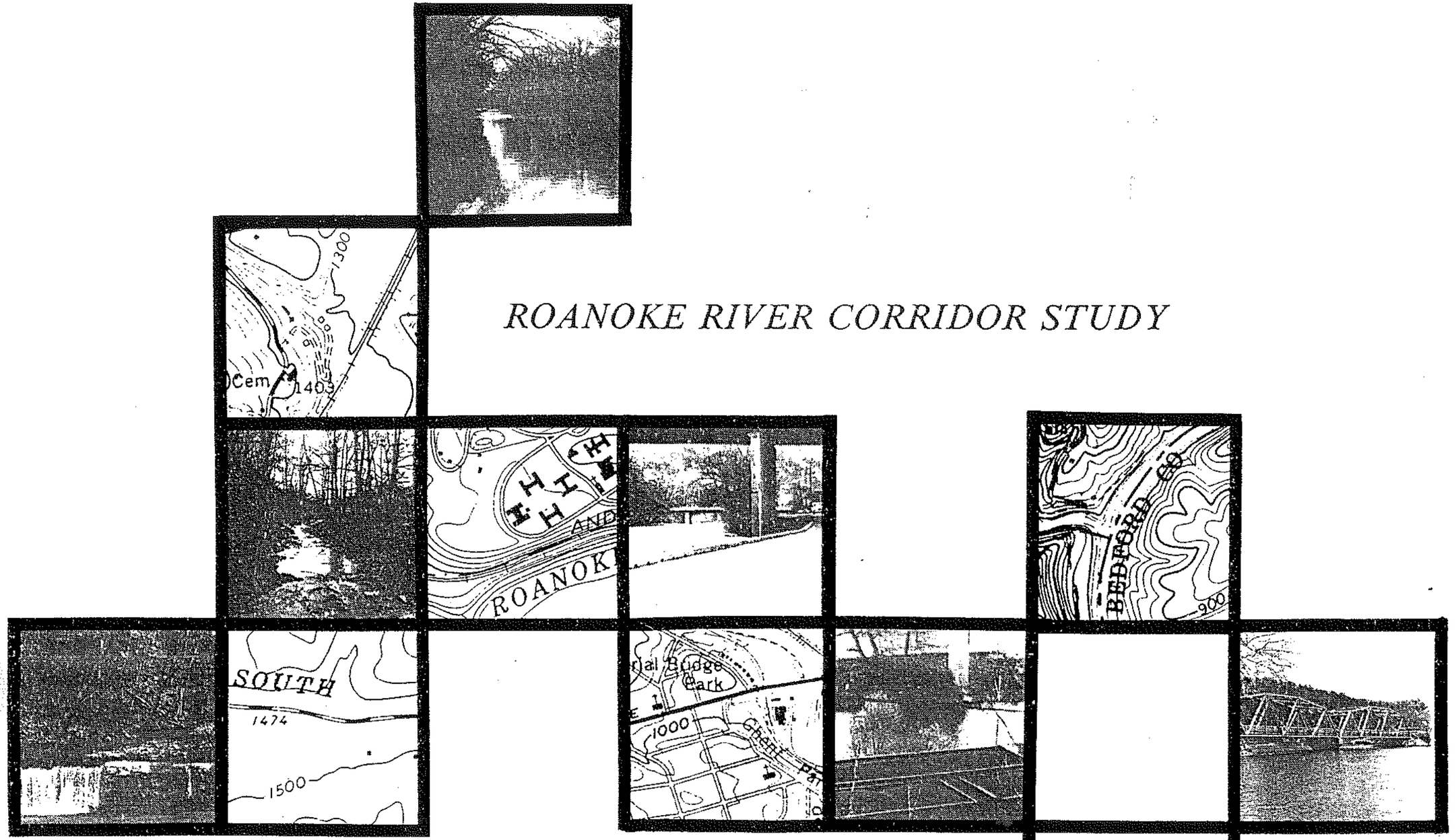

ROANOKE RIVER CORRIDOR STUDY

Produced by the Land Planning Studio in the Landscape Architecture Program at Virginia Polytechnic Institute and State University - April 26, 1989.

Dr. William E. Shepherd

Kevin Barnes

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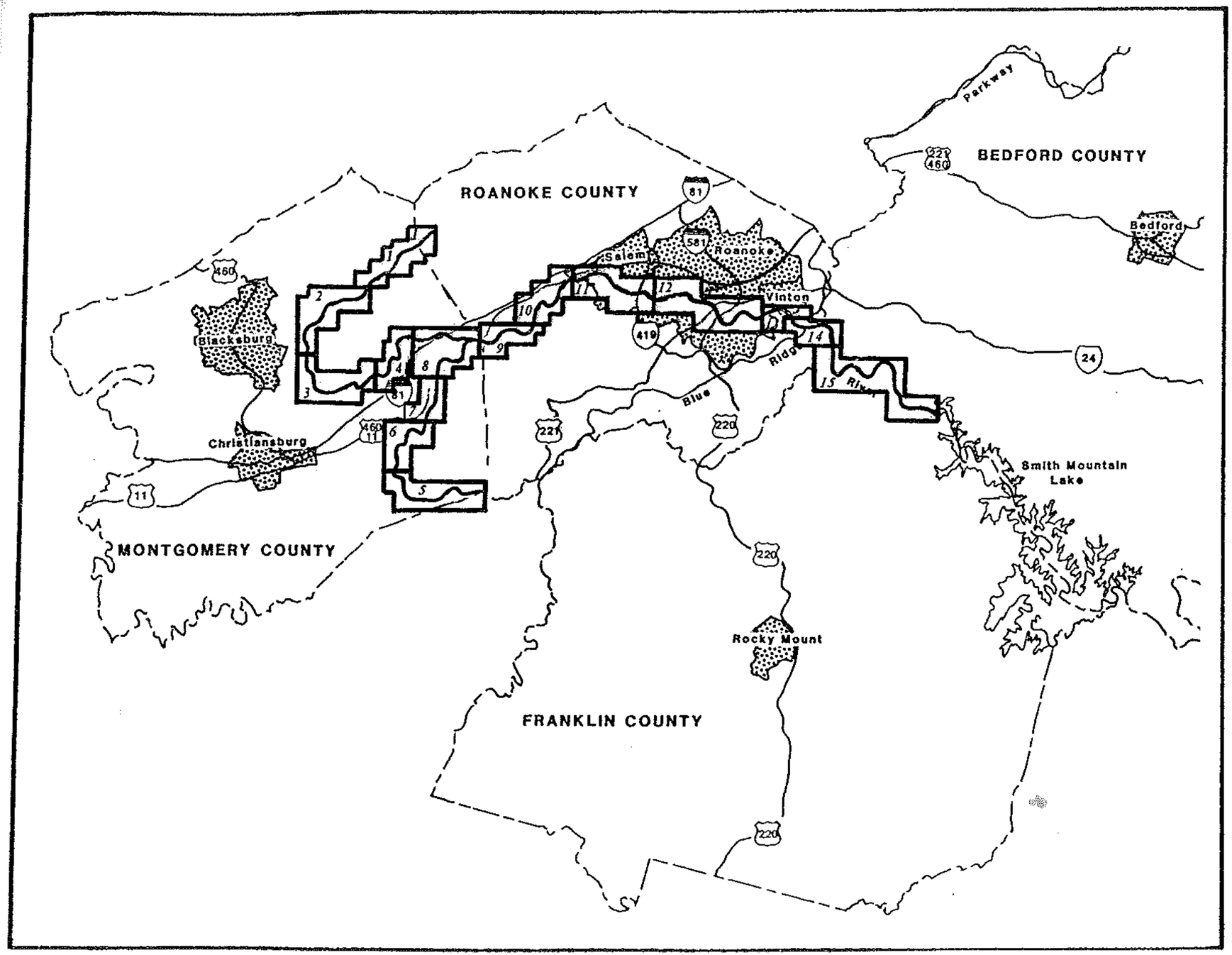
Keith Scott

Kathy Shrader

Denny Sisson



Legend

- county boundaries
- cities and towns
- interstate highway
- U.S. highway
- VA primary highway

INDEX MAP

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

Landscape Architecture Progaram

Virginia Polytechnic Institute & State University

April 26, 1989

North

River Corridor Along Glenvar

INTRODUCTION

The upper Roanoke River basin is Virginia's most industrial developed headwaters with the cities of Roanoke and Salem contributing to most of that development. The lower Roanoke River travels 280 miles through southern Virginia and much of northern North Carolina. "As it flows, the river receives discharges of treated sewage and industrial wastes, as well as runoff carrying pollutants from agricultural lands, highways, and city streets. Some pollutants settle into the sediments [of the River] or are broken down by natural processes, but others remain in the water column and are carried downstream" (Lower James River Corridor Study, 1988).

All land use along the Roanoke River impacts the water quality in some way. This is particularly true in the cities of Salem and Roanoke which are heavily populated and industrialized. The entire region is also subject to increasing pressure from growth and development.

The upper Roanoke River is a valuable resource for commerce, industry, farming, fishing and recreation. As more growth occurs, more pressure is being placed on the River and its adjacent lands. "Somehow, competing uses must find a way to survive compatibly, without significantly depleting the available resources. This is a challenge of both local and regional planning" (Lower James River Corridor Study, 1988).

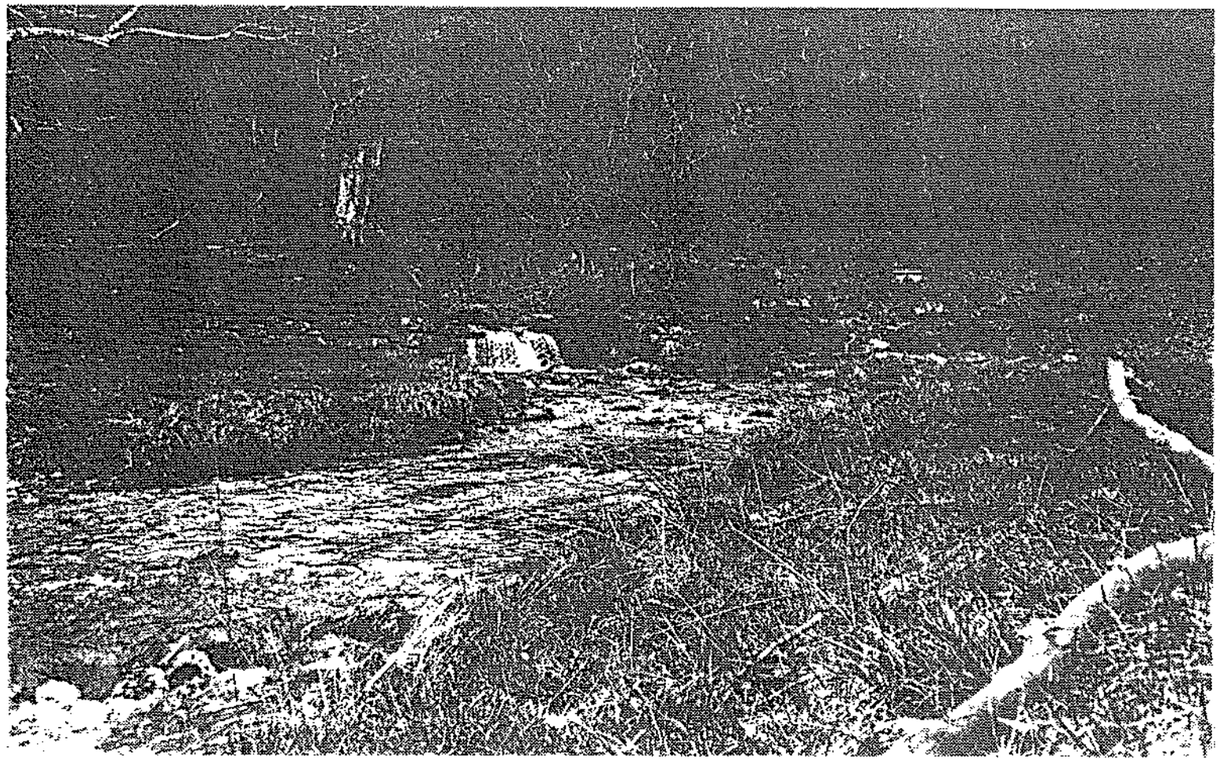
South Fork of Roanoke River

"A primary problem with providing a regional perspective on planning has been the lack of a single reliable source of information about the natural, historic, and man-made features of the River basin. Historically, the River has been a boundary for local planning and decision-making. Planning districts have been planned around metropolitan areas," (Lower James River Corridor Study, 1988) so the river is divided into several different planning districts. This situation has not been conducive to regional planning and cooperation in the upper Roanoke River basin.

The primary objective of the Roanoke River Corridor Study is to provide a useful document to local, regional, and state planners, and to citizens interested in the natural and historical resources of the Roanoke River basin. The intent of the Study is to foster cooperation among citizens, government representatives, developers, and river users. It should help decision makers to understand the complex nature of managing the Upper Roanoke River basin and to find innovative solutions to balance competing interests, while protecting valuable resources. The study also provides a unique tool for citizens in evaluating the impacts of proposed development on the resources and existing uses along the River.

Work Cited

Sevebeck, Kahn, Champman: *Virginia's Waters*: Virginia Water Resource Center, VPI & SU, 1987.



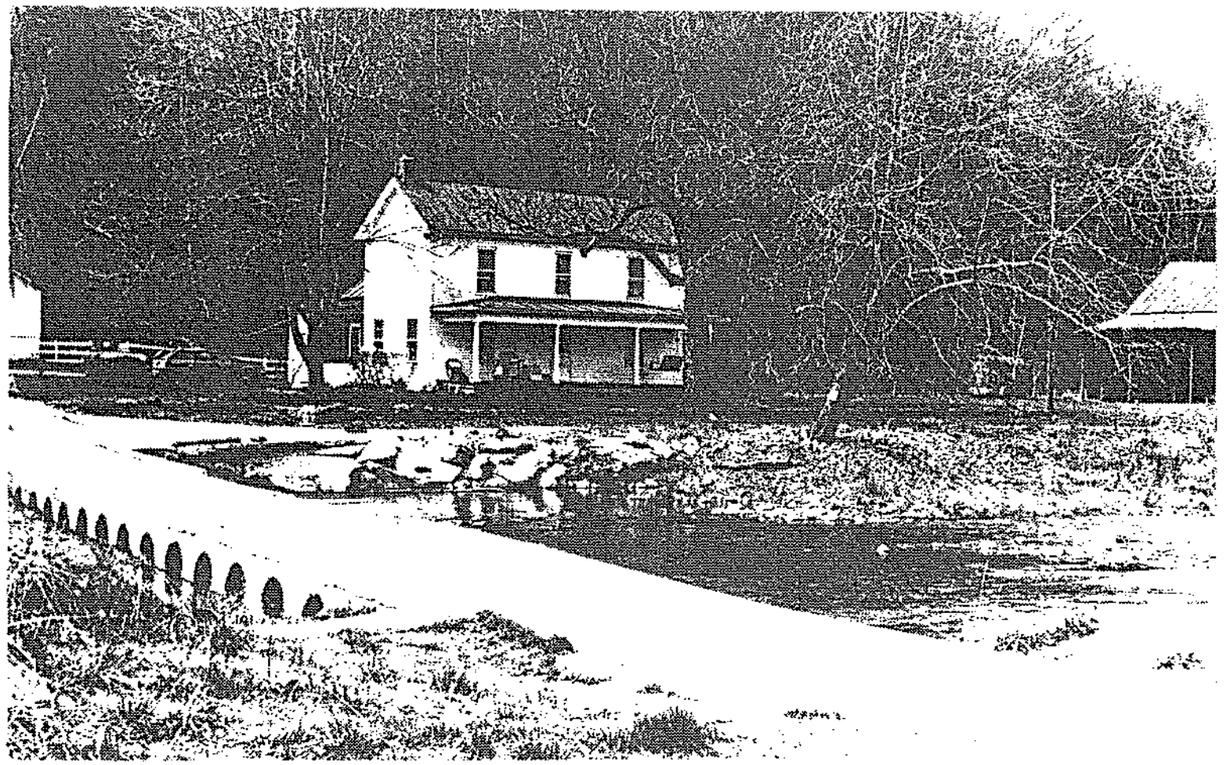
Farmland Located on the Old Site of Bennet's Mill on the North Fork

NORTH FORK (McDONALD'S MILL-ELLETT VALLEY) SEGMENT

The North Fork of the Roanoke River winds through a scenic valley between Brush Mountain and Paris Mountain. The majority of surrounding mountain slopes are forested; pasture and cropland exist on the valley floor where wide enough. Although some pig and sheep farms may be found, most of the pasture land is devoted to cattle.

Detached large lot single family housing is spread throughout the headwaters. Residential subdivisions are small and sparse. A golf course and country club lie along the Ellett Valley segment of the corridor. Although the subdivision surrounding the golf course is served by a small sewage treatment plant, most residential uses in this area are served by individual septic tanks and absorption fields.

Route 785, which winds along the valley floor and the banks of the river from Luster's Gate to the Roanoke County border, has been designated as a state scenic by-way. Route 723, south of Luster' Gate, also follows a portion of the river providing access to farms and dwellings. In this segment, notably at Ellett, commercial uses are few. A rock quarry also exists adjacent to the Norfolk and Western Railroad north of Ellett.



Farmhouse along South Fork.

NORTH FORK (IRONTO) SEGMENT

The Ironto segment of the North Fork is surrounded by forested mountains and ridges of rugged topography. However, along valley floors and bottomland, pasture and cropland use is prevalent.

A great deal of small older residential housing is present along the river banks and Route 603. Septic tanks and absorption fields are close to the river due to the narrowness of the valley. Illegal dumping exists throughout the corridor especially at turnoffs and pullouts along the roadway. Ironto is a small community along the river corridor with only one country store and an abandoned school. The Norfolk and Western Railroad runs along most of the river. A number of rock quarries are located less than a mile from the river.

US 81 crosses the north fork along a small section of rerouted river. The rest area on US 81 is also on the north fork promoting a small walk and seating area adjacent to the river bank.

SOUTH FORK SEGMENT

The South Fork of the Roanoke River travels through linear valley floors with steep mountain ridges on each side. Most of the surrounding mountain slopes are forested, and the valley floor, where wide enough, provides gentle slopes for pasture and cropland.

Restricted Access to Farmland Along the South Fork

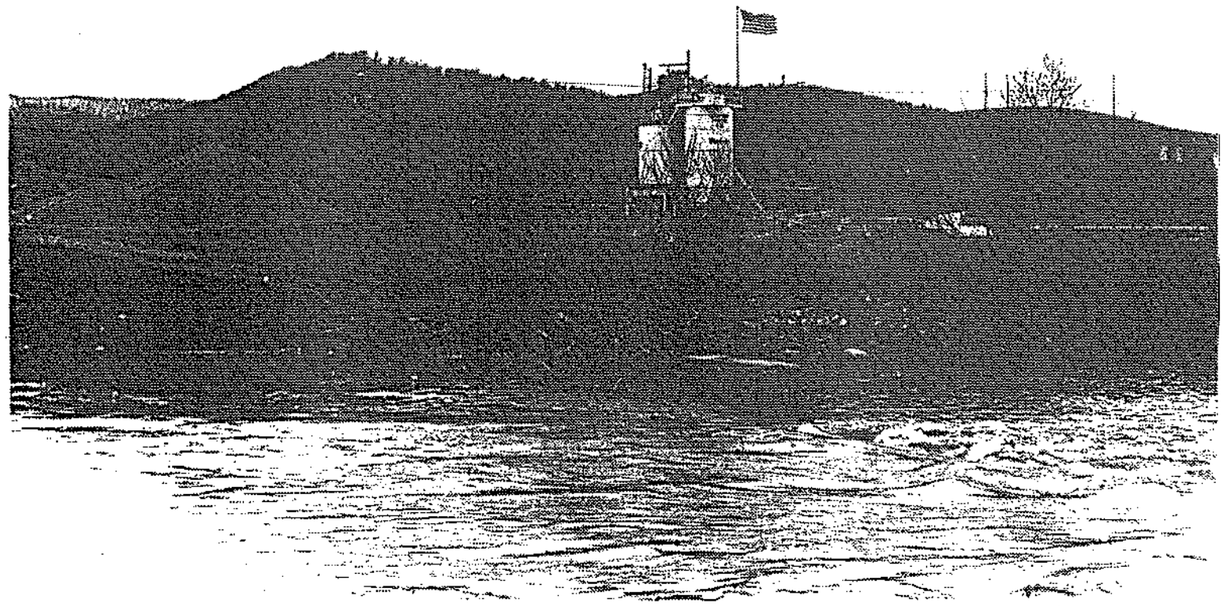
Residential uses consist mainly of small, older rural dwellings that are clustered in narrow bands above the river's edge, along with several trailer parks. Illegal dumping exists along roadways and in some residential areas often creating a trashy appearnce to an otherwise pastoral landscape. Recreational opportunities are evident along the south fork due to the river's accessibility in this segment.

SOUTH FORK (SHAWSVILLE-ELLISTON-LAFAYETTE) SEGMENT

The South Fork, between Shawsville, Elliston, and Lafayette, meanders through a much broader valley corridor, cutting deep into mountain ridges on both sides. The river has created many steep hill slopes which are still covered with young, mixed deciduous woodlands. Mountain ridges and stream corridors are occupied by a more mature, deciduous woodland cover.

Pasture, commerce, light industry and cropland uses appear mixed together throughout much of this segment. Operating facilities include such diverse uses as county sewage treatment plants, a county trash pick-up facility, a lumber yard, grain mill, sausage plant, rock quarries, and a plant material nursery.

Residents tend not to have houses close to the river due to the danger of flooding. The only intrusion into the flood plain areas are trailer parks. Many of the houses in Elliston and Lafayette are older,



Industry Located on the Outskirts of Salem

single family residences. Illegal dumping is not evident along this section of the river or the adjacent roads.

In this segment, Route 460 is separated from the river which makes access more difficult. Overall, development is nearly nonexistent throughout the segment. The Norfolk and Western Railroad runs along adjacent to the river in the northern portion of this segment.

