.

Lincoln Woods State Park (Lincoln, 55): state-owned 539-acre regional park and conservation area containing a boat launch, beach, hiking and riding trails.

Grotto Marsh at Butler Hospital (Providence, 58): example of freshwater tidal marsh. One of Rhode Island’s most impacted and rarest natural communities.

Seekonk River Fringe Marsh (Pawtucket, 59): example of freshwater tidal marsh. One of Rhode Island's most impacted and rarest natural communities.

Wallum Lake (Douglas/Burrillville, 61): an example of southern New England basin marsh and acidic seepage swamp. A rare plant species can be found along the western lake shore. This site is threatened by the death of cedars from unknown causes.

Buck Hill Management Area (Burrillville, 62): a State Management area containing great blue heron nesting sites.

Croff Farm Brook (Burrillville, 63): a Boy Scout and State Management area containing a concentration of northern plant species in a white cedar/black spruce swamp.

Cedar Swamp Pond (Burrillville, 64): southern New England basin swamp with rare invertebrate in swampy areas along the western shore of the pond. Fresh water springs also support northern spring salamander.

Clear River (Burrillville, 65): only site for some northern plant species including dewdrop.

Bowdish Reservoir (Glocester, 66): floating bog islands supporting several northern plants including dwarf mistletoe.

Ponaganset Mounds (Glocester, 67): unusual sod-hut remains or mounds located in a wooded area.

Hemlock Ledges (Glocester, 68): a steep bedrock ledge supporting Rhode Island's only population of the fern mountain spleenwort. The surrounding forest provides habitat for several Rhode Island listed birds.

Smith and Sayles Forest (Glocester, 69): unique forest community of hemlock and tuliptree, which also supports several northern plants.

Schwindel Swamp (Glocester/Burrillville, 70): good example of a fen community, protected by the Audubon Society of Rhode Island.

AN EVOLVING COLLECTION

Like the natural sites and systems represented in this document, an inventory is dynamic and will change over time. The Inventory and Assessment today, represents a collection of natural resource features and areas considered significant within the Blackstone Heritage Corridor, especially in the context of the Valley's cultural landscape. The discussion and recommendations provided in this document relate to one point in time, and should be revisited occasionally to consider more current conditions and information. Indeed, during the public review period, several more natural sites were revealed which the public asked to be included. When the Inventory is updated in the future, the following sites should be assessed for their natural and cultural value, and recommendations made for their protection if necessary.

Wolf Hill Cedar Swamp *Northbridge and Uxbridge*

Douglas Cedar Swamp *Douglas*

Goss Pond Bog *Upton*

Upton State Forest Bog *Upton*

Leicester Cedar Swamp *Leicester*

Riverdale Hill *Northbridge*

Kettle Brook Falls *Worcester*

George Washington Management Area *Burrillville*

Anjelica Springs *Millville*

Chepachet River *Glocester*

Wild Trout streams such as Cold Spring Brook (Sutton), Ironstone (Uxbridge), Center Brook (Upton) and Cronin Brook (Grafton)

Ethel Newman Wildlife Sanctuary *Glocester/Smithfield*

Fayette Bartlett Woodland *Burrillville*

McKenzie Wildlife Refuge *Cumberland*

Florence S Fort & Richard K Fort Refuge *North Smithfield*

Snow Marsh *Grafton*

Woonsocket Falls, *Woonsocket*

River Island Park, *Woonsocket*

Working farms in southeast Mendon and along North Avenue *Mendon*

Woonasquatucket River *North Smithfield, Smithfield, Glocester*

Lake Manchaug *Douglas, Sutton*

Lackey Pond Wildlife Restoration Area *Douglas*

Wallum Lake State Park *Douglas*

Singletary, Ramshorn, Dorothy Brooks and Ponds *Millbury*

Tainter Stowe Farm *Millbury*

Pearson Dairy Farm *Millbury*

Green Hill Park *Worcester*

Smith and Sayles Reservoir *Glocester*

CREDITS

The Planning Team

Steering Committee

David Dunham, Planning Subcommittee Chairman
Andy Backman, Massachusetts Department of Environmental Management
Robert D. Billington, Blackstone Valley Tourism Council and Planning Subcommittee
Viola Bramel, Blackstone River Watershed Association
Bonnie Brown, Massachusetts Department of Environmental Management
Peter Coffin, National Park Service
Russell A. Cohen, Massachusetts Department of Fisheries, Wildlife and Environmental Law Enforcement
Rick Enser, Rhode Island Department of Environmental Management Natural Heritage Program
John Kennelly, U.S. Army Corps of Engineers
Louise M. Redding, Planning Subcommittee
Jon Regosian, The Nature Conservancy
Frederick Vincent, Rhode Island Department of Environmental Management
Donna Williams, Massachusetts Audubon Society and Environmental Subcommittee

Goody, Clancy and Associates

Christine Cousineau, Manager of Planning and Urban Design
Rebecca Lave, Melissa Lober, Russell Newman, Stephen Perfetto, Planning staff

Carol R. Johnson Associates, Inc.