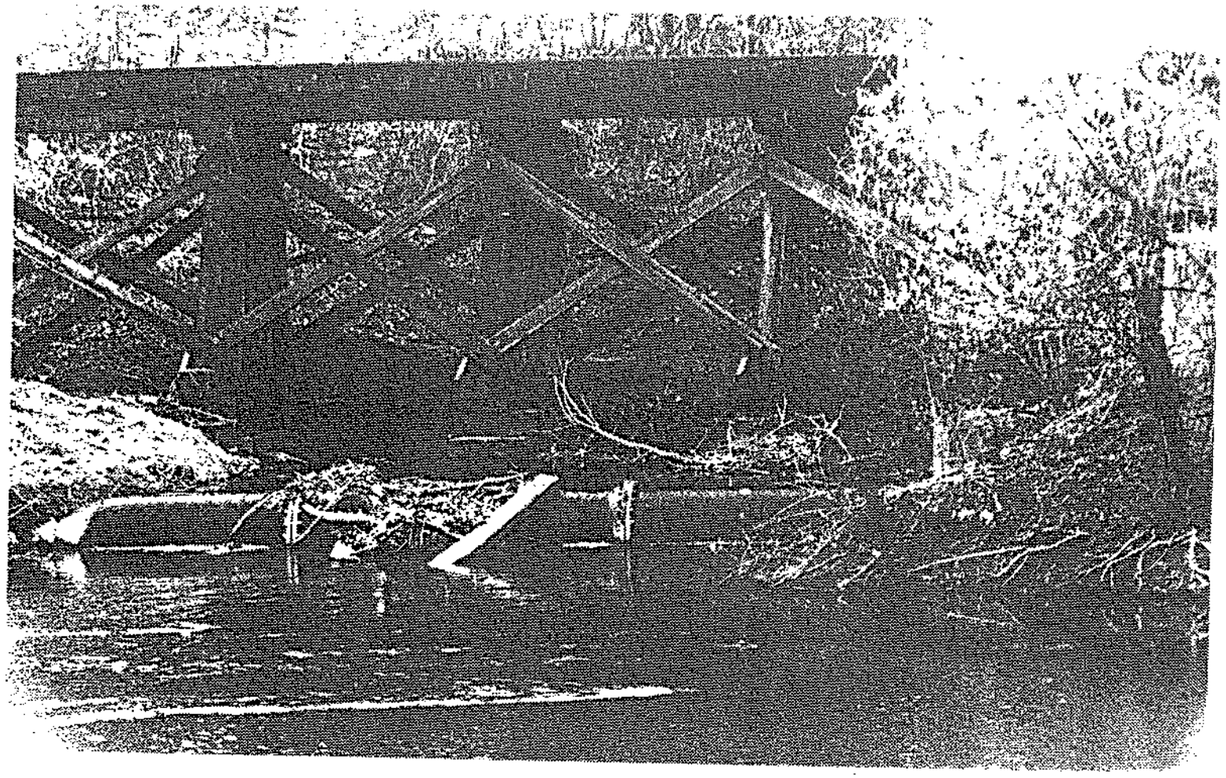
GLENVAR SEGMENT

The Glenvar segment of the Roanoke River is a transitional one; from forested slopes and agriculture to commercial and industrial areas. The industrial area is located near Salem with pasture and cropland existing along the western portion of this segment.

There is evidence of considerable illegal dumping along Route 639 and adjacent to the river. Areas of deforestation are also visually evident throughout the corridor. More suburban development is also visible, from scattered homesites to residential subdivisions, in various areas above the river.

The Norfolk and Western Railroad and US 460 parallel the river through much of the area, making access more difficult.

Near the city of Salem, Green Hill Park is being developed with open grass meadow play fields and a tree lined reparian corridor along the river.



Typical Scene Along the River in Roanoke City

SALEM SEGMENT

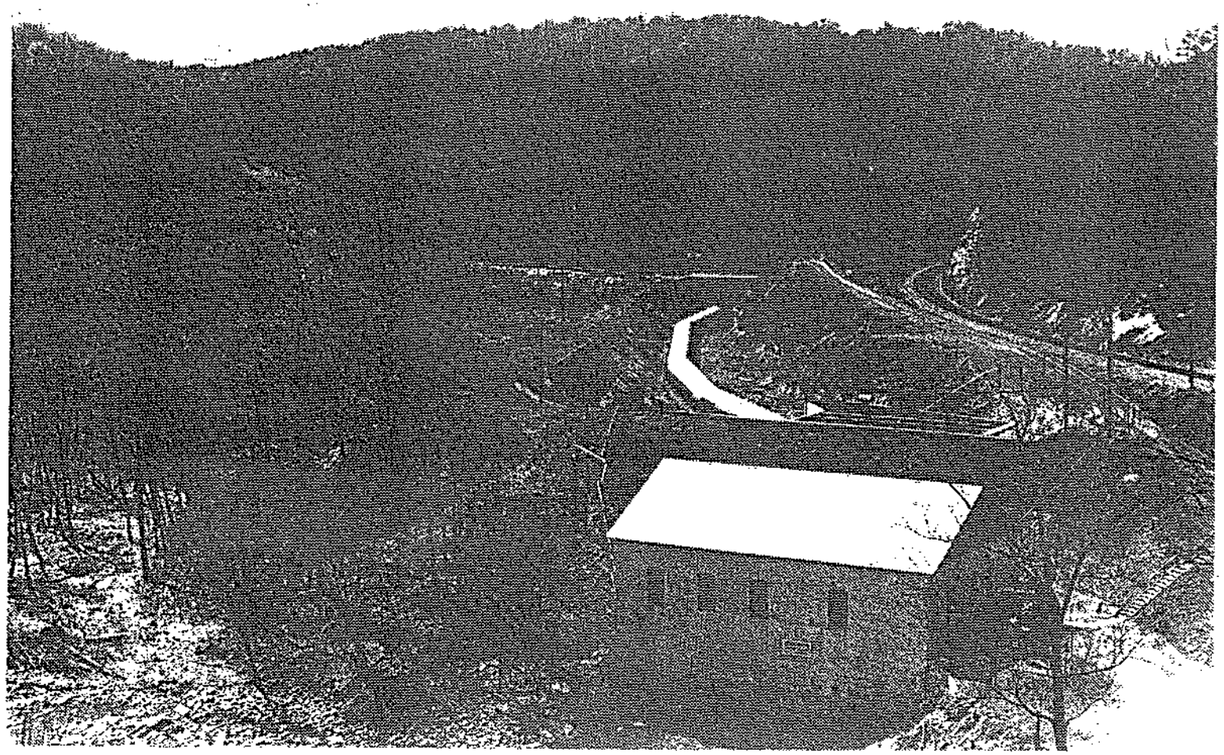
The Salem segment of the corridor is principally industrial. Abuse of the riverine habitat, by industrial uses, is evident from the encroachment of metal and cement debris along the river banks. This abuse is prevalent and there are few visible signs of any clean-up efforts. Illegal dumping is evident at several pulloffs adjacent to the river and surface erosion appears to be a serious and continuing problem at some locations.

A number of residential neighborhoods are located in this vicinity although they are set back somewhat from the Roanoke River. Sites of new construction and industrial development are evident all throughout this segment.

CITY OF ROANOKE SEGMENT

This segment, for the most part, is fully static and in a state of neglect. Large scale industrial uses in close proximity to the river's edge occupie most of the frontage. Stream corridor neglect (i.e. trash, refuse, and work equipment and materials) is blatant throughout the industrial sections of Roanoke.

Other land uses consist of a sewage treatment plant, the expansive Norfolk and Western Railroad Yard, and the adjacent Historic District



The Niagara Power Plant Near the Blue Ridge Parkway

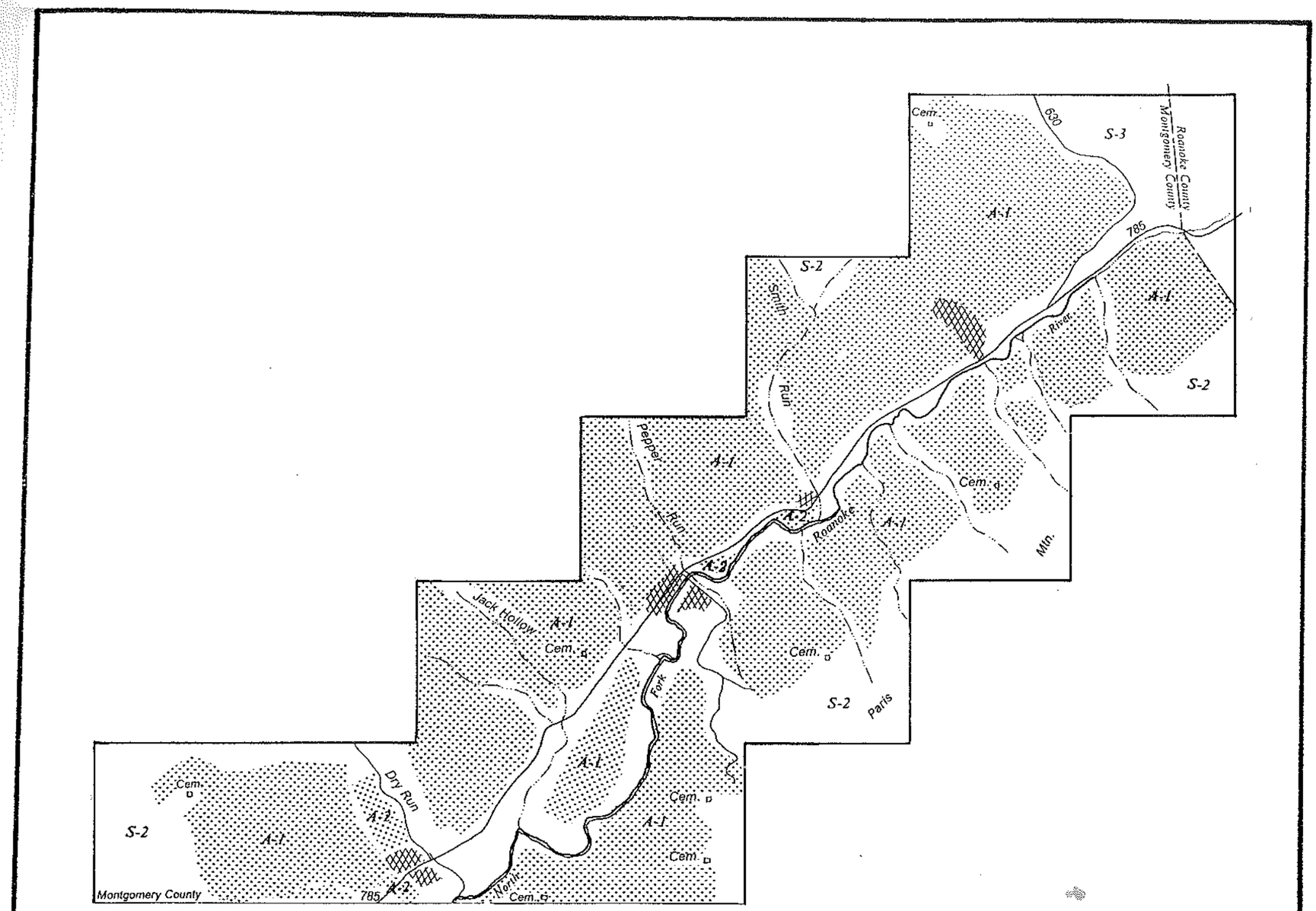
of downtown Roanoke. Route 116 provides the most direct access to the river in this section of the corridor.

VINTON TO HARDY BRIDGE (SMITH MOUNTAIN LAKE) SEGMENT

Most of this region is in forest cover and somewhat unaccessible. Because of the rolling mountain terrain, minimal agricultural activity takes place along the river corridor. Two landfills dot the region upslope from the river's edge. The railroad line is the only industrial usage taking place along this segment. Residential housing exists in the town of Vinton and in Franklin County, but there are few residences along the river above Smith Mountain Lake.

MAPS AND METHODOLOGY

Information on the following maps was gathered from existing land use maps and field surveys done during the Spring of 1989.



Paris Mtn. Segment

Legend

Commercial

- C-1 = Highway oriented
- C-2 = Regional
- C-3 = Tourist
- C-4 = Institutional

Industrial

- M-1 = Light manufacturing
- M-2 = Heavy manufacturing
- M-3 = Warehousing

Agricultural

- A-1 = Pasture
- A-2 = Cultivated

Open Space

- S-1 = Riparian, wetland
- S-2 = Forest, woodlot
- S-3 = Abandoned , vacant fields

Residential

LAND USE

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

Landscape Architecture Progaram

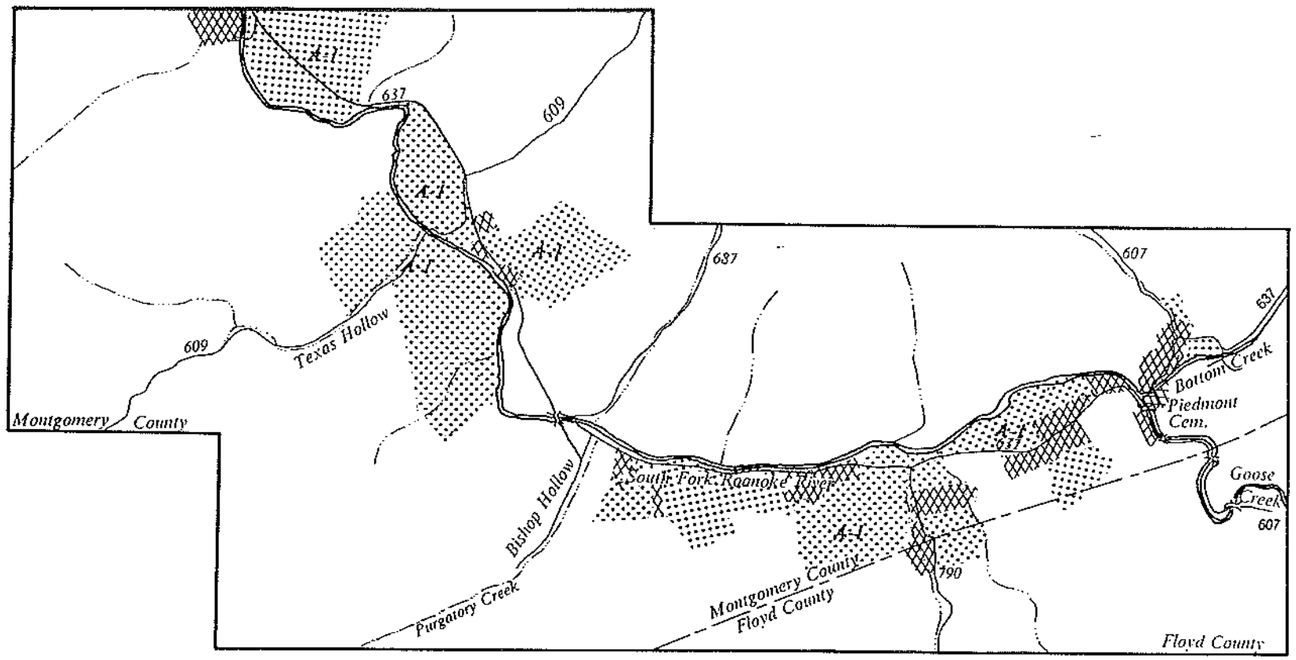
Virginia Polytechnic Institute & State University

April 26, 1989

A 1

Scale: 1" = 1500'

North



Piedmont Segment

Legend

Commercial

- *C-1 = Highway oriented*
- *C-2 = Regional*
- *C-3 = Tourist*
- *C-4 = Institutional*

Industrial

- *M-1 = Light manufacturing*
- *M-2 = Heavy manufacturing*
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Agricultural

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Open Space

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Residential

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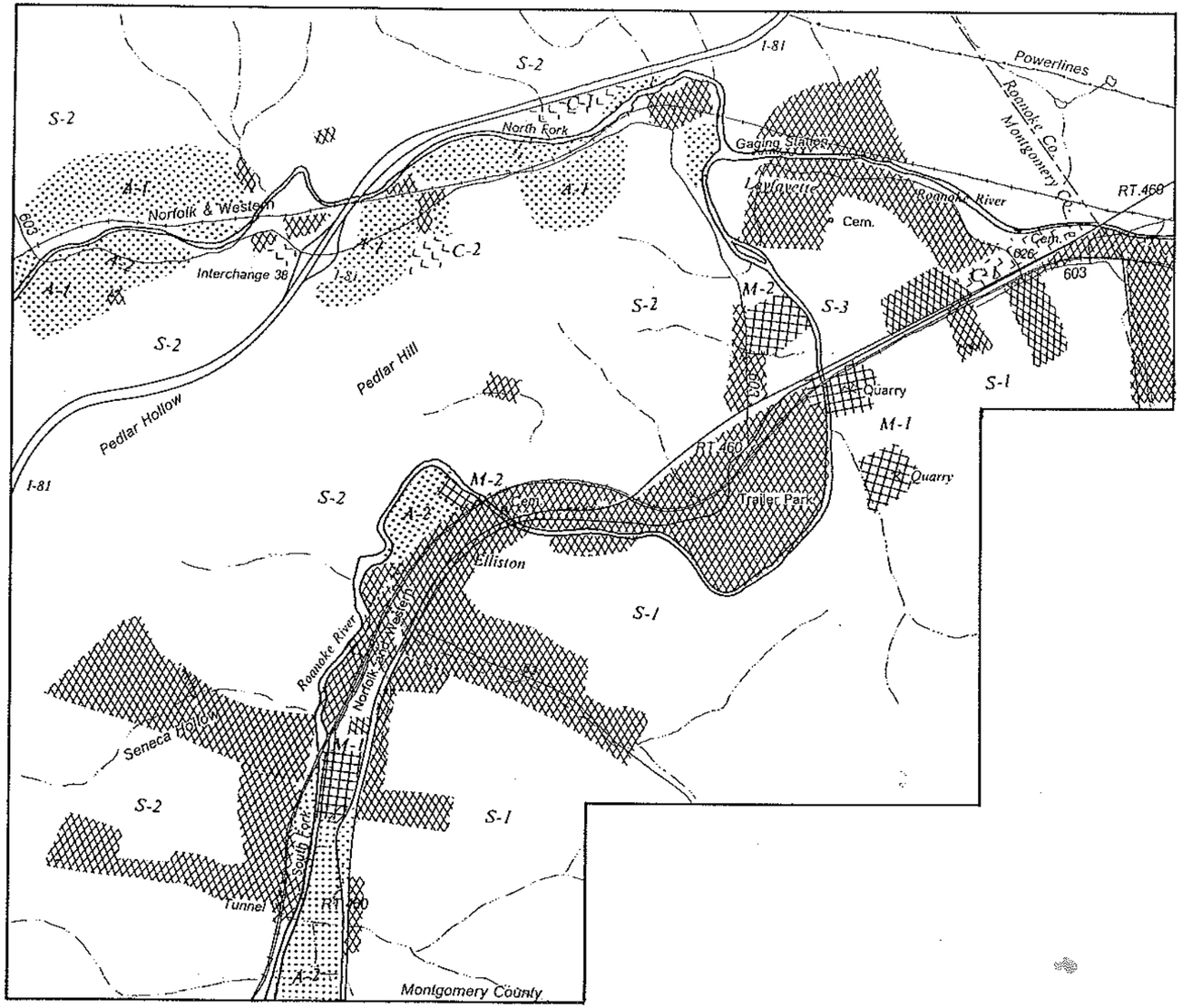

Lafayette Segment

Legend

Commercial

- *C-1 = Highway oriented*
- *C-2 = Regional*
- *C-3 = Tourist*
- *C-4 = Institutional*

Industrial

- *M-1 = Light manufacturing*
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Residential

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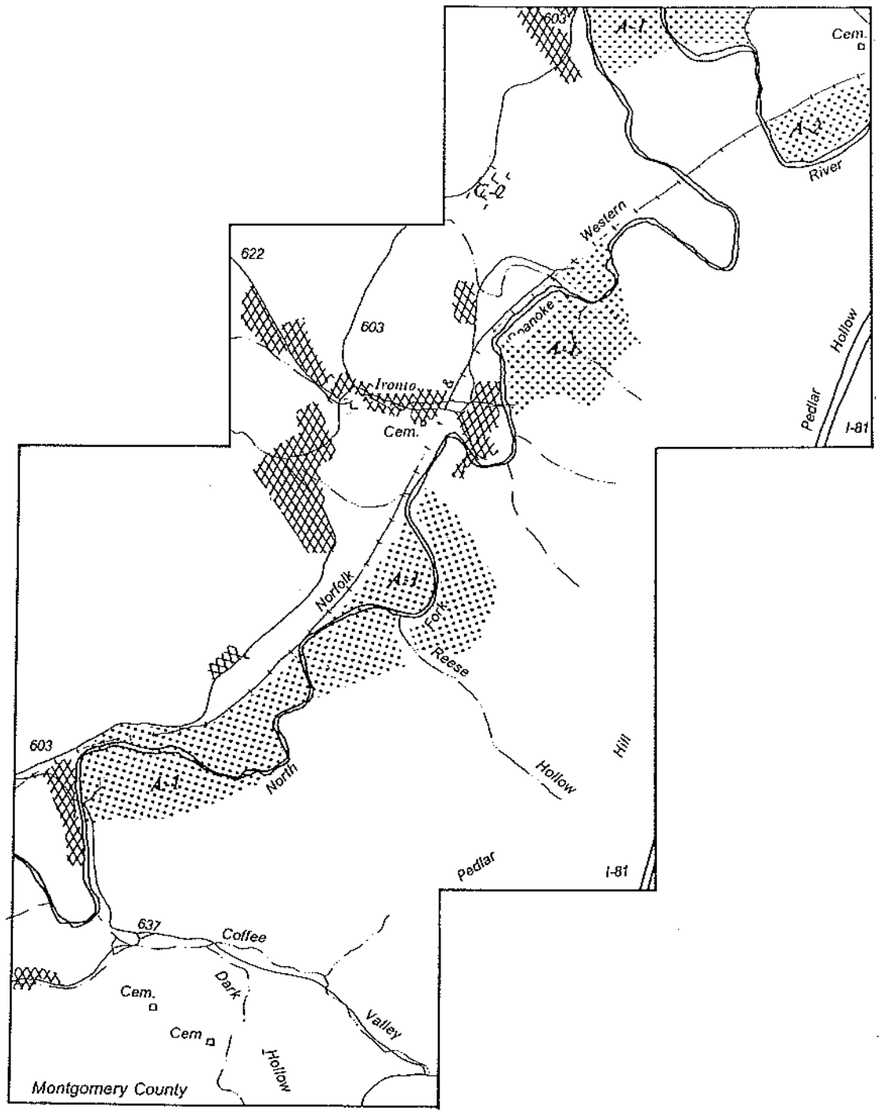

Ironto Segment

Legend

Commercial

- *C-1 = Highway oriented*
- *C-2 = Regional*
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Industrial

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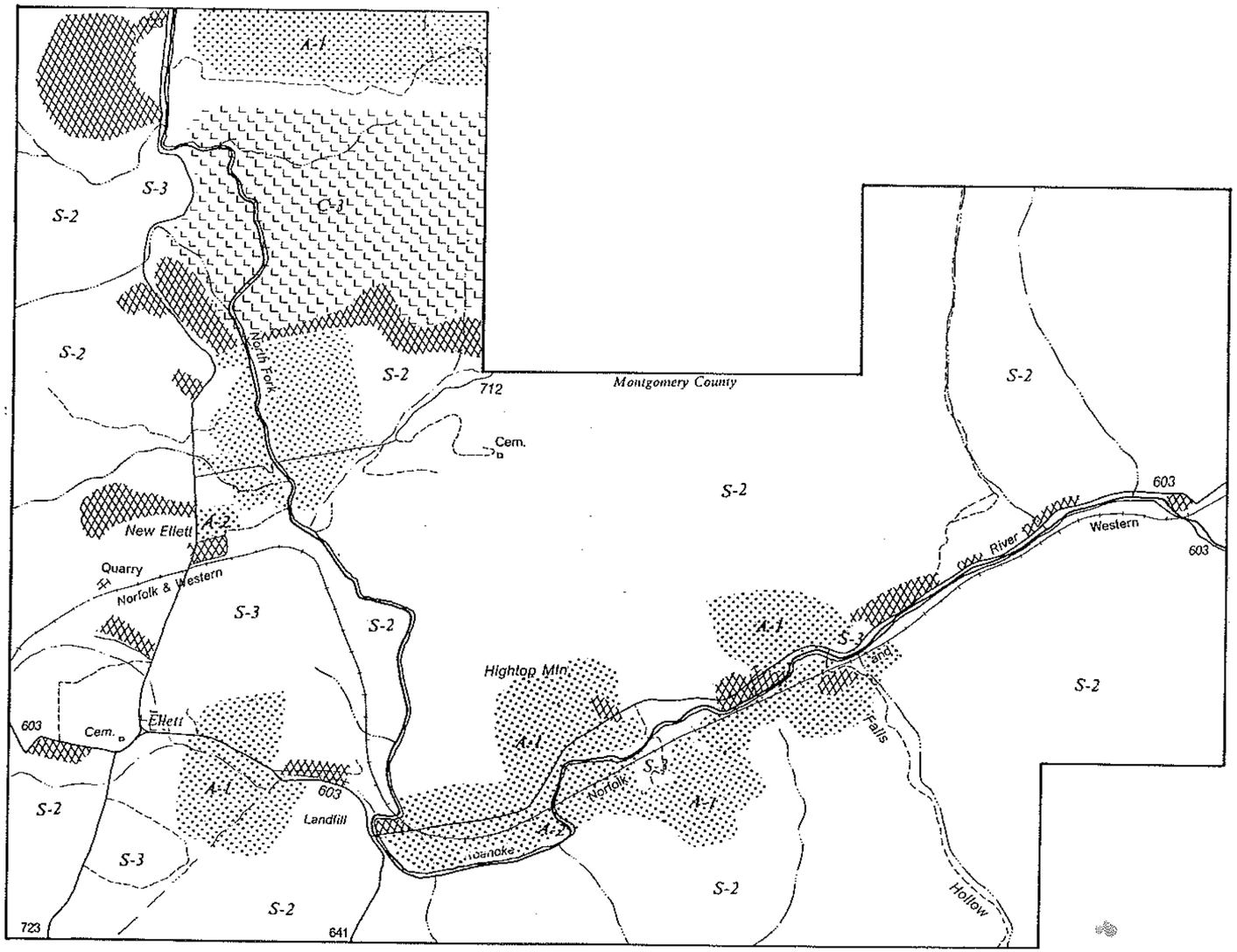

Ellett Segment

Legend

Commercial

- *C-1 = Highway oriented*
- *C-2 = Regional*
- *C-3 = Tourist*
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Industrial

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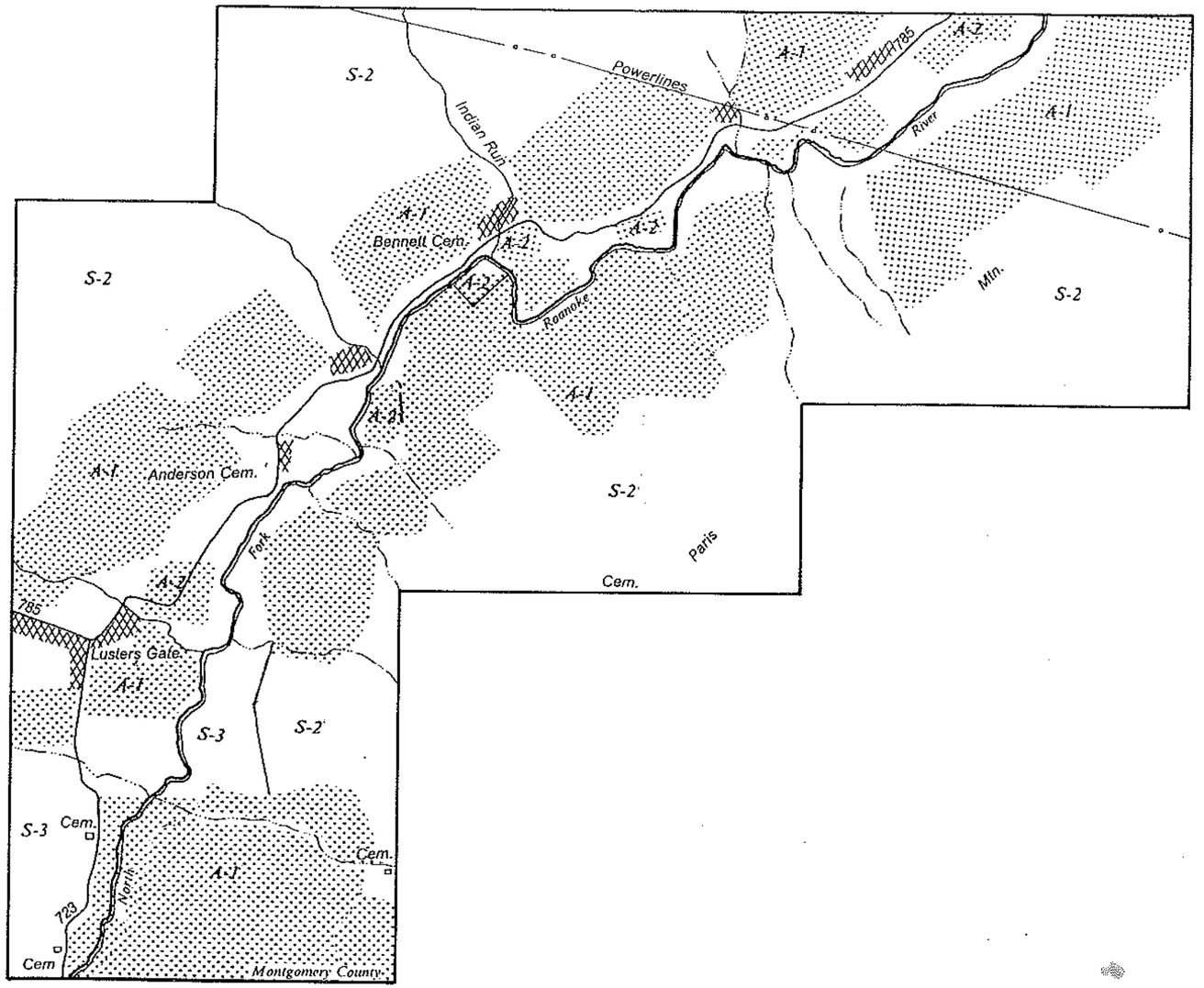

Lusters Gate Segment

Legend

Commercial

- C-1 = Highway oriented
- C-2 = Regional
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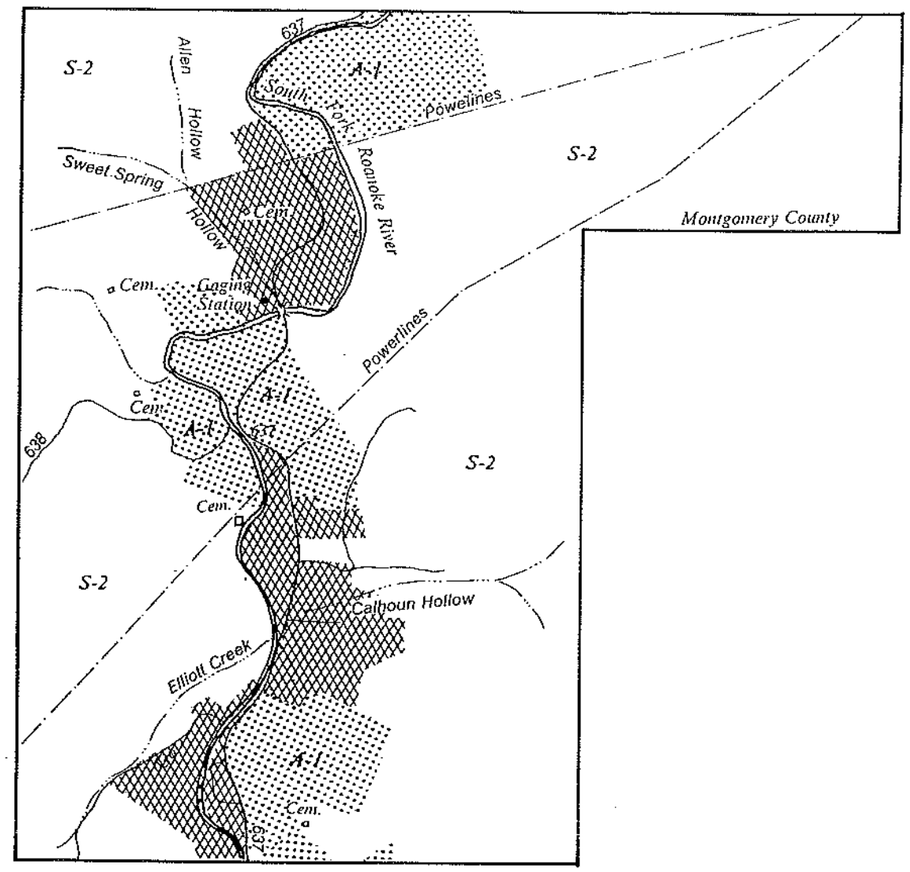

Calhoun Segment

Legend

Commercial

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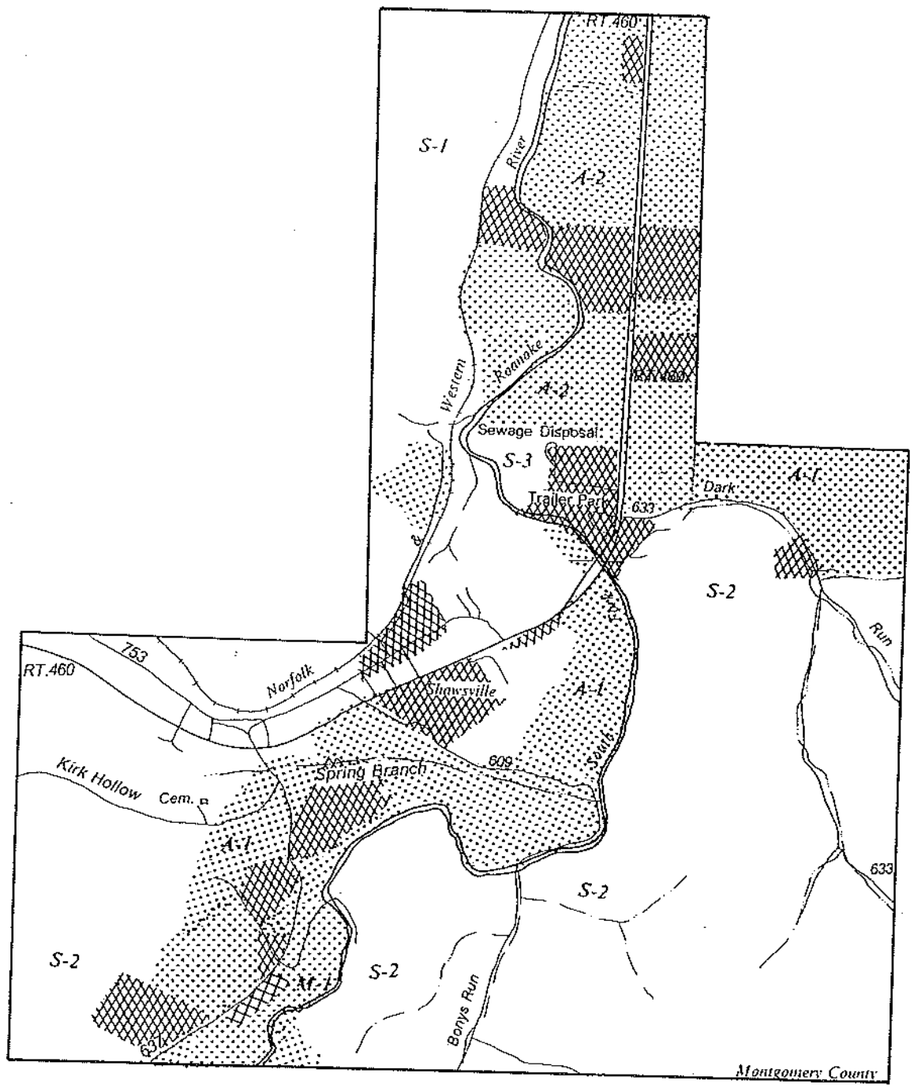

Shawsville Segment

Legend

Commercial

- *C-1 = Highway oriented*
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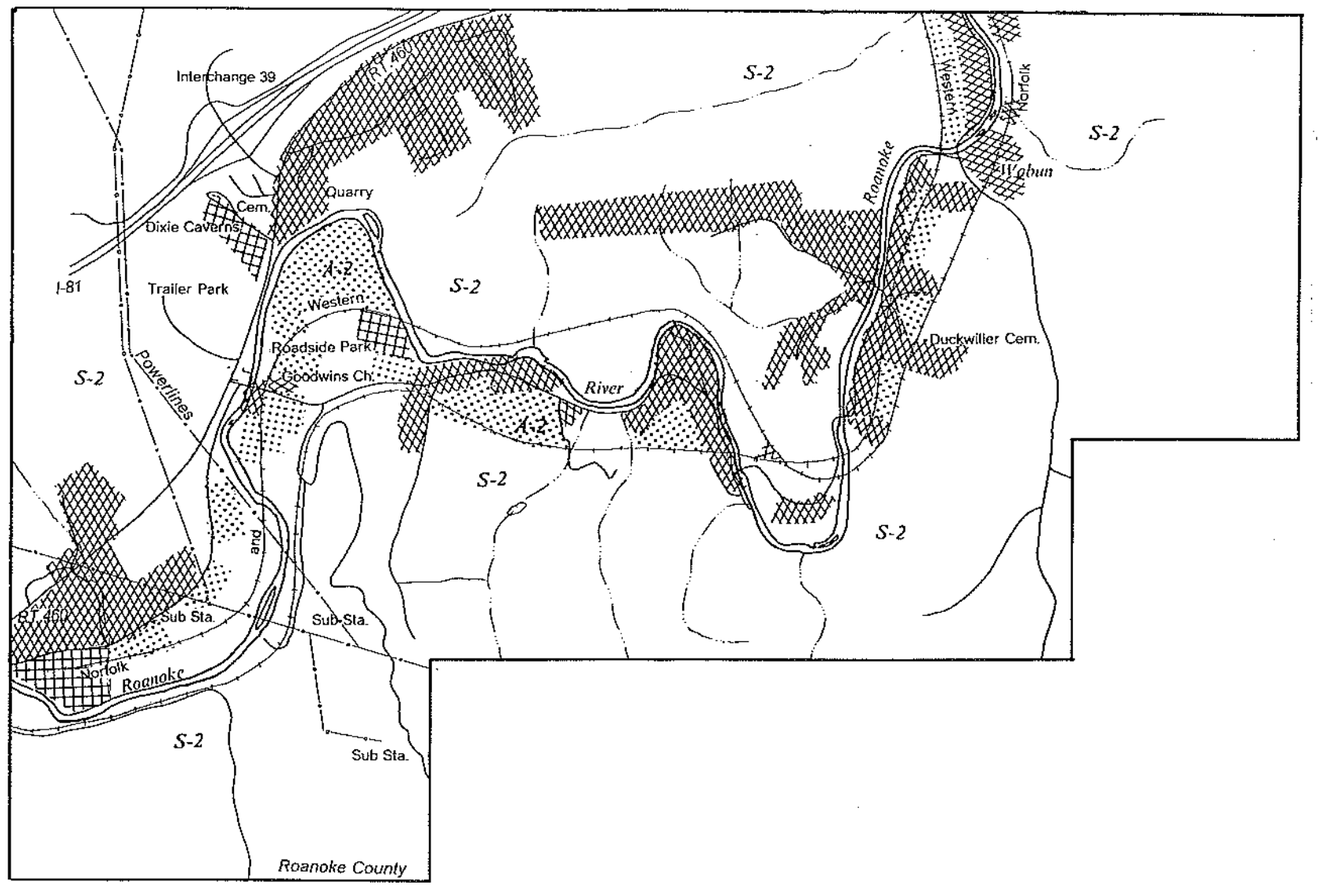

Wabun Segment

Legend

Commercial

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Industrial

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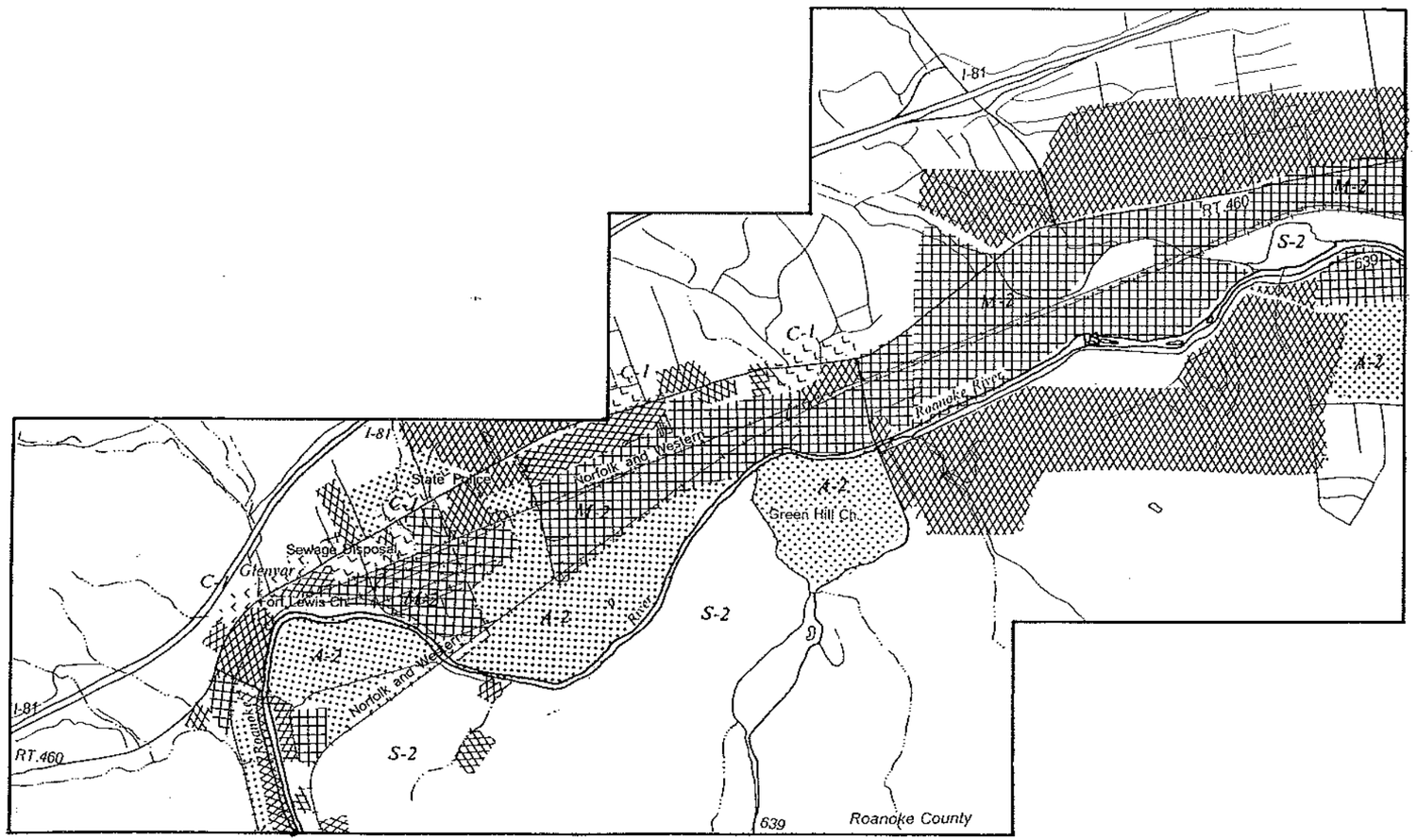

Glenvar Segment

Legend

Commercial

- C-1 = Highway oriented
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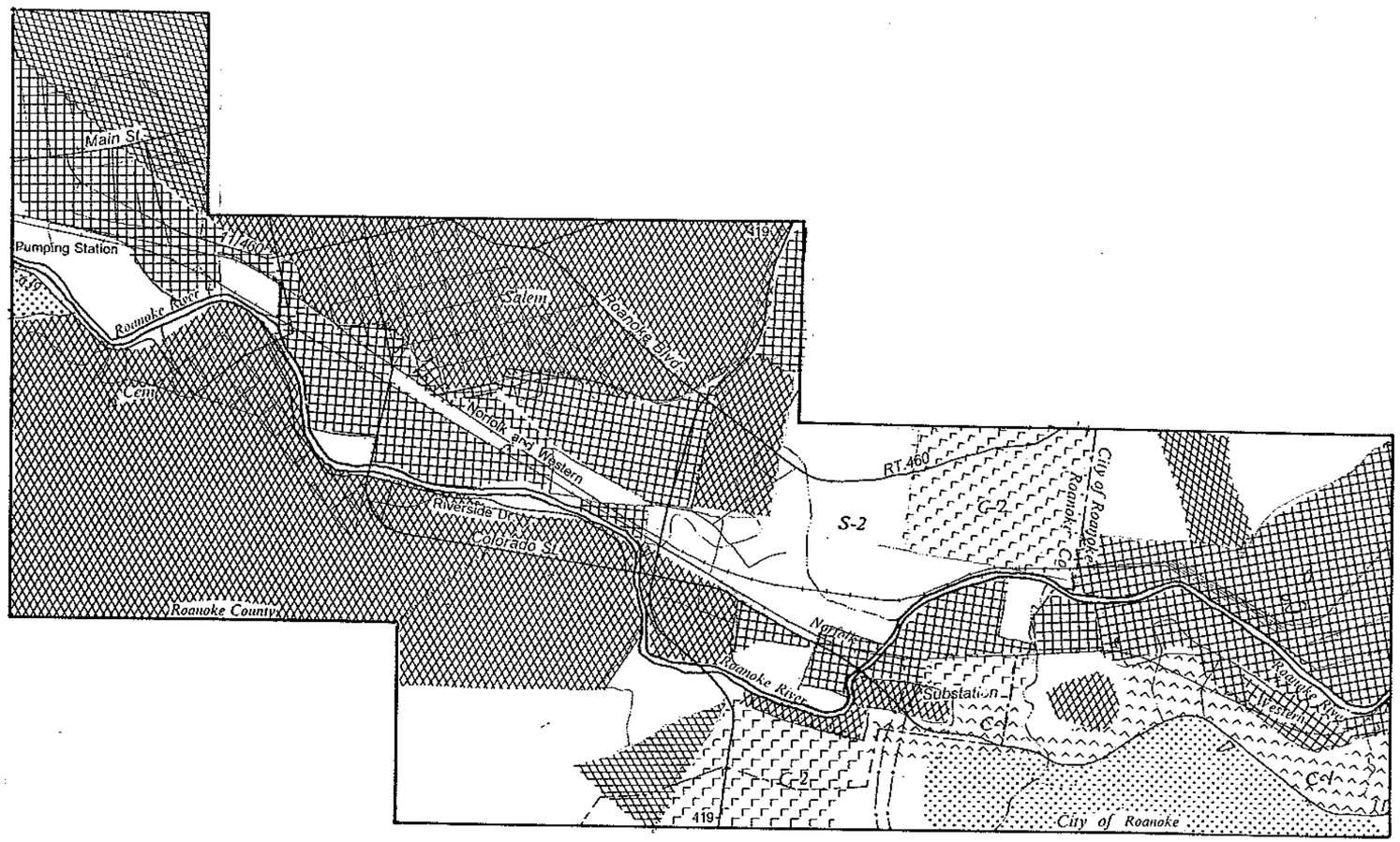