Laura Schoenbaum, Senior Landscape Architect

University of Rhode Island

Department of Natural Resources Science
Mary F. Hutchinson, Environmental Data Specialist

Additional consultants

Alison McDeedy

Other contributions

William Scanlan, Central Massachusetts Regional Planning Commission
Derwent Riding, Rhode Island Office of Statewide Planning
Vicki Frey, Massachusetts Natural Heritage & Endangered Species Program
Eugenia Marks, Audubon Society of Rhode Island

and the many Town and City Planners, and Conservation Commission members who provided information.

APPENDICES

APPENDIX A

LISTED SPECIES

Below are rare species of plants and animals in the Blackstone River Valley National Heritage Corridor listed by the states of Massachusetts and Rhode Island. With the exception of transient peregrine falcons, there are no Federally-listed species in the Corridor.

GROUP	COMMON NAME	STATUS	
		MA	RI
VERTEBRATES			
Fish	American Brook Lamprey	T	SC
Amphibians	Jefferson Salamander		SC
	Blue-spotted Salamander		SC
	Marbled Salamander	T	+
	Spring Salamander		SC
	Four-toed Salamander		SC
Reptiles	Blanding's Turtle	T	
	Spotted Turtle		SC
	Wood Turtle		SC
	Eastern Box Turtle		SC
	Worm Snake	T	SC
	Hognose Snake	+	SC
	Timber Rattlesnake	E	
Birds (nesting only)	American Bittern		SC
	Least Bittern		T
	Great Blue Heron		WL
	Cooper's Hawk		SC
	Common Nighthawk	+	SC
	Northern Goshawk		SC
	Sharp-shinned Hawk		SC
	Sora	+	SC
	Northern Saw-whet Owl		SC
	Pileated Woodpecker	+	SC
	Acadian Flycatcher		SC
	Winter Wren	+	SC

	Marsh Wren		+		SC
	Golden-winged Warbler		E		H
	Black-throated Blue Warbler		+		T
	Blackblurnian Warbler				T
	Worm-eating Warbler				SC
	Grasshopper Sparrow		T		
	White-throated Sparrow		+		SC
	Henslow's Sparrow		E		
	Dark-eyed Junco		+		SC
	Upland Sandpiper		E		
Mammals	Smoky Shrew		+		SC
	Water Shrew		SC		SC
	Southern Bog Lemming		SC		SC
	Fisher		+		SC
	Hoary Bat		WL		
	Indiana Myotis		E		

INVERTEBRATES

Dragonflies	Ringed Boghaunter		E		SC
Beetles	Twelve-spotted Tiger Beetle		SC		+
	Red-bellied Tiger Beetle	T		SC	
Butterflies and Moths	Bog Copper		+		SC
	Acadian Hairstreak		+		SC
	Hickory Hairstreak		+		SC
	Hessel's Hairstreak		SC		SC
	Frosted Elfin		+		SC
	Northern Pearly Eye		+		SC

PLANTS

Ferns and Fern Allies	Mountain Spleenwort		E		E
	Walking Fern				E
	Maidenhair Spleenwort		+		SC
	Water Horsetail		+		SC
	Woodland Horsetail		+		SC
	Ostrich Fern		+		SC
	River Quillwort		+		SC
	Stiff Clubmoss		+		E
	Triangle Grapefern		+		SC
	Daiseyleaf Grapefern		+		SC
	Dwarf Grapefern		+		SC
	Purple Cliff-brake				E
	Climbing Fern		SC		SC
Gymnosperms	Ground Hemlock		+		SC
	American Larch			+	T
	Black Spruce		+		SC