Salem Segment

Legend

Commercial

- C-1 = Highway oriented
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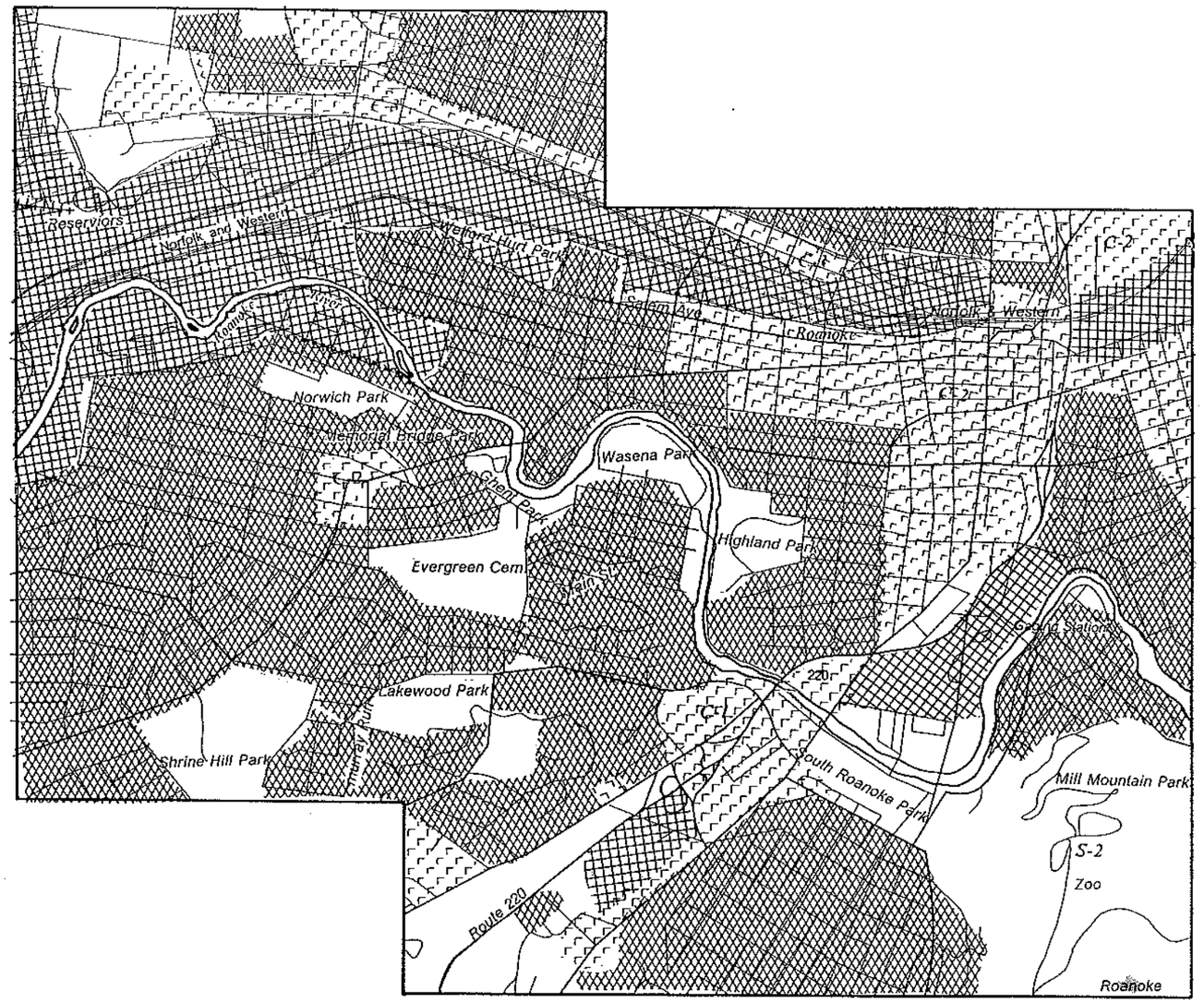

Roanoke Segment

Legend

Commercial

- *C-1 = Highway oriented*
- *C-2 = Regional*
- *C-3 = Tourist*
- *C-4 = Institutional*

Industrial

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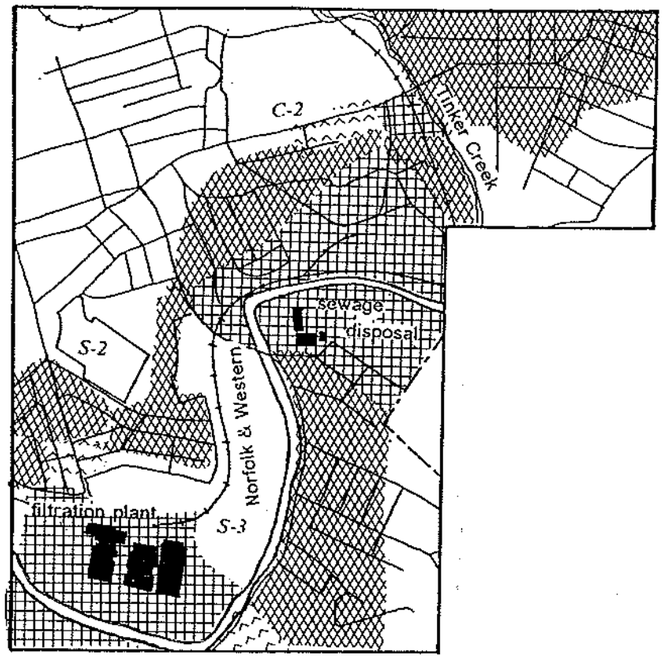

Roanoke Segment

Legend

Commercial
- C-1 = Highway oriented
- C-2 = Regional
- C-3 = Tourist
- C-4 = Institutional

Industrial
- M-1 = Light manufacturing
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Residential

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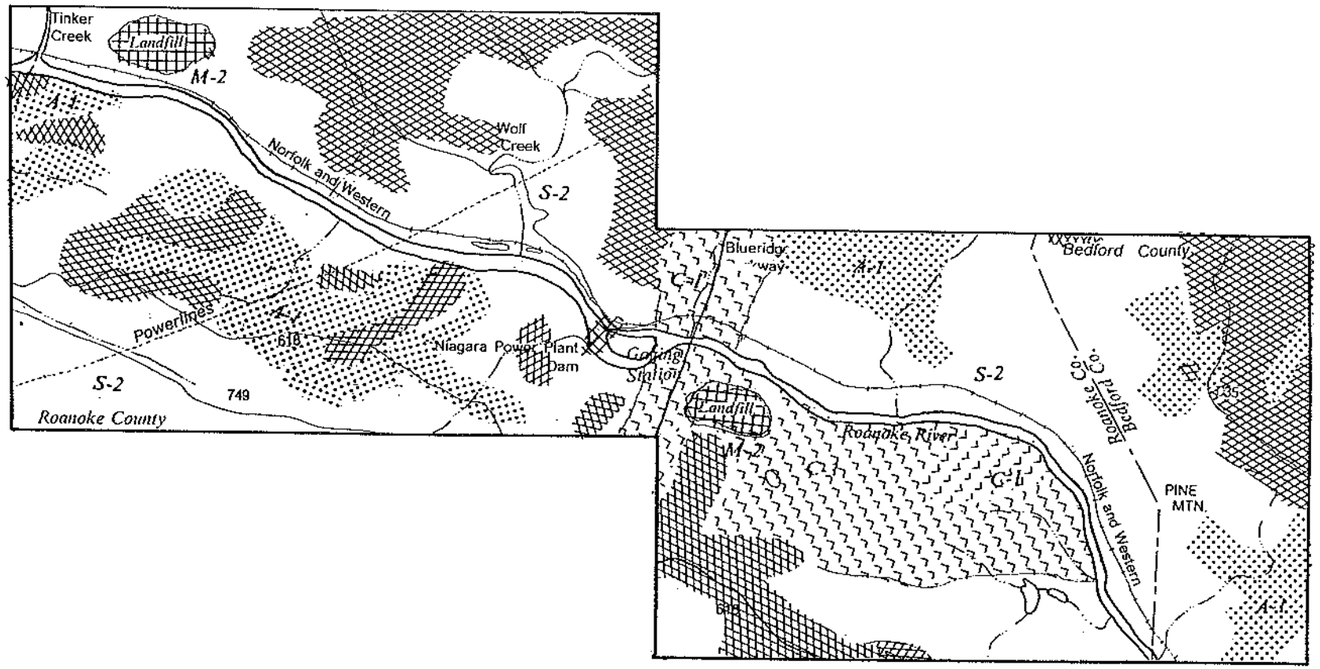

Vinton Segment

Legend

Commercial

C-1 = Highway oriented
C-2 = Regional
C-3 = Tourist
C-4 = Institutional

Industrial

M-1 = Light manufacturing
M-2 = Heavy manufacturing
M-3 = Warehousing

Agricultural

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Open Space

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Residential

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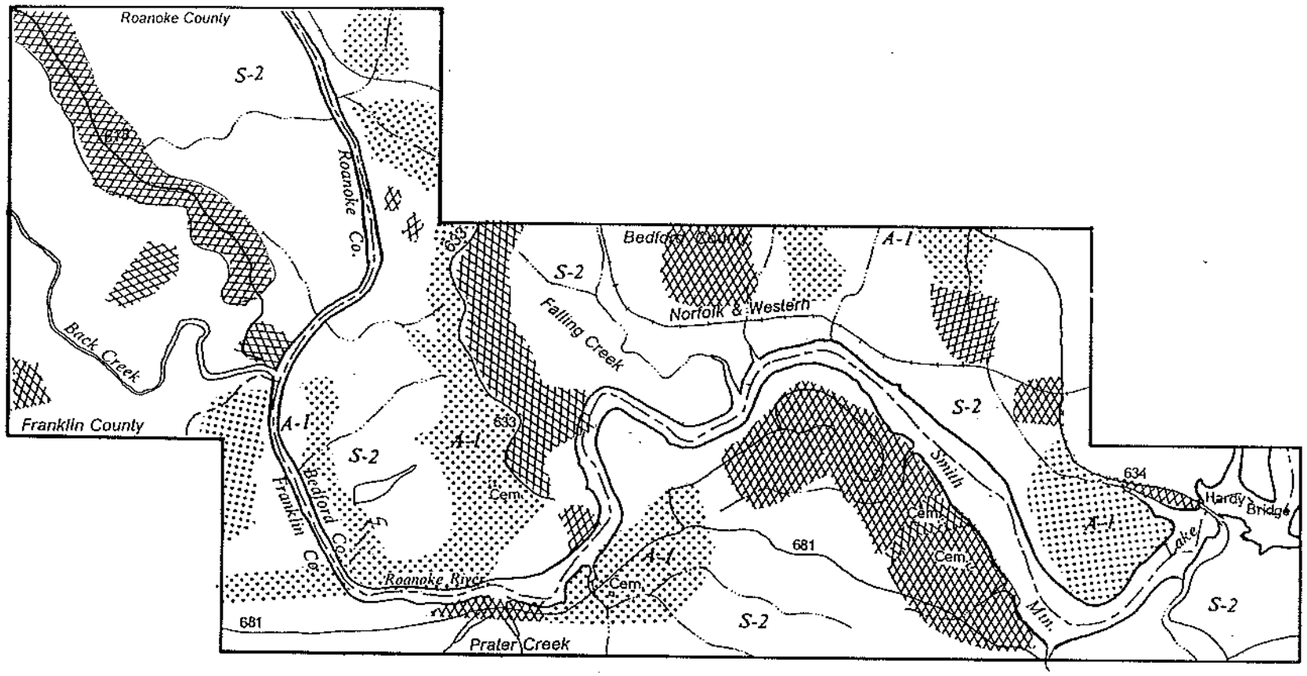
April 26, 1989

A14

Scale: 1" = 1500'

North



Hardy Bridge Segment

Legend

Commercial

C-1 = Highway oriented
C-2 = Regional
C-3 = Tourist
C-4 = Institutional

Industrial

M-1 = Light manufacturing
M-2 = Heavy manufacturing
M-3 = Warehousing

Agricultural

A-1 = Pasture
A-2 = Cultivated

Open Space

S-1 = Riparian, wetland
S-2 = Forest, woodlot
S-3 = Abandoned , vacant fields

Residential

LAND USE

ROANOKE RIVER CORRIDOR STUDY

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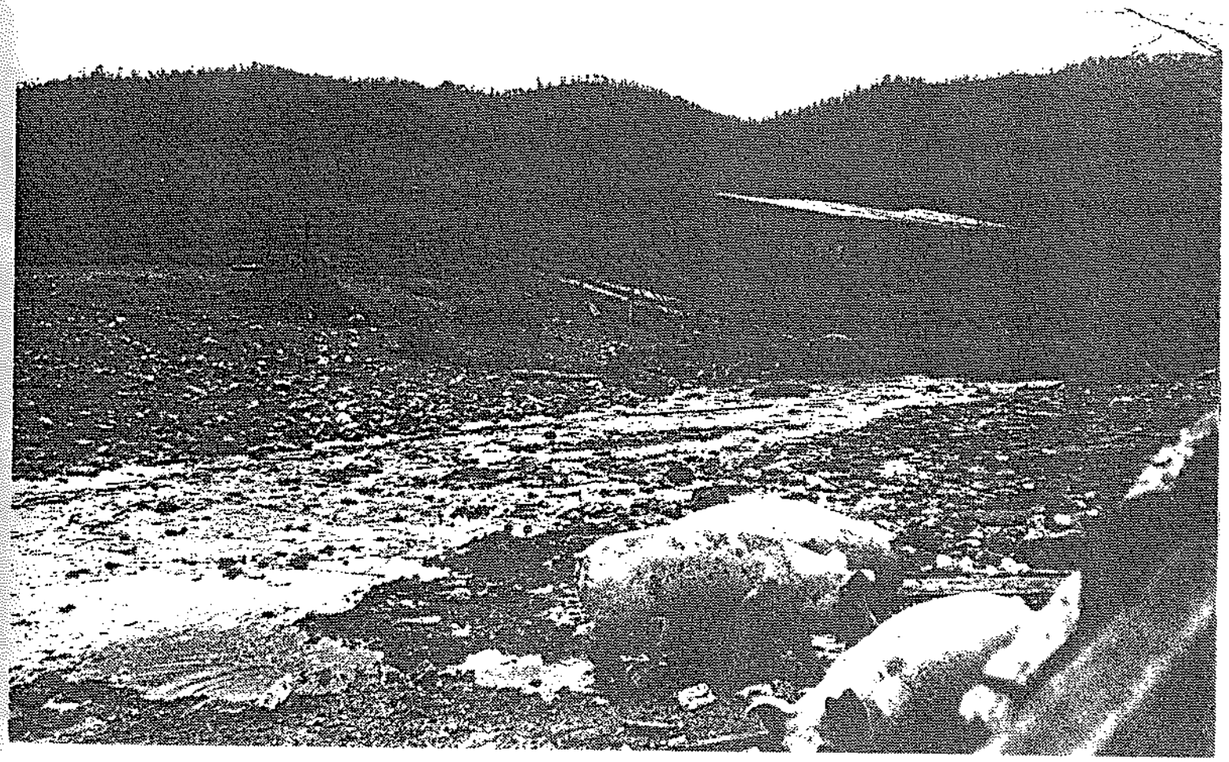
Virginia Polytechnic Institute & State University

April 26, 1989

A15

Scale: 1" = 1500'

North



Tributary of the North Fork Running Directly Through Pig Lot

DEGREDATION

Degradation is a lessening of the natural quality of the landscape usually brought about by improper land use or thoughtless activity. It results in a lowering of environmental quality essential for life. Particular forms of degradation which are prevalent are erosion, sedimentation, deforestation and indiscriminate dumping of trash. Unfortunately, from our studies, it was found that each river corridor segment is inflicted by one or even several forms of degradation. This degradation has an alarming impact on the Roanoke River's ecosystems and surrounding environments. Without careful forms of conservation, protection, and management, serious problems could arise with irreversible consequences. Therefore, public officials and residents of the Roanoke River corridor must implement better management and conservation practices to improve and retain the quality of the river for the generations to come.

NORTH FORK

This first river segment is well established with thick forests in the high ridges along the river. The lower elevations along the river contain grazing and croplands. There is considerable runoff from these areas. A golf course adds to the chemicals that runoff into the stream. The color of the water testifies to the fecal wastes and chemicals that are being washed into the stream. Stream bank ero-

Illegal Dump Site on the South Fork

sion is prevalent, caused by runoff and livestock traffic along the water's edge.

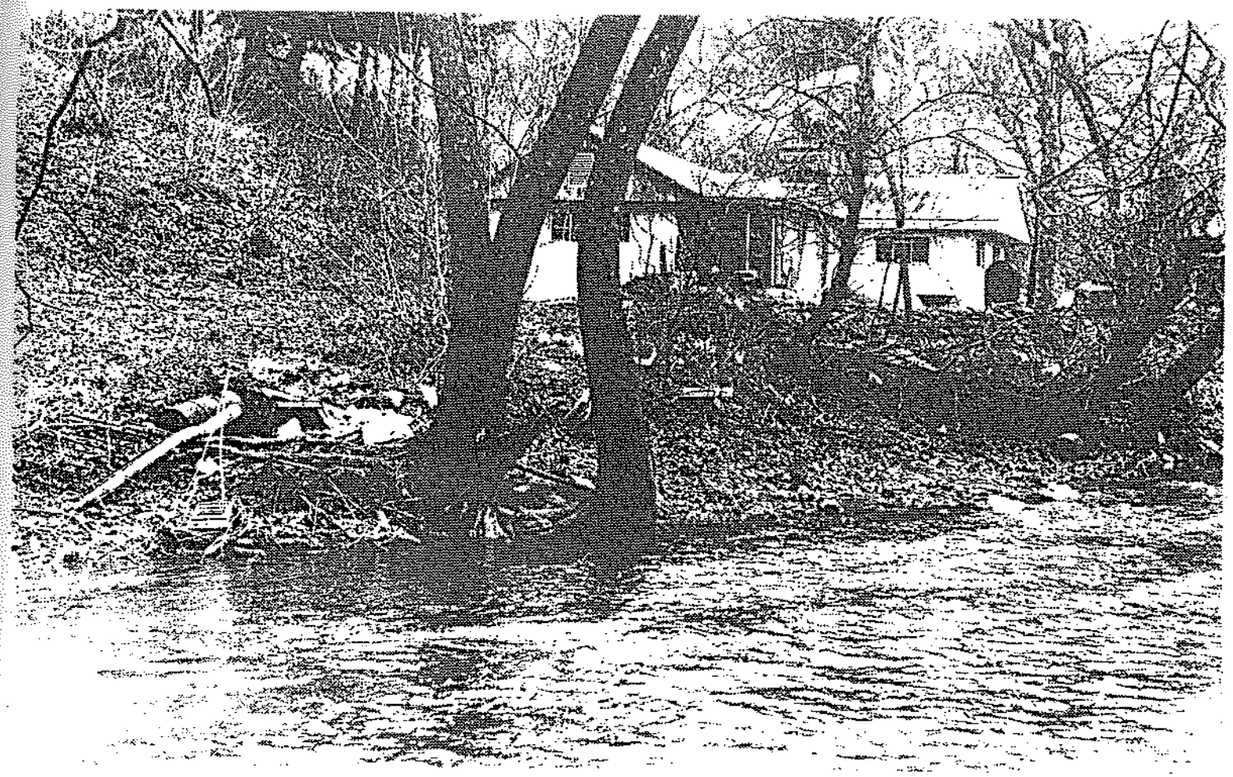
Sewage treatment release exists near the golf courses, dumping into the stream. There are many areas of illegal dumping from sparse roadside trash to farm equipment dumps.

NORTH FORK ROANOKE RIVER (IRONTO)

This river segment is surrounded by well preserved forested ecosystems because of the steep topography. However, where the topography allows, pastures and croplands prevail. River bank erosion exists in several areas of the North Fork. Feed lots produce some problems in the Ellett Valley area. These lots have no grass cover; therefore, runoff of animal wastes and eroded soils go directly into the river. Trash dumping from bottles and paper along roads to old farm equipment is prevalent in this area.

SOUTH FORK

The South Fork area is mostly agricultural with livestock fields in the lower elevations and thick forests on severe slopes. Deforestation of most of these farming areas occurred years ago. These areas remain unstable due to overgrazing and yearly tilling. Because of overgrazing and tilling, these areas are losing large amounts of soils due to water runoff. Results are heavy sedimentation of the South



Riverside bank dumping.

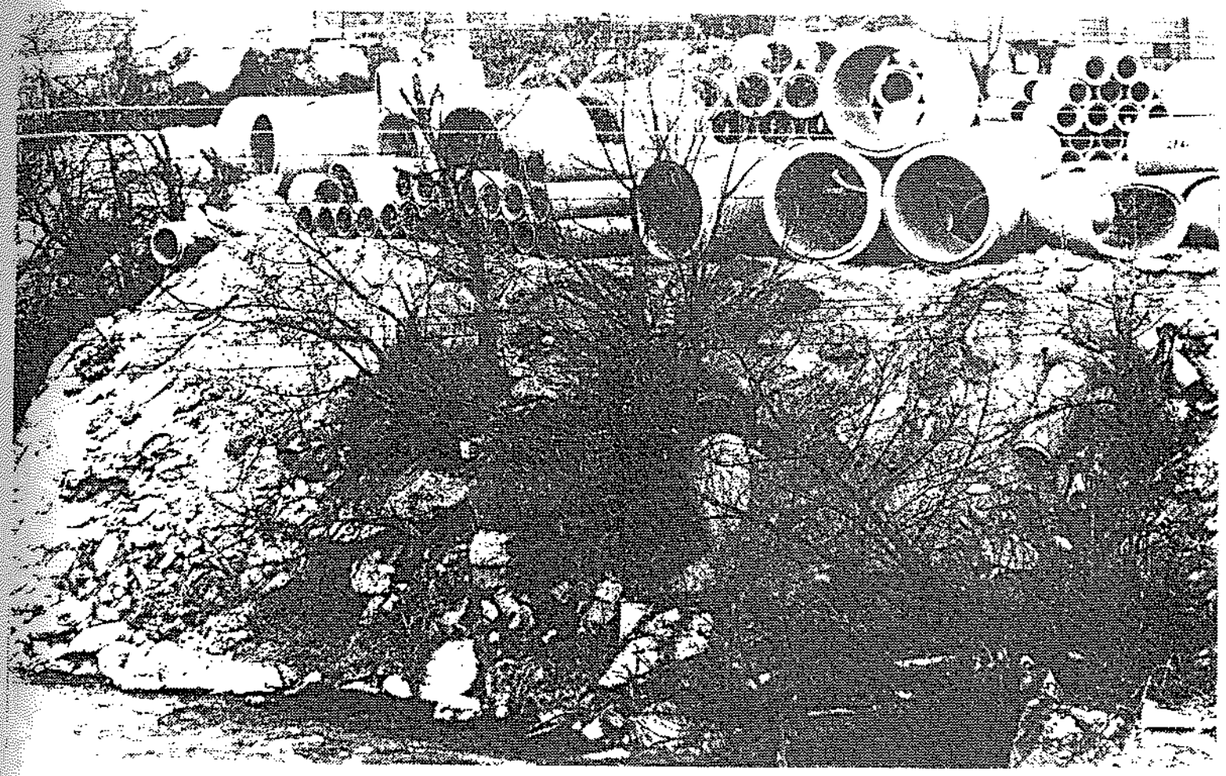
Fork which directly affects fish and aquatic habitat. Also resulting from runoff is the transportation of fecal waste from livestock. Along Rt. 637, littering exists between the road and the river. There are several large illegal dumping areas found on the outskirts of several farms. Where the road permits pulloffs for cars, trash is usually found in large quantities.

SOUTH FORK - SHAWSVILLE TO ELLISTON, LAFAYETTE

The South Fork River cuts deeply into the valley creating steep mountain ridges on both sides of the river. These ridges are heavily wooded so that they are generally stable. In the lower areas where agriculture is present, erosion and sedimentation are found. There is considerable illegal dumping found around trailer parks that are located close to the river's edge.

GLENVAR

The Glenvar area is a transition from cropland and pastures to light industry and residences. Several industries in this area are very close to the river's edge. Some locations contribute industrial waste runoff as well as industrial materials such as concrete, timber, and steel. Deforestation is occurring at an increased rate to accommodate site preparation for buildings and roads. Some unstable areas are producing heavy runoff and sedimentation along the Roanoke



Industrial Products Stored Directly on the Banks of the Salem Corridor

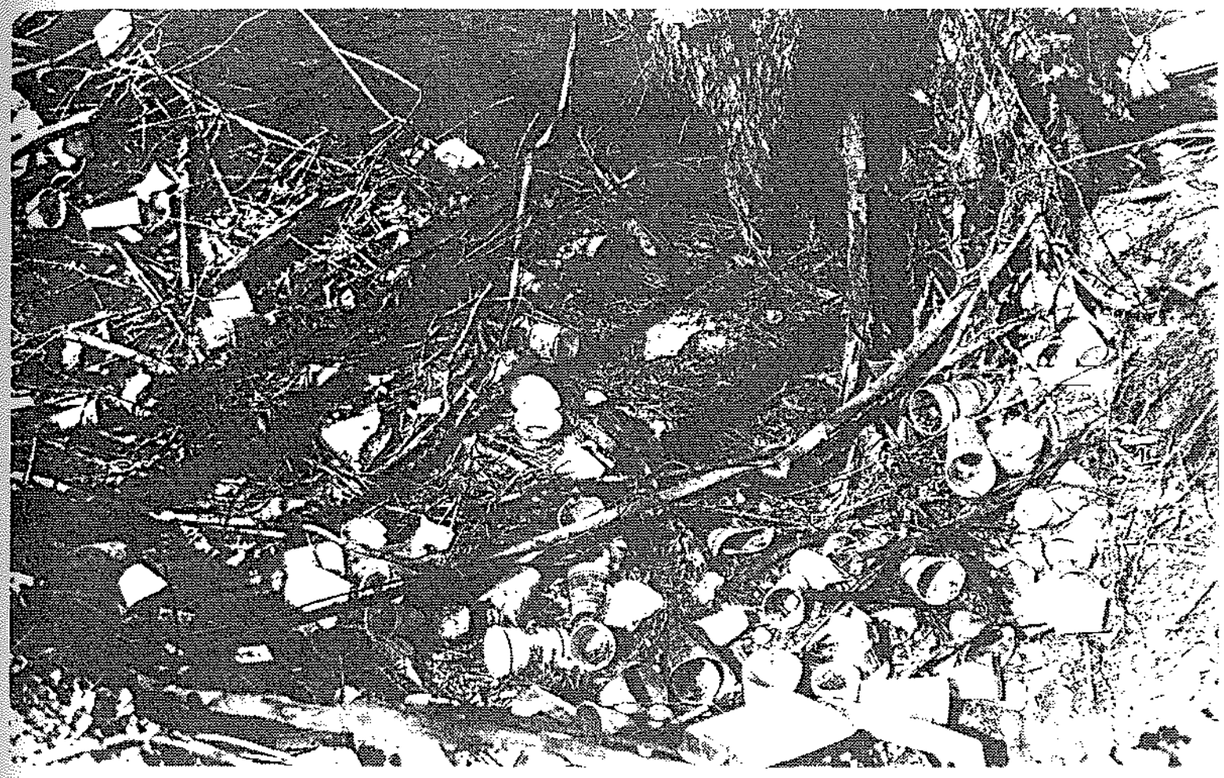
and Montgomery County line. Illegal dumping is found along Rt. 639 east of the county line.

SALEM

The Salem area is highly industrial and commercial on the North bank with residential uses on the South bank. The only areas which sustain forests are floodlands and steep slopes. Industry bordering the river contributes to industrial runoff and industrial solids falling into the river. Residential construction has led to deforestation, which has resulted with heavy soil loss and sedimentation buildup. Sewer conduits have been exposed along the river in the industrial sector. Trash along riverside roads is a problem because of pulloffs where people park and discard trash out of their car. The city is addressing this problem in the form of a trash pickup.

ROANOKE

Roanoke is basically an urban environment, with established parks as its major open space element. Trash buildup in the river and along the river is of considerable quantity. Erosion problems are causing road deterioration, with road material in some places washing into the river. Some industrial plants are loosing materials such as concrete forms and steel into the river. Some residential uses along the river's edge are also adding to streambank trash and ero-

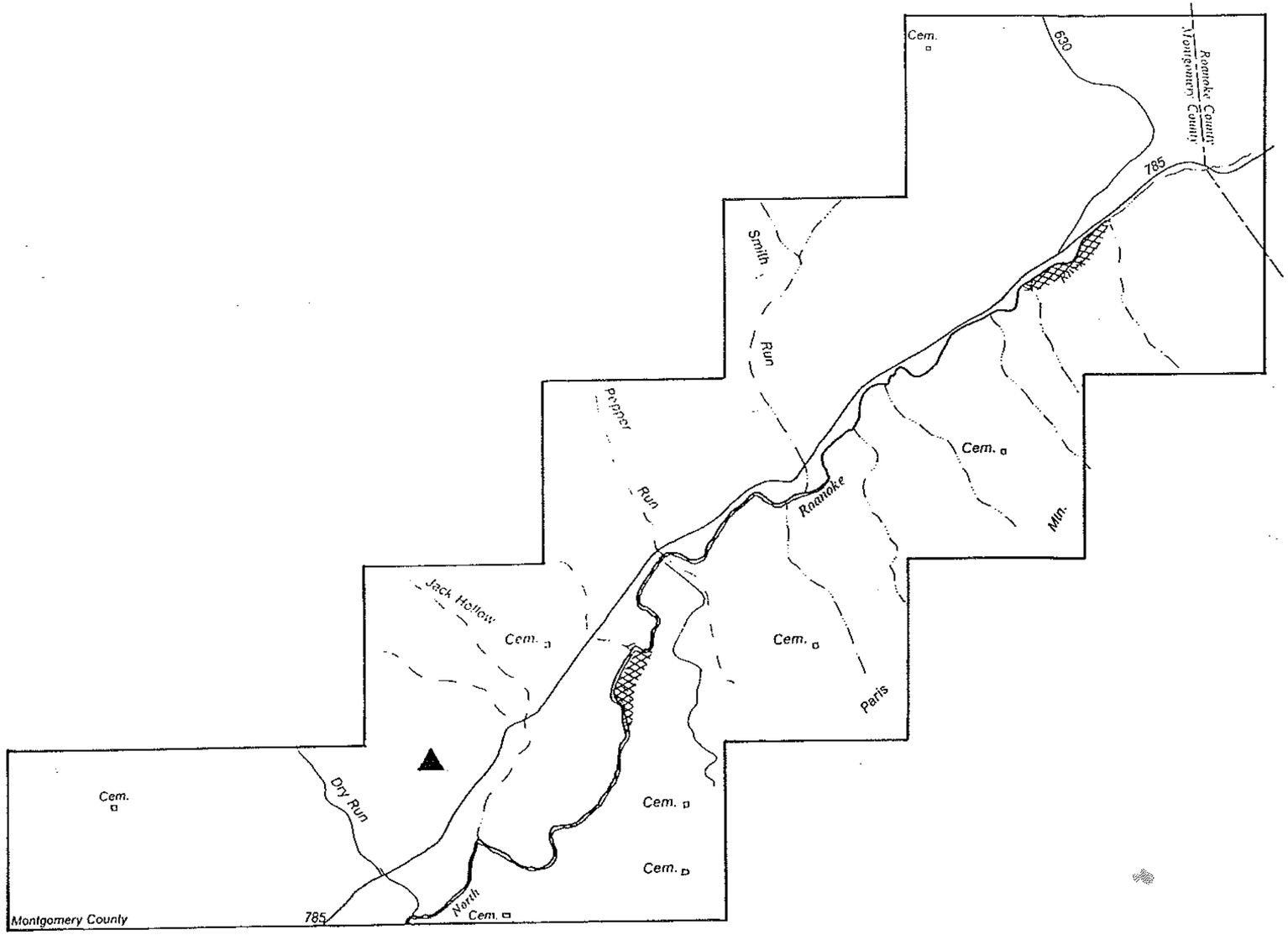


Stream Bank Trash Deposits

sion. Sewage treatment plants along the river are discharging into the water.

HARDY'S FORD

This segment is a transition back to the natural settings with a mix of residential areas. Unfortunately debris along the river bank is prevalent due to the dumping problems that exist in the above corridors. The only runoff problems here are caused by deforestation and construction activities. A large area of sedimentation is found near the Hardy Ford Dam. Landfill sites located close to the river are most likely leaching wastes into the water.



Paris Mtn. Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

Landscape Architecture Progaram

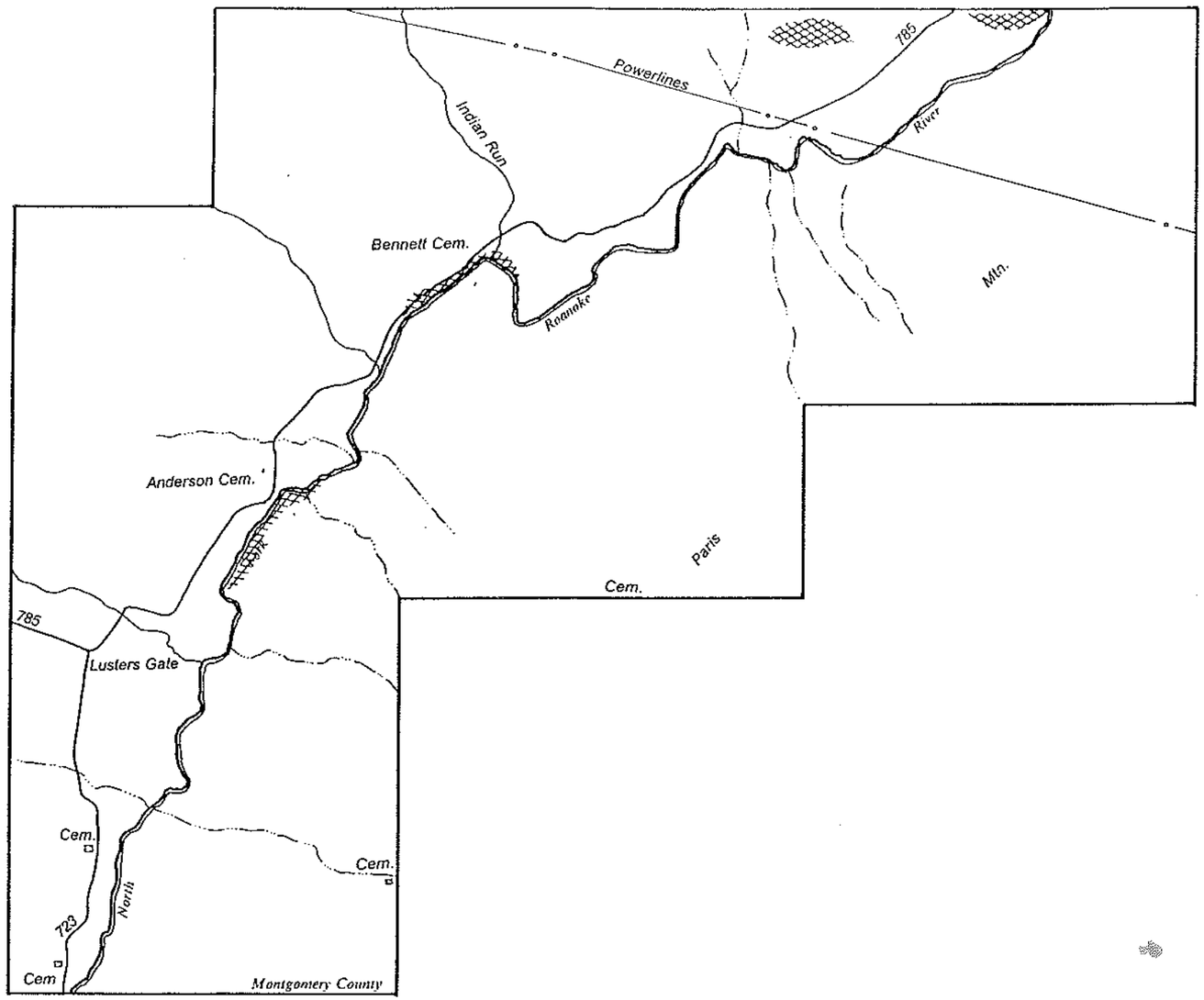
Virginia Polytechnic Institute & State University

April 26, 1989

B 1

Scale: 1" = 1500'

North



Lusters Gate Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

ROANOKE RIVER CORRIDOR STUDY

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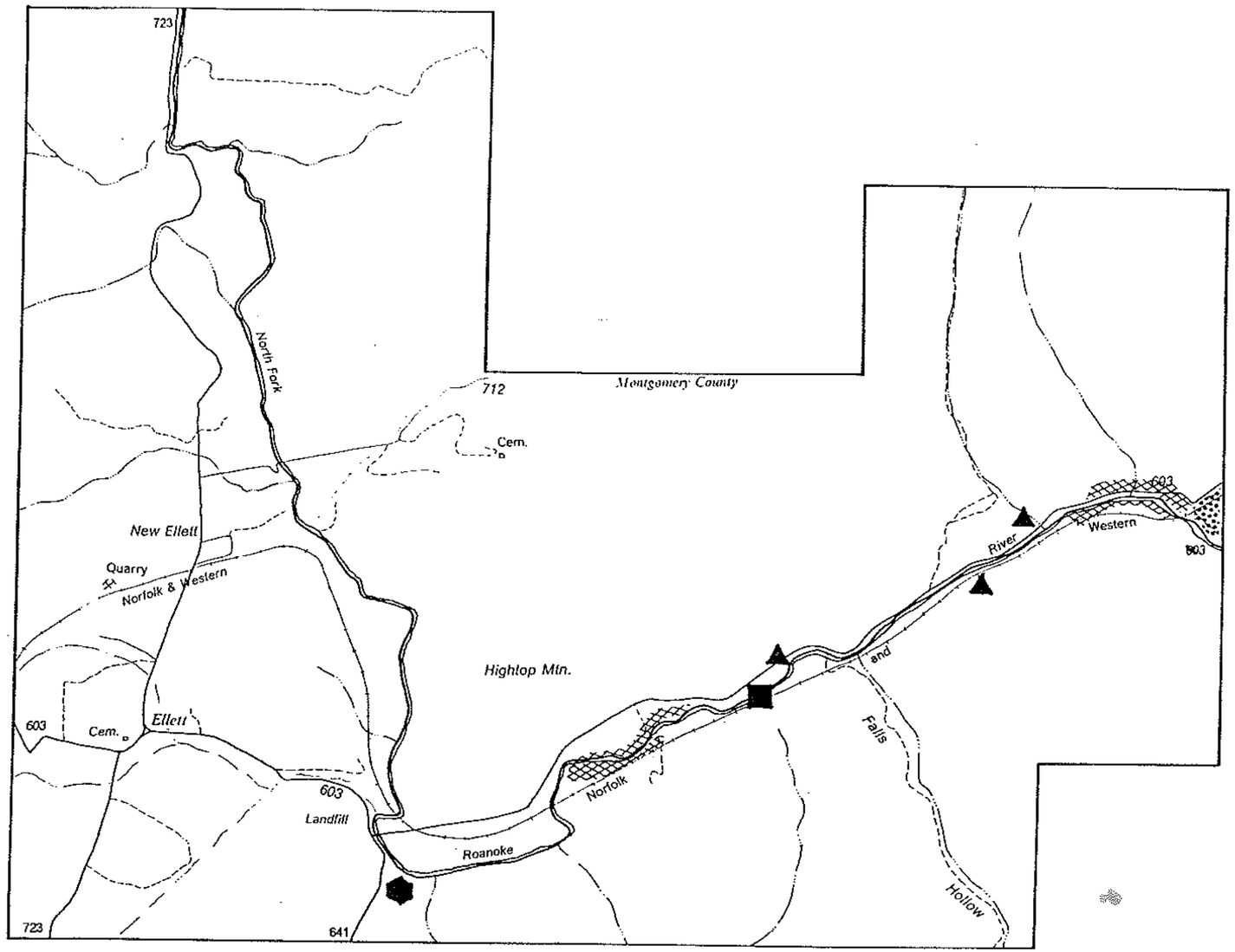
B 2

Scale: 1" = 1500'

North



Ellett Segment

Legend

- Erosion
- Sedimentation
- Deforestation
- Major trash dumping
- Minor trash dumping
- Industrial wastes

DEGRADATION

ROANOKE RIVER CORRIDOR STUDY

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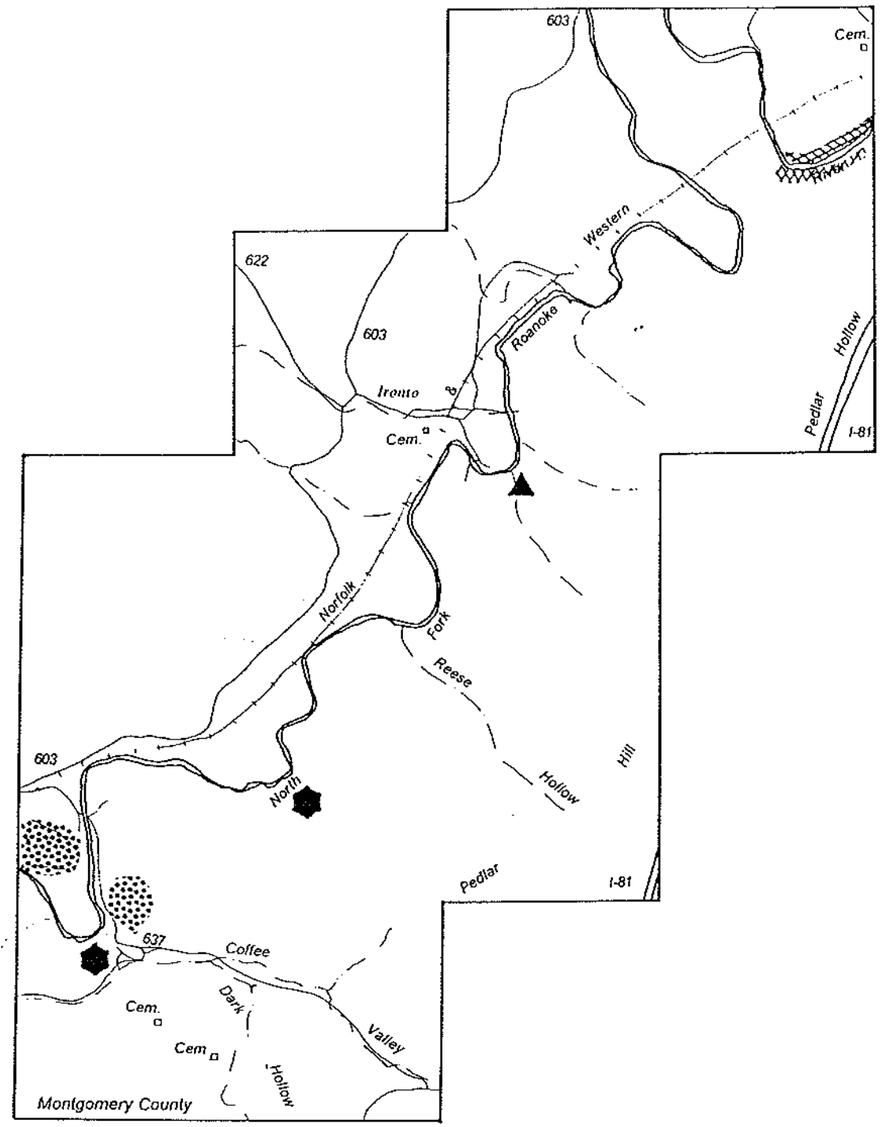
B 3

Scale: 1" = 1500'

North



Ironto Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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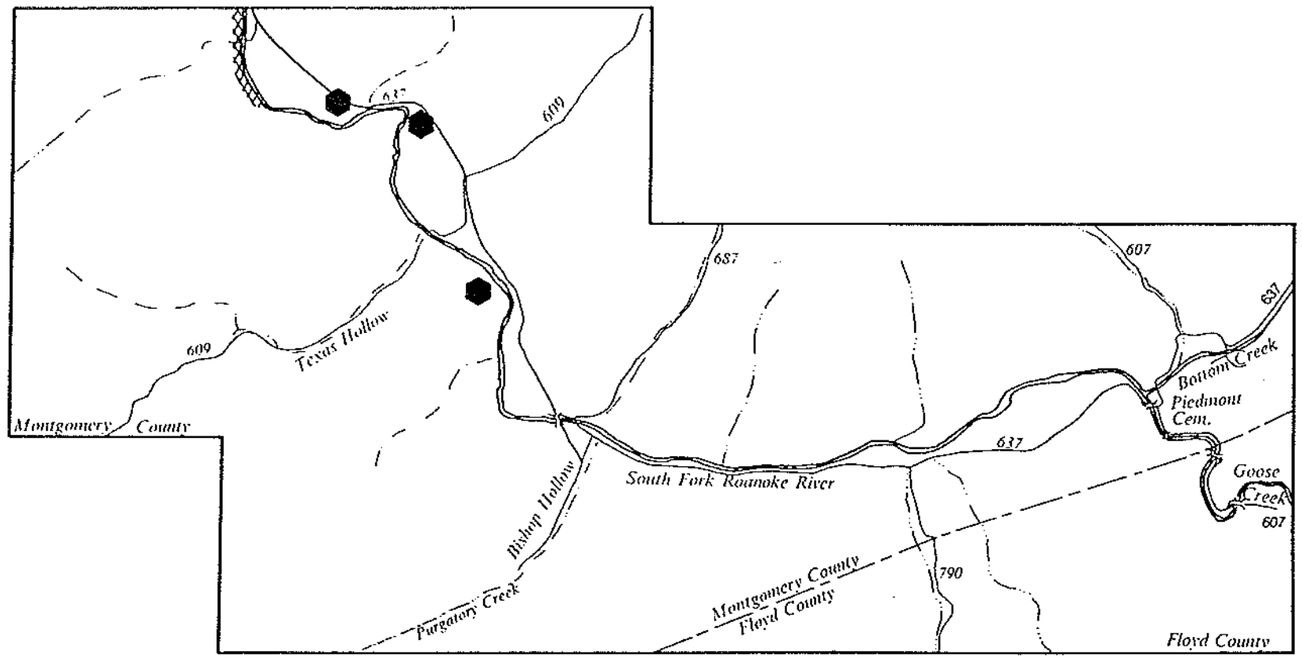
B 4