Angiosperms

Striped Maple	+	SC
Honewort	+	SC
Golden Alexanders	+	SC
Spikenard	+	SC
American Ginseng	SC	E
Purple Milkweed	T	SC
Whorled Milkweed	T	SC
Large-leaved Aster	+	SC
Lion's Foot	E	SC
Sclerolepis	E	E
Blue Cohosh	+	T
Feverwort	E	SC
Hobblebush	+	SC
Golden Heather	+	SC
Round-leaved Dogwood	+	SC
Piled Sedge	+	SC
Bog Sedge	+	SC
Log-stalked Sedge	+	T
Variable Sedge	E	E
Horsetail Spike-rush		SC
Inundated Horned-rush		E
Bog Rosemary	+	E
Creeping Snowberry	+	T
Pale Laurel	+	T
Spreading Tick-trefoil	E	
Wild Lupino	+	SC
Pale Corydalis	+	SC
Bicknell's Geranium	+	SC
American Pennyroyal	+	SC
Colicroot	+	SC
Zigzag Bladderwort	+	T
Rose-twisted Stalk	+	T
Canada Lily	+	T
Black Ash	+	SC
Small Enchanter's Nightshade	+	SC
Showy Orchid	+	SC
Lily-leaved Twayblade	+	T
Northern Green Orchid	+	T
Small Purple Fringed Orchid	+	SC
Spring Ladies'-tresses	SC	SC
Squaw-root	+	SC
Bloodroot	+	SC
Featherfoil	+	SC
One-sided Pyrola	+	SC
Red Baneberry	+	SC
Long-fruited Anemone	+	SC
Hepatica	+	SC
Yellow Water-crowfoot	+	SC
Dewdrop	+	E
Podgrass	T	E
Tall White Beardtongue	+	SC
Early Saxifrage	+	SC

Swamp Saxifrage	+	SC
Slippery Elm	+	SC
Palmate-leaved Violet	+	T
Round-leaved Yellow Violet	+	SC
Dwarf Mistletoe	+	E
Northern Yellow-eyed Grass	+	SC

Key E = Endangered; T = Threatened; SC = Special Concern; WL = on Watch List; H = Historic
 + = present in state but not listed as rare
 blank space indicates not present in Blackstone Corridor

ADDITIONAL SPECIES OF INVERTEBRATES AND PLANTS LISTED BY THE MASSACHUSETTS NATURAL HERITAGE & ENDANGERED SPECIES PROGRAM

COMMON NAME	LAST OBSERVED	STATUS IN MA
<hr/> INVERTEBRATES <hr/>		
Mystic Valley Amphipod	1989	SC
Purple Tiger Beetle	0000	SC
Hessel's Hairstreak	1987	SC*
Imperial Moth	1934-Pre	SC
Northern Hairstreak	1992	SC
Regal Fritillary	1934-Pre	E
Triangle Floater	1974	SC
Smooth Branched Sponge	1989	SC
<hr/> PLANTS <hr/>		
Purple Milkweed	1954	T*
Sclerolepis	1981	E*
Northern Wild Comfrey	1879	H
Climbing Fumitory	1938	T
Broad Waterleaf	1934	E
Pondshore Knotweed	1934	SC
Purple Clematis	1940-Pre	SC
Hairy Beardtongue	1890	E
Indian Paintbrush	1940-Pre	H
Sandplain Gerardia	1944	E
Swamp Lousewort	1940	E
Pappilose Nut-Sedge	1989	E
Shore Sedge	1933	T
Slender Cottongrass	1988	T
Tall Nut-Sedge	1986	E
Arethusa	1935	T
Grass-Leaved Ladies'-Tresses	1993	SC
Large Whorled Pogonia	1964	WL
Orange Fringed Orchis	1934	H
Pale Green Orchis	1939	T

Philadelphia Panic-Grass	1990	SC
Small Bur-Reed	1865	E
Lake Quilwort	1922	E
Adder's-Tongue Fern	1933	T
Climbing Fern	1995	SC*

**Also listed in Rhode Island*

ADDITIONAL SPECIES CONSIDERED HISTORIC IN THE BLACKSTONE VALLEY CORRIDOR (SINCE 1900)
(includes approximate date of last occurrence)

Freshwater Mussels	Swollen Wedgemussel – candidate for Federal listing – recorded from Blackstone River, Canal Falls (1897). Unknown after this date.
Fish	Several species of anadromous fish eliminated from the Blackstone River by the construction of dams, all before 1900.
Amphibians	Eastern Spadefoot (MA: never recorded in Blackstone Valley; RI: Providence – 1906)
Reptiles	Timber Rattlesnake: although likely present in the Blackstone Valley historically, extinct from region prior to 1900.