Scale: 1" = 1500'

North



Calhoun Segment

Legend

- Erosion
- Sedimentation
- Deforestation
- Major trash dumping
- Minor trash dumping
- Industrial wastes

DEGRADATION

ROANOKE RIVER CORRIDOR STUDY

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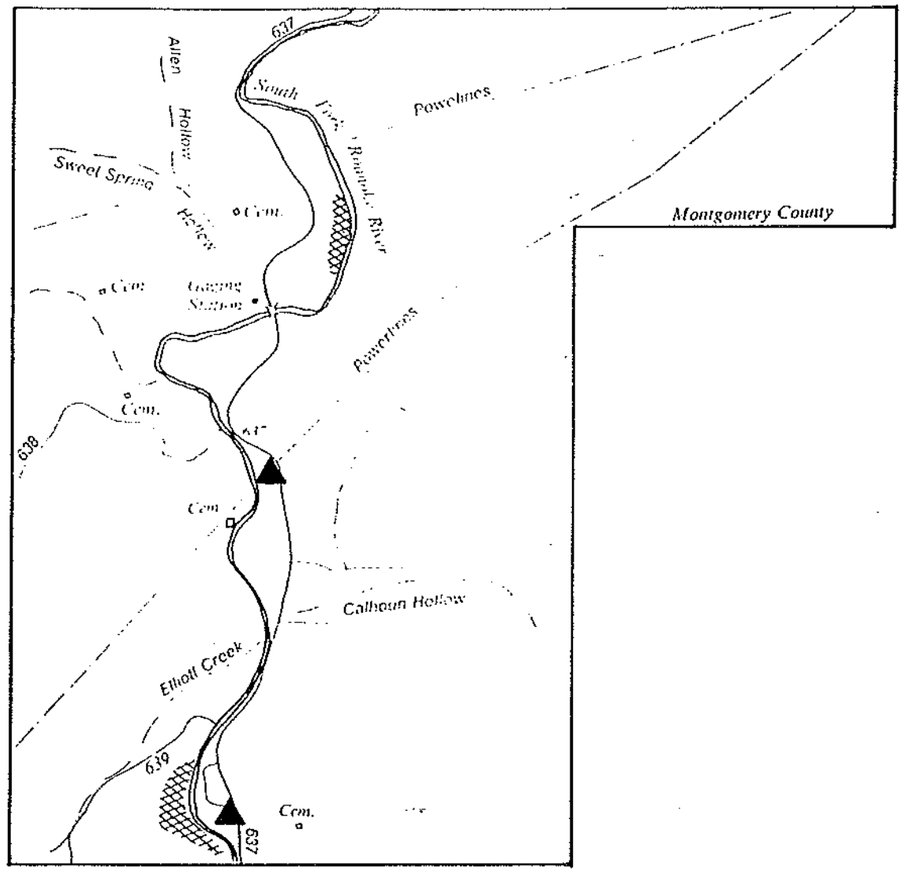
B 5

Scale: 1" = 1500'

North



Piedmont Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

ROANOKE RIVER CORRIDOR STUDY

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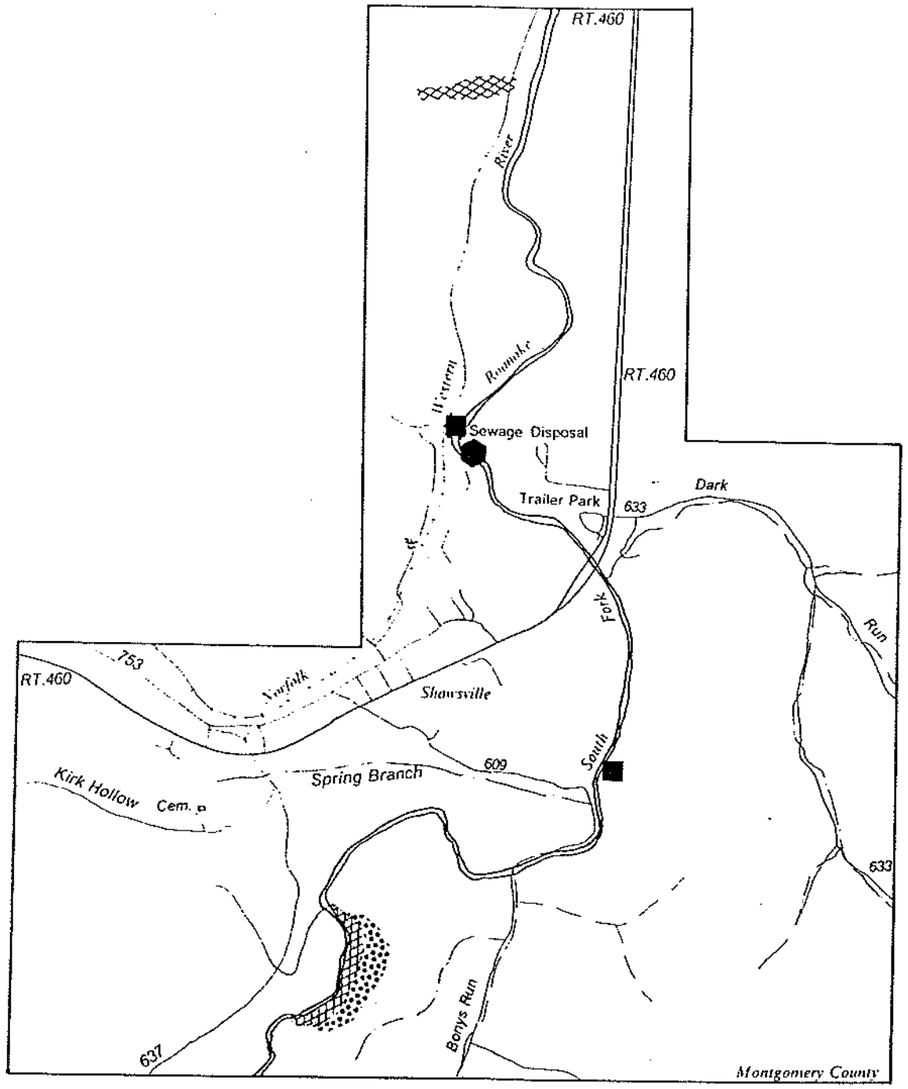
B 6

Scale: 1" = 1500'

North



Shawsville Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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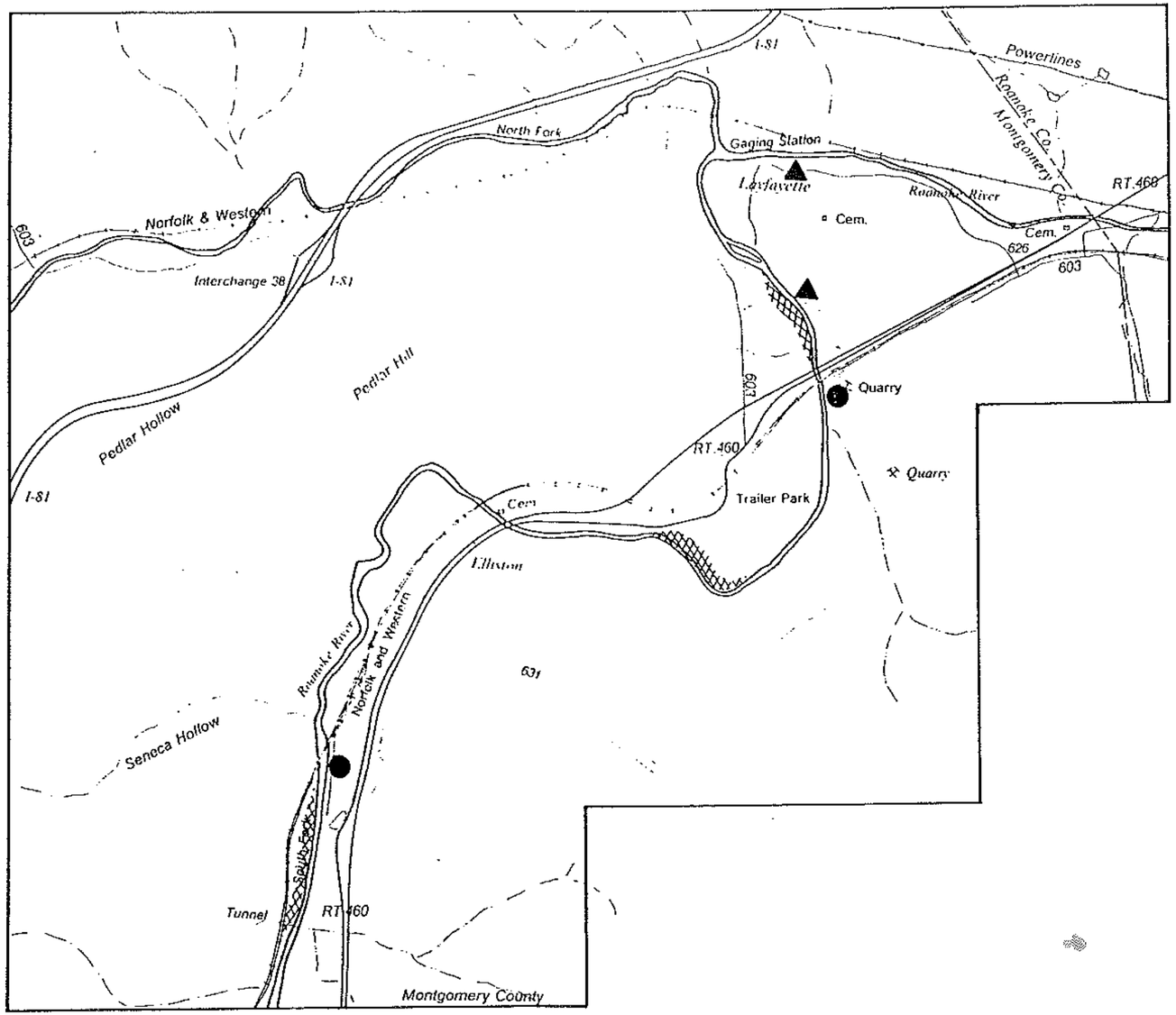
B 7

Scale: 1" = 1500'

North



Lafayette Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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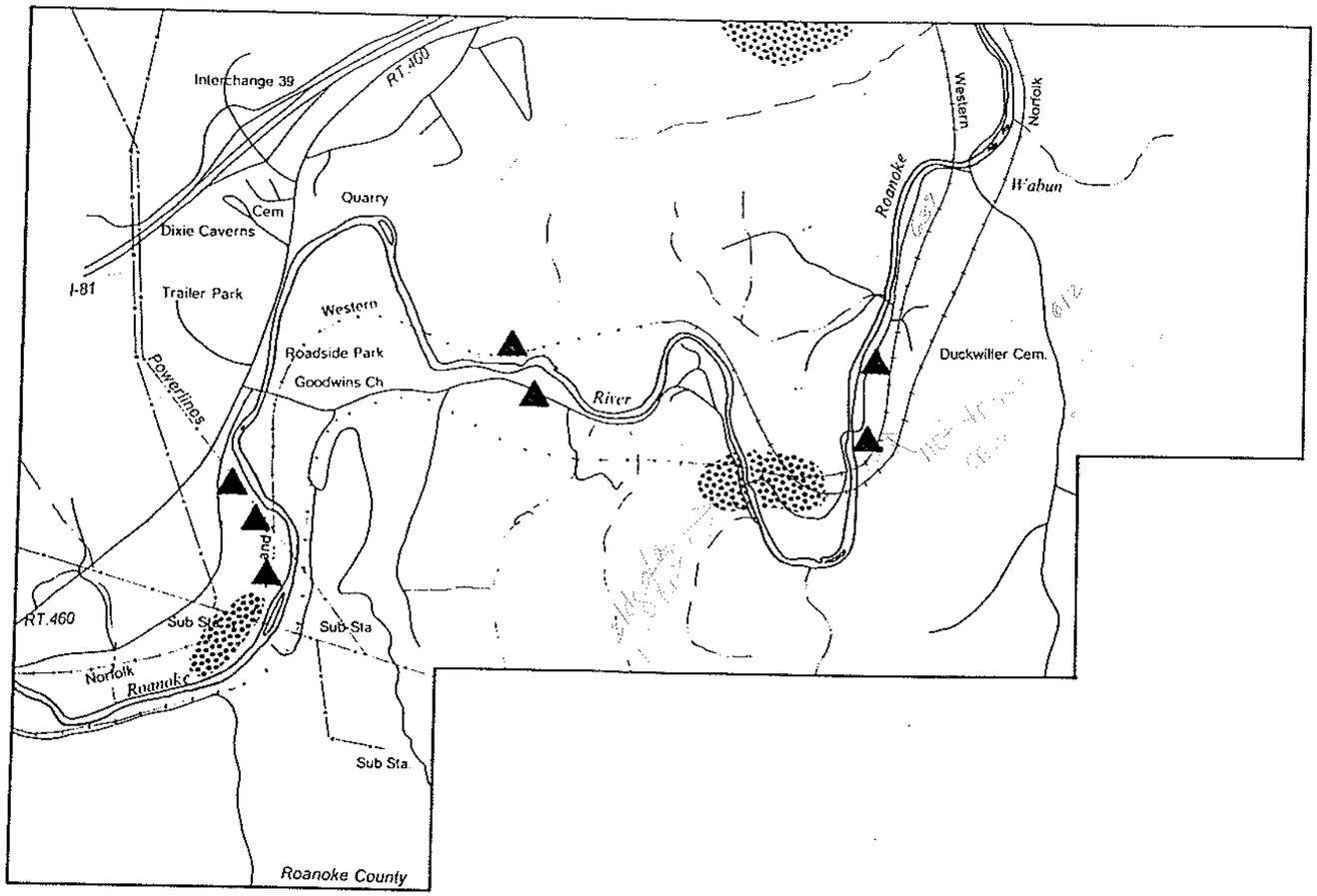
B 8

Scale: 1" = 1500'

North



Wabun Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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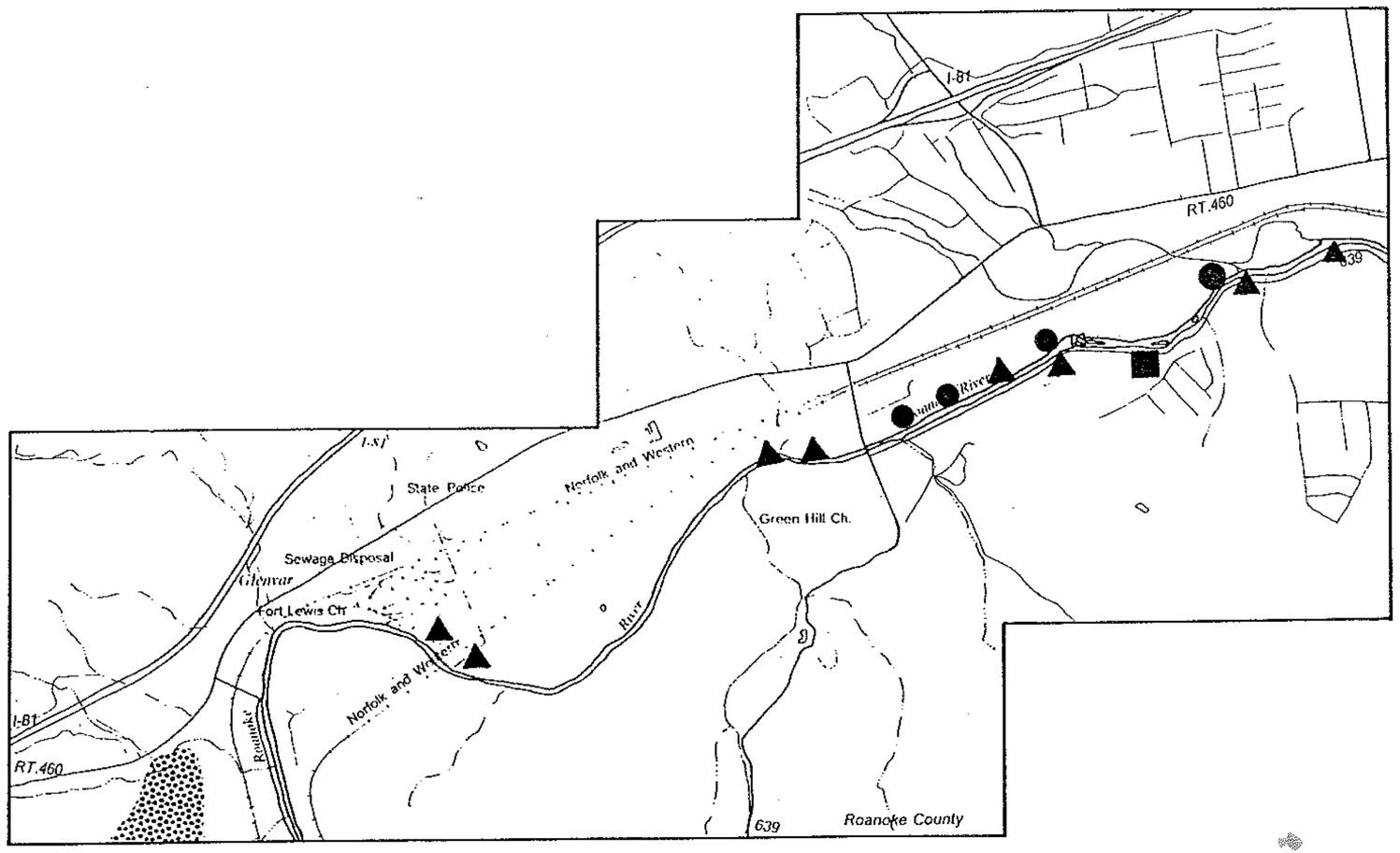
Scale: 1" = 1500' *North*



Glenvar Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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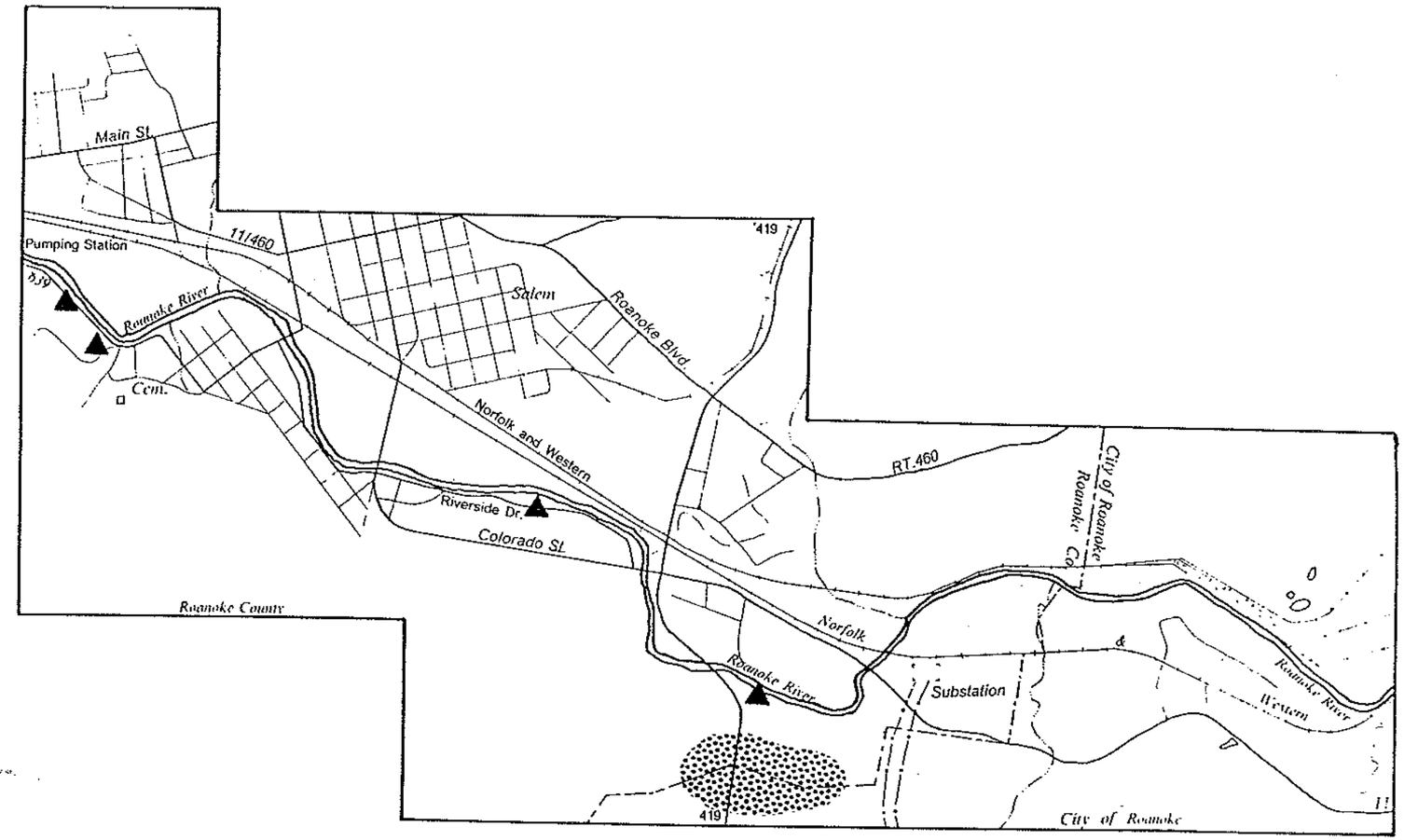
B 10

Scale: 1" = 1500'

North



Salem Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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B 11

Scale: 1" = 1500'

North

Roanoke Segment

Legend

Erosion

Sedimentation

Deforestation

Major trash dumping

Minor trash dumping

Industrial wastes

DEGRADATION

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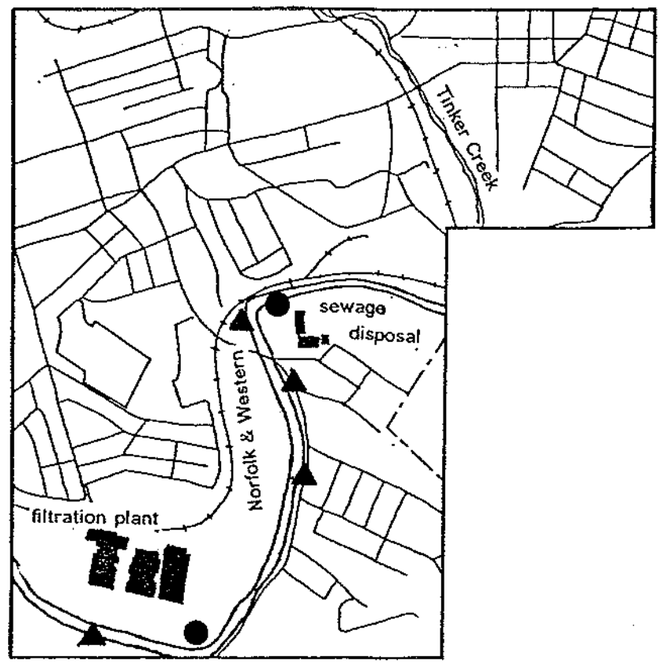
B 12

Scale: 1" = 1500'

North



Roanoke Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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B 13

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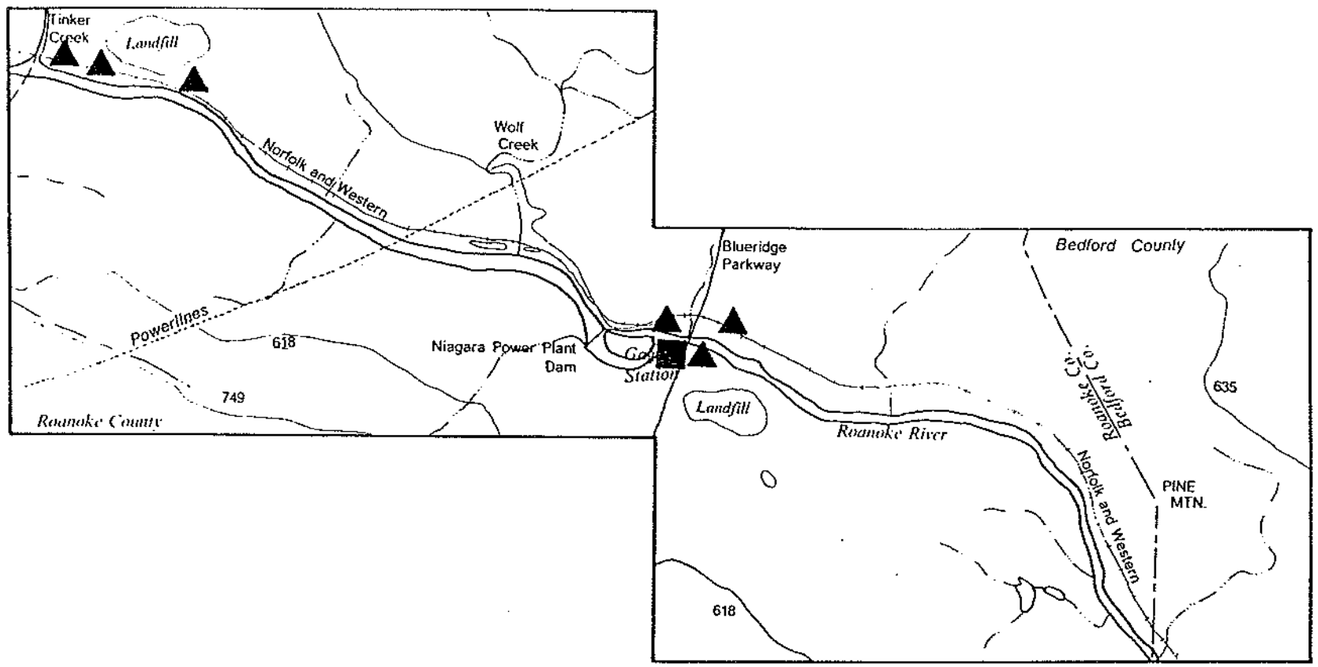
North



Vinton Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

ROANOKE RIVER CORRIDOR STUDY

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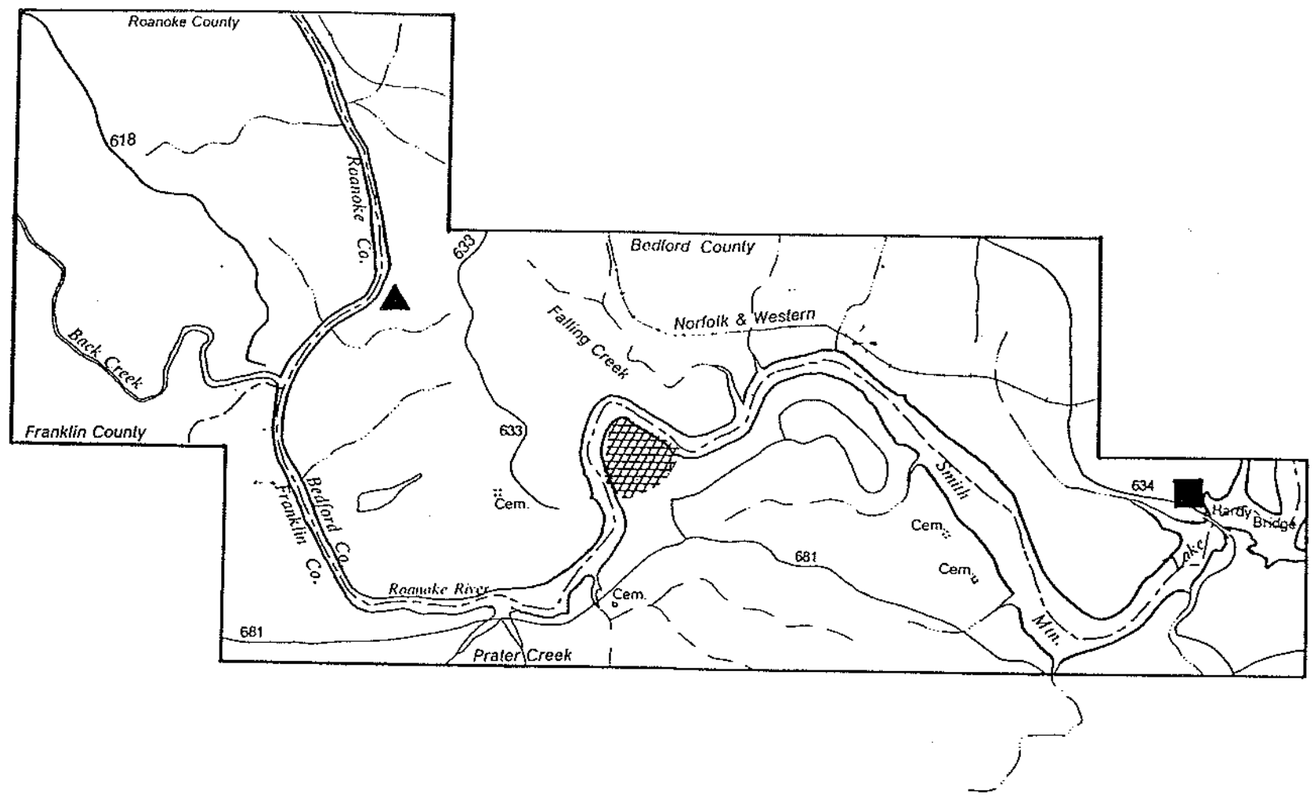
B 14

Scale: 1" = 1500'

North



Hardy Bridge Segment

Legend

- *Erosion*
- *Sedimentation*
- *Deforestation*
- *Major trash dumping*
- *Minor trash dumping*
- *Industrial wastes*

DEGRADATION

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B 15

Scale: 1" = 1500'

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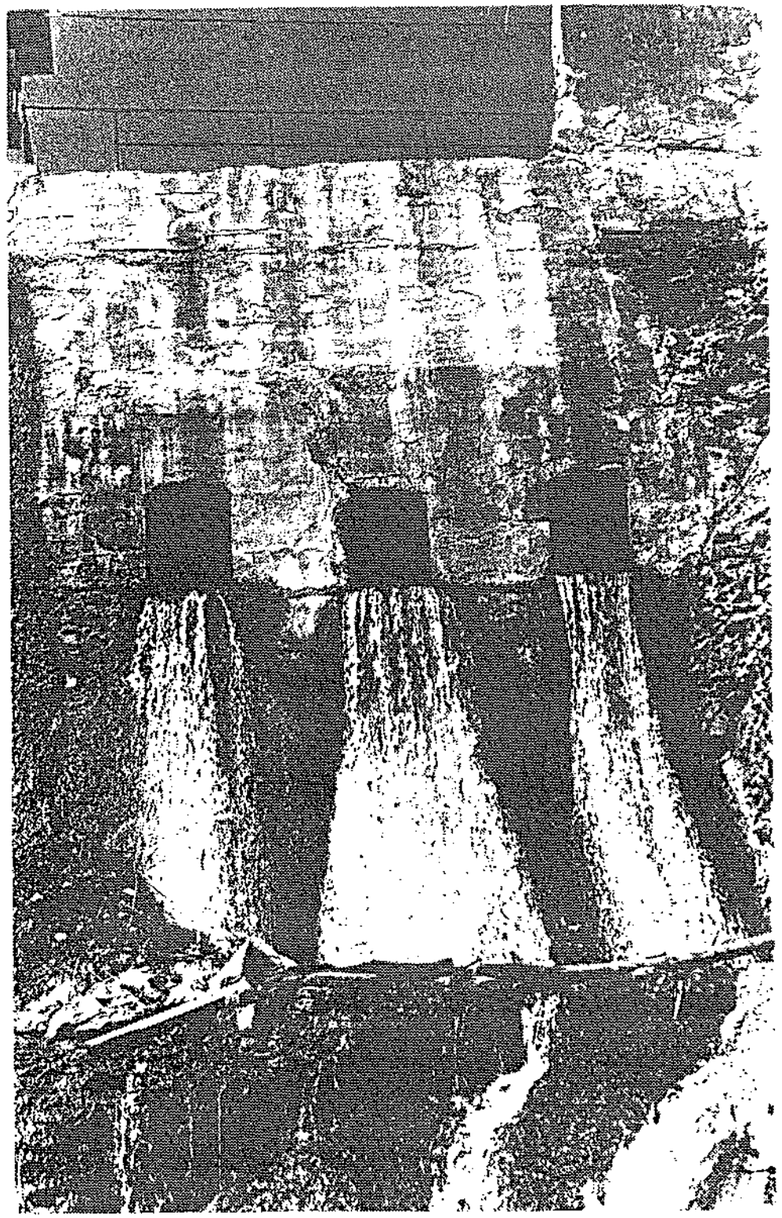


Water From the Niagara Power Plant Dam Near the Blue Ridge Parkway

NATURAL RESOURCES

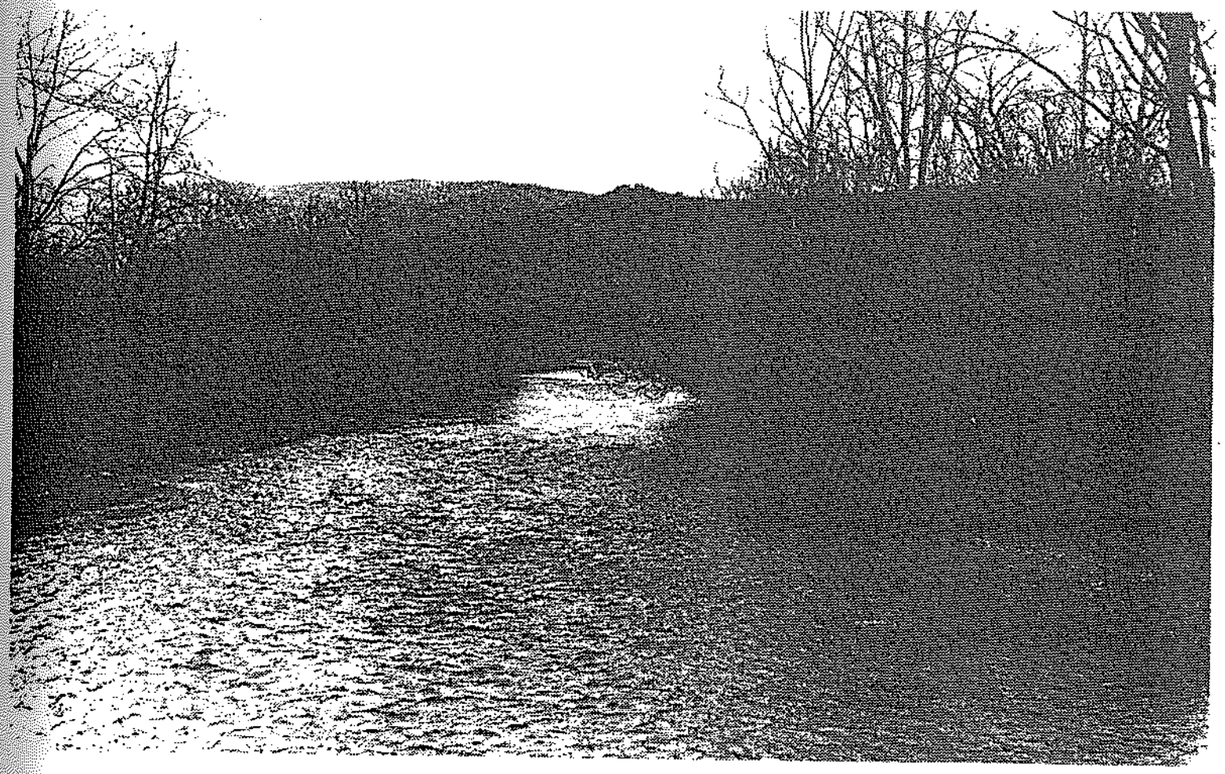
The upper Roanoke River basin is rich and varied in natural resources. Settlers in the Roanoke River Valley, during the mid-1700s, found "productive farming, grazing, and hunting lands in the river basin" (Virginia's Waters, 1986). Although the Roanoke is the most developed river in Virginia, it still retains many of the natural resources found by the earlier settlers.

WATER

Water is the first resource which comes to mind when discussing the Roanoke River. With an average daily flow of 5,218 million gallons per day, more water flows through the Roanoke than any river in Virginia besides the Shenandoah-Potomac River.

The water of the Roanoke River is viewed largely as an extractable resource by many who live in the river basin. Millions of gallons are drawn each day from the river for drinking, household use, industrial use, and irrigation. Thousands of people, businesses, and industries rely on the river each day for their water needs. It is critical that the quality of water is sustained throughout the river.

The upper Roanoke River basin is a major groundwater aquifer recharge zone. Rich, alluvial soils on the valley floor and valley terraces overlay unconsolidated sand, gravel, silt, and clay (Quaternary



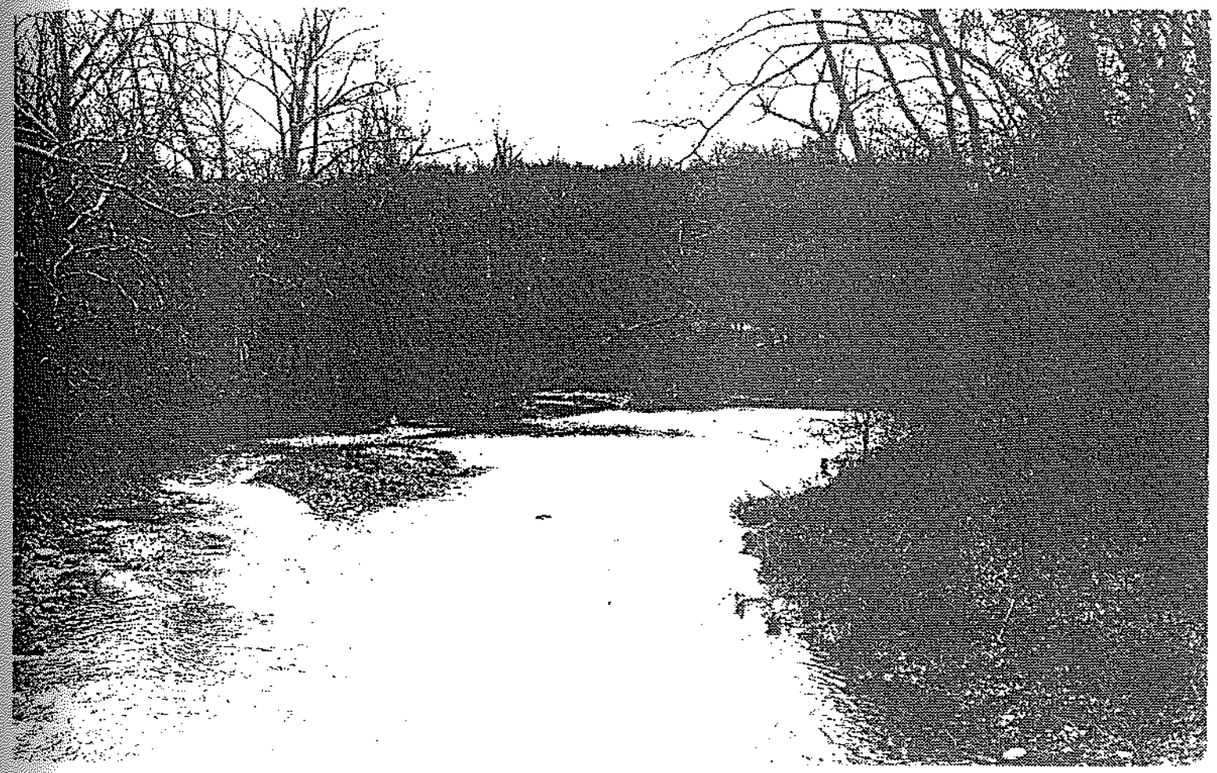
View along the river near Glenvar which contains the habitat of the logperch and the orangefin madtom. These have been proposed as endangered species.

formations). The underlying limestone and dolomite strata (Cambrian and Ordorvician) in these areas are fractured by faulting in many sections along the valley. Due to these factors, the valley floor and terraces of the upper Roanoke are the region's major ground water aquifer recharge zones and have very high ground water potential.

Protecting the natural resources which form the ecosystems along the Roanoke River will substantially help in sustaining the surface and ground water quality of the river and valley. Clean water is an integral component of both natural ecosystems and urban settlements.

The Roanoke River and related landforms are the habitat for many species of flora and fauna. The river has the highest number of species of fish (51) and the most native fish (7) of any drainage way on the eastern seaboard. This variety of fish and the periodic stocking of trout by the Virginia Commission of Game and Inland Fisheries makes the upper Roanoke River one of Virginia's prime fishing streams. The upper Roanoke River is also the unique habitat of the Roanoke logperch and the orangefin madtom. Both of these have been proposed for the endangered species listing (Virginia's Waters, 1986).

Many species of wildlife inhabit the Roanoke River and its surroundings. The abundant communities of riparian vegetation and



Riparian woodlands along the Glenvar reach. Riparian woodlands provide an erosion buffer and fish and wildlife habitats.

several wetland areas provide important habitats for these species. Wetlands and riparian communities are similar in many respects. Both are characteristic of low-lying areas, associated with water, and inhabited by moisture tolerant plants. However, wetland soils remain saturated throughout the year. Riparian soils tend to be wet, but tend to alternate between periods of saturation and drying. Many of the same species are found in both wetlands and riparian communities. Riparian communities are common all along the upper Roanoke River where there are only a few small wetlands. Wetlands, however, are protected by state and federal law and are very important in their ecological function.

WETLANDS AND RIPARIAN COMMUNITIES

FOOD PRODUCTION - Riparian and wetland plant communities are an abundant source of food for local fauna in the forms of nuts, berries and leaves. The wetland's Anaerobic nature promotes bacteria which break down dead plants and animals into detritus, which is an important food at the bottom of the food chain.

FISH AND WILDLIFE HABITATS - Riparian and wetlands communities are exclusive habitat for animals such as muskrats, waterfowl, and amphibians. They also form secondary habitats for animals such as deer, wild turkeys, and hawks.

Riparian Woods Along the North Fork of Roanoke River

EROSION BUFFER - Riparian corridors and wetlands support plant communities whose roots anchor soil to prevent erosion. The foliage of these plants also softens the impact of rain and prevents soil displacement by droplets.

WATER QUALITY CONTROL - Wetlands serve as a filter between streams and their surrounding drainage basin. Sediments and excess nutrients are filtered out by the wetlands. Wetland plants and organisms can actually break down pollutants so they may pass through here.

FLOOD BUFFER - Riparian corridors and wetlands temporarily store water during periods of flooding. In essence, they are the natural "sponges" which help to prevent downstream flooding. This becomes increasingly important as more impervious surfaces are laid down as the result of urbanization.

GROUND WATER RECHARGE - Much of the excess water that riparian corridors and wetlands absorb is discharged into ground water aquifers in the underlying alluvium (James River Corridor Study, 1985).

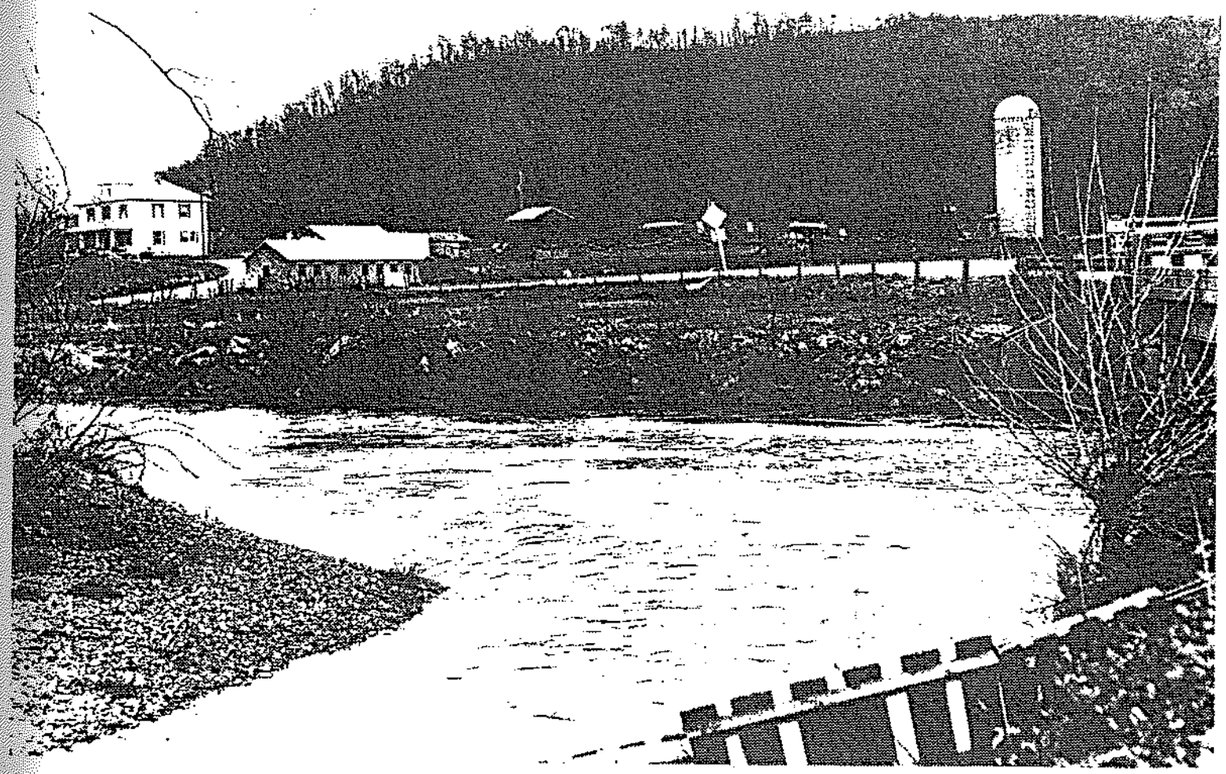
VEGETATION

Forested lands comprise almost 2/3 of the state of Virginia and at least that much within the study area. The Roanoke River corridor

River Woodlands Along the Glenvar Reach

is rich in its diversity of plant materials. The function of vegetation in stream bank ecology is of tremendous importance. Stream bank stabilization and rain water infiltration/absorption are but two processes that influence water quality. Shading and cooling of the water is important to trout populations in several reaches of the river. Insects that frequent streamside foliage provide an important link in the foodchain of the fisheries. Additionally vegetation provides visual interest and makes the stream inviting to man and allows him countless recreational opportunities.

In addition to riparian vegetation, there are important forest lands as well as agricultural lands and wetlands that deserve recognition and in many cases, protection. The following river reach descriptions give a general overview of the character of the river and its associated vegetation as it meanders through southwest Virginia and on toward Smith Mountain Lake. The accompanying maps provide more detailed information on the occurrence, or lack of specific types of vegetation. As development blossoms into rural Virginia, it is becoming more important that prime agricultural lands along with forest land be preserved and that Best Management Practices (i.e. pesticide control, site planning vegetative strips along the immediate stream bank) be implemented.



Agricultural Land Along the North Fork Near Ironto

The Luster's Gate reach is dominated by agricultural lands within the floodplain and adjacent valley floor. Riparian vegetation consists of large sycamores lining the streambanks along most of the corridor. The eastern side, where Paris Mountain rises from the floodplain, is vegetated at first by pioneer plants such as young cedars and sumac and then becoming mostly deciduous hardwoods with a few conifers.

NORTH FORK

The North Fork of the Roanoke passes through quality agricultural lands as it makes its way through the Ellett Valley. Vegetation along this reach is predominantly limited to streamside conifers (Juniperus virginiana) and sycamores. Pasture land, on the east bank, provides views to Hightop Mountain and is dominanted by deciduous trees. On the western bank the topography rises quickly into forest which is currently being developed for single family residential homes. As Rt. 603 approaches the river, the topography flattens and rural residential and agricultural dominant the land use. Again, scattered sycamores, maples, and cedars account for most streamside vegetation with mixed woodlands providing a visual enclosure of the corridor. As the river meets the junction of Rt. 641, it goes through an alluvial hardwood forest store.

A Cattle Fence on the South Fork

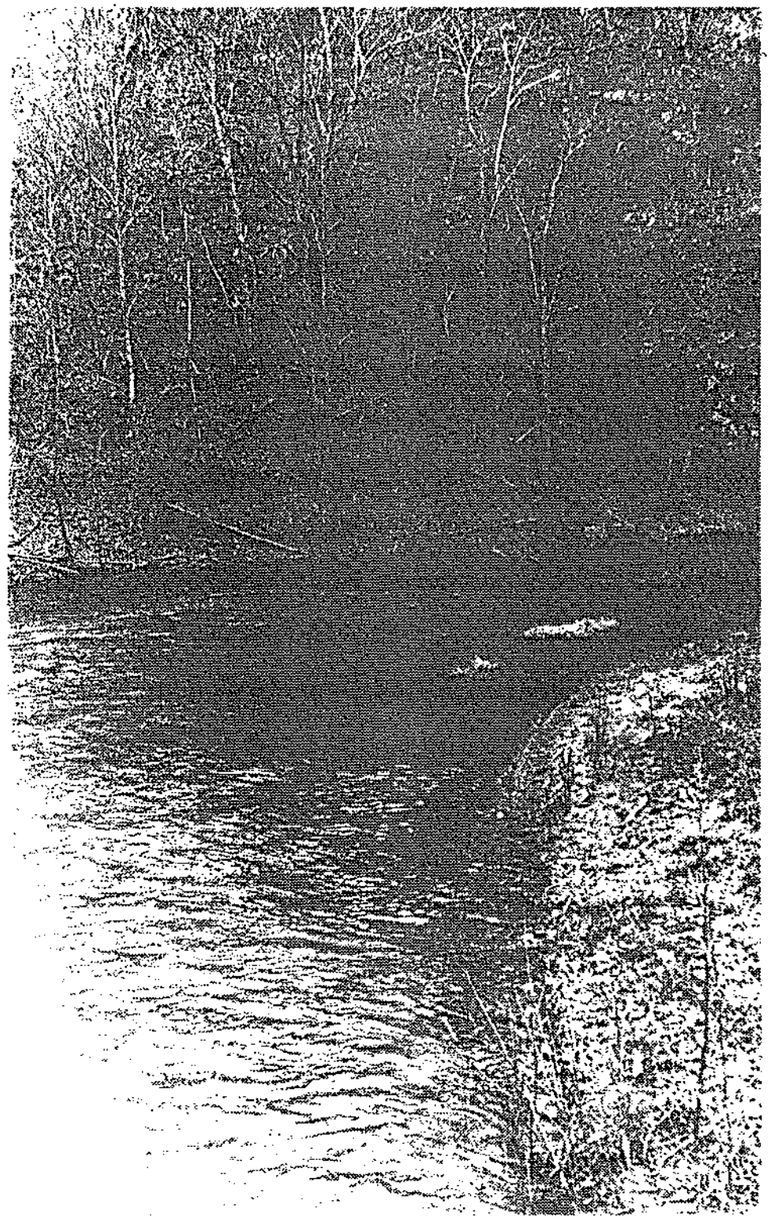
This reach of the North Fork has many redbuds that lend interest to the river during spring. The presence of weeping willows, in addition to several wetland areas, also heighten the interest in this segment. Rt. 603 is the primary vantage point for this corridor and vegetation is very important in determining the way in which the river is experienced. Roadside vegetation creates the foreground in any given scene while the numerous open pastures provide middle ground encompassing the river. Mixed conifers and hardwoods cover the hills that form the picturesque background.

SOUTH FORK: Sowder's Chapel

Except in pasture lands where cattle are eroding the banks, this entire length of this research is lined on at least one side by hardwoods. All forests in this area are mixed deciduous hardwoods and conifers. There are a few nice grassy areas, one at Sowder's Chapel adjoining the river, and another in the southeast section of the Chapel where there are nice views to the mountains. Many side slopes are covered with mountain laurel. Also within the reach is a mature pine forest.

SOUTH FORK: Shawsville

The Shawsville reach is predominantly mixed coniferous and deciduous woodlands. Interspersed throughout are rural residences with some agricultural lands towards the northern end of the reach.



An Example of Wooded Undevelopable Portion of the North Bank in the Glenvar Section

The topographyearly in this section is hilly and covered with plentiful mountain laurel. Further downstream there are small wetlands and riparian corridors. Again, the river tends to run close to wooded hillsides that provide a pleasing background to be experienced by the viewer on the reach or when just passing through on Rt. 460.

SOUTH FORK: Elliston & Lafayette

The Elliston reach drains forest lands as well as pasture and production agricultural lands. The notable vegetation includes large stands along many sections of the corridor of sycamore which creates a pleasing effect both in winter and summer. Also along this reach is a small wetland area along the parallel to Route 460 (see map). The west bank of this corridor is well forested for most of the reach. There occurs, in one area, some deforestation (see map).

DIXIE CAVERNS - WABUN

At the beginning of this reach the valley is relatively narrow. The south bank is predominantly mixed hardwoods and conifers along with rural residential housing and agricultural lands. The steep nature of the north bank accounts for the occurrence of dense vegetation. This vegetation continues to dominate the north bank up until the Rt. 612 bridge near Wabun, where the topography mellows and agricultural lands pick up. Vegetation near Wabun becomes thin, although there are nice sycamores forming a canopy in many areas.

GLENVAR REACH

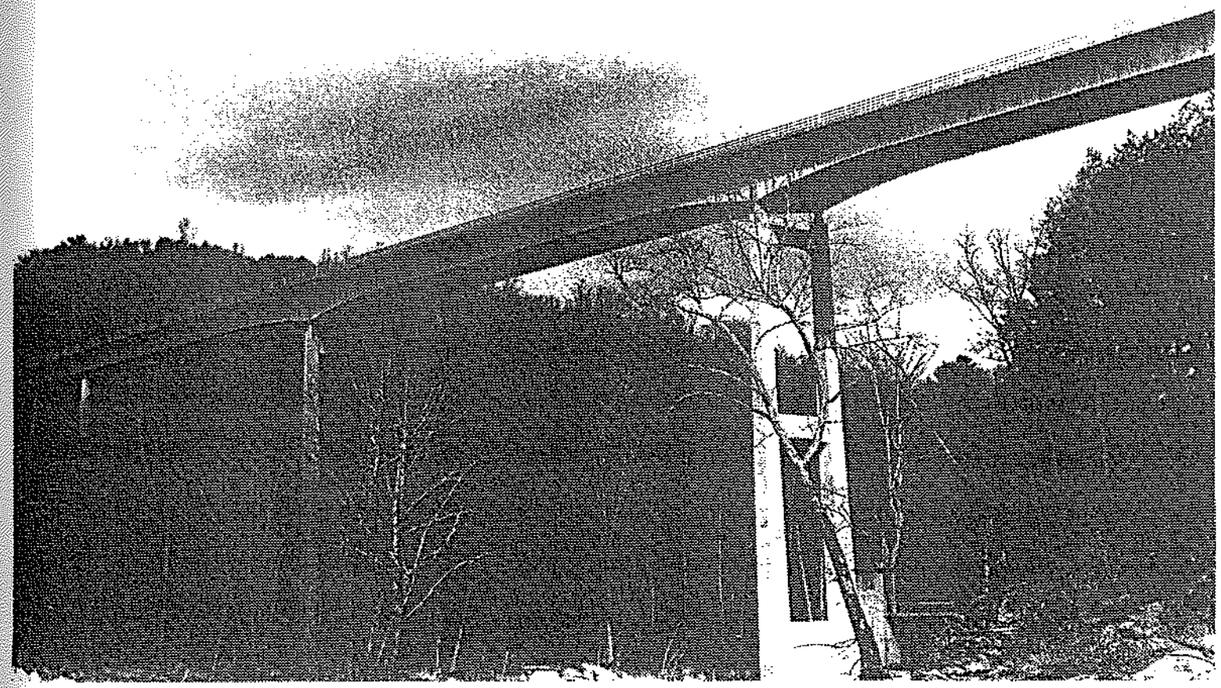
Agricultural lands and sparse forestation mixed with light industrialization make up the western end of this reach. At the east end the rural nature of the river is becoming more urban as it heads into Salem. In this section there are some conifer covered hilltops and pleasant grassy areas just downstream from Dry Hollow Creek on Rt. 639. Mature sycamores allow penetrating views in residential areas. There is one deforested area within the section.

SALEM REACH

As the river winds its way around Salem, high quality vegetation is limited to high outcroppings and undevelopable slopes on the south side of the river. Between the river and Riverside Drive there is a thin line of riparian stream bank vegetation. There are thin stands of deciduous and coniferous trees on the north bank. East of Salem there is open riverbank with mature deciduous trees that visually connects many front lawns to the stream.

ROANOKE REACH

As the river enters the city of Roanoke the north bank is dominated by Norfolk and Western right of way. Areas of unique vegetation are most often obscured by the industrial sites so common throughout this reach. Meandering into central Roanoke, the river flows along



The Blue Ridge Parkway Bridge Spanning the Roanoke River Gorge

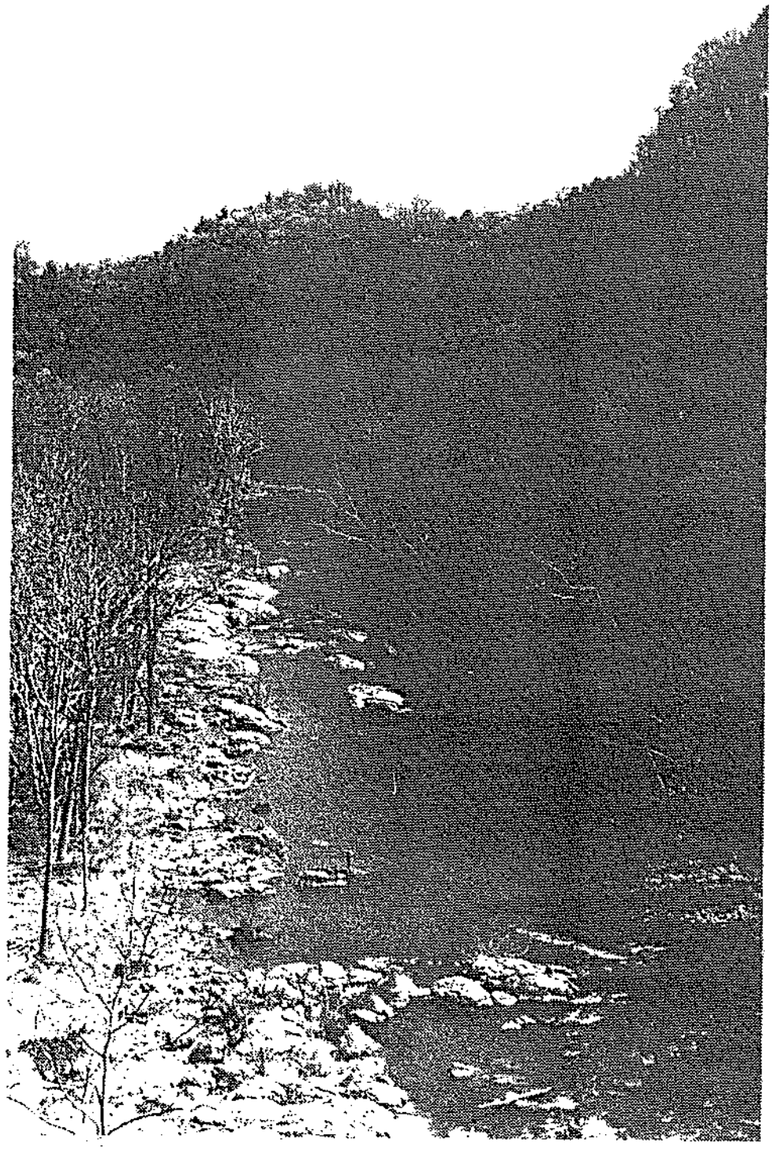
Wasena Park. This area is one of the most easily accessible and provides pleasant grassy areas as well as mature hardwoods. The open areas in this corridor offer many recreational possibilities as well as easy access directly to the water's edge. Finding its way out of the city, the east Roanoke section is dominated by the mature vegetation of Mill Mountain which dominates the horizon in this area. Generally, however, the vegetation through the Roanoke reach is limited to occasional sycamores and other hardwoods interspersed with wiry undergrowth.

VINTON - TINKER CREEK - BLUE RIDGE PARKWAY

Beginning at Tinker Creek this section of river is more rural. The north bank down to the Blue Ridge Parkway is predominantly urban residential with its associated vegetation mixed with woodlands. The south side of the river is rural residential lying among agricultural and woodlands. Below the Parkway the river begins to narrow into a gorge which is heavily forested with the primary vantage point being the Parkway. The visual quality of this vegetation cannot be overstated.

SMITH MOUNTAIN REACH

Steep slopes are heavily forested along this wild reach of the Roanoke River. Hardwoods and conifers are plentiful throughout this region. As the banks begin to flatten toward Hardy's Bridge,



Roanoke River Gorge Near the Blue Ridge Parkway

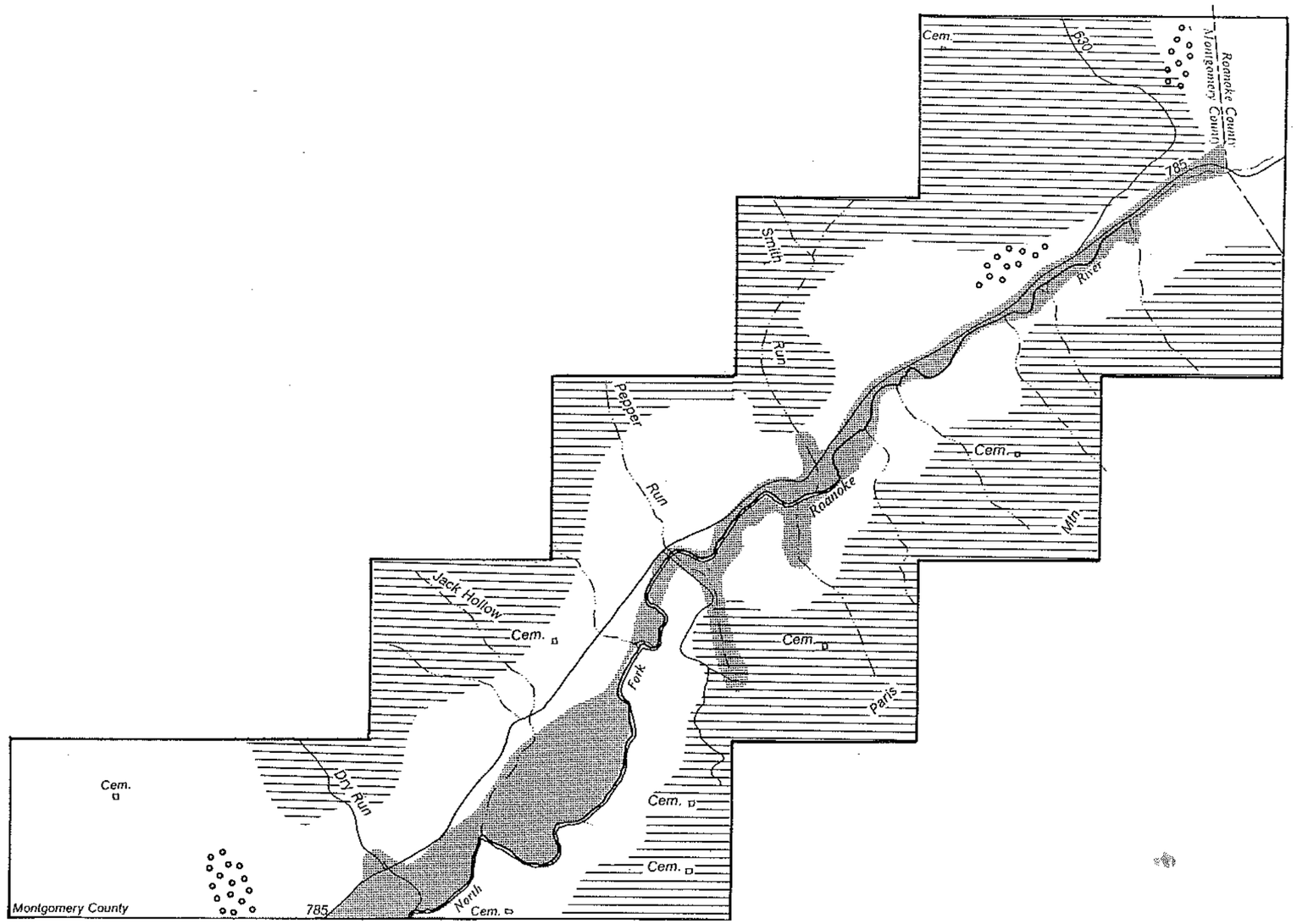
agricultural lands begin to displace the forest as the dominant landscape.

SOIL

Soils vary greatly throughout the upper Roanoke River basin. Many of the soils found on ridges and hillslopes are shallow and rocky. From these soils, the rich alluvial soils of the valley terraces and valley floor have been formed. For purposes of this study, soils which are classified in land capability classes I and II are considered valuable soil resources. In the Upper Roanoke River valley, valuable soil resources are not abundant, and are usually found along valley floors and valley terraces of the river and its tributaries.

ROCK

The upper Roanoke River lies entirely in the Valley and Ridge geomorphic province. The Valley and Ridge province consists largely of limestone, dolomite, shale, and sandstone formation which have been folded, and compressed into anticlinal and synclinal structures. Much of this region has been extensively faulted in past geologic periods. Coal deposits are present in the upper reaches of the head waters but are not currently being mined. The most widely extracted minerals are limestone, dolomite, and granite all of which are quarried for building stone.



Paris Mtn. Segment

Legend

- Parkland
- Deforestation/construction
- Wetlands
- Rare plants
- Crops
- Mixed Forest
- Coniferous Vegetation
- Valuable Soil Resources
- Range of Roanoke Log Perch
- Range of Orangefin Madtom
- Karst Topography

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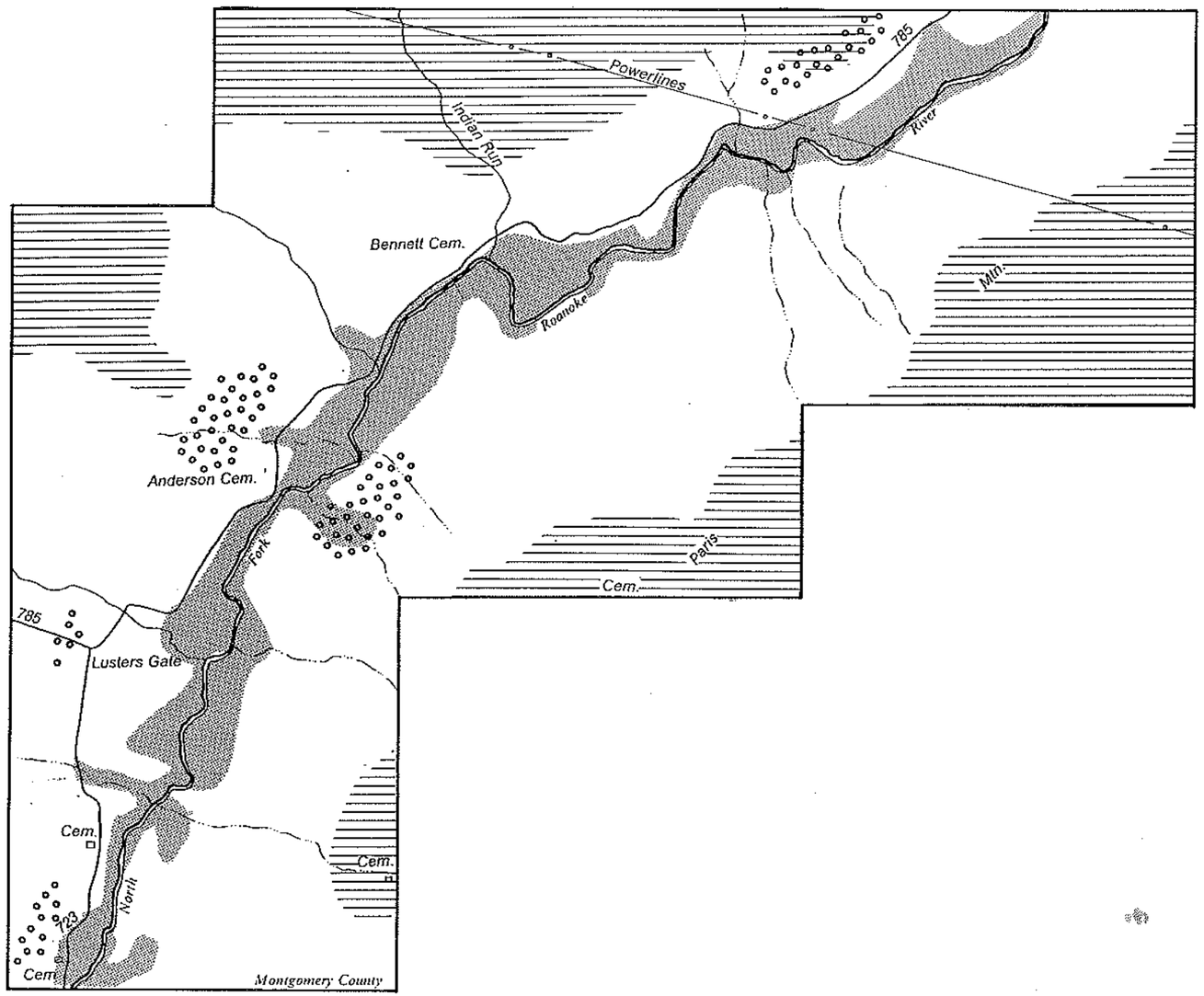

Lusters Gate Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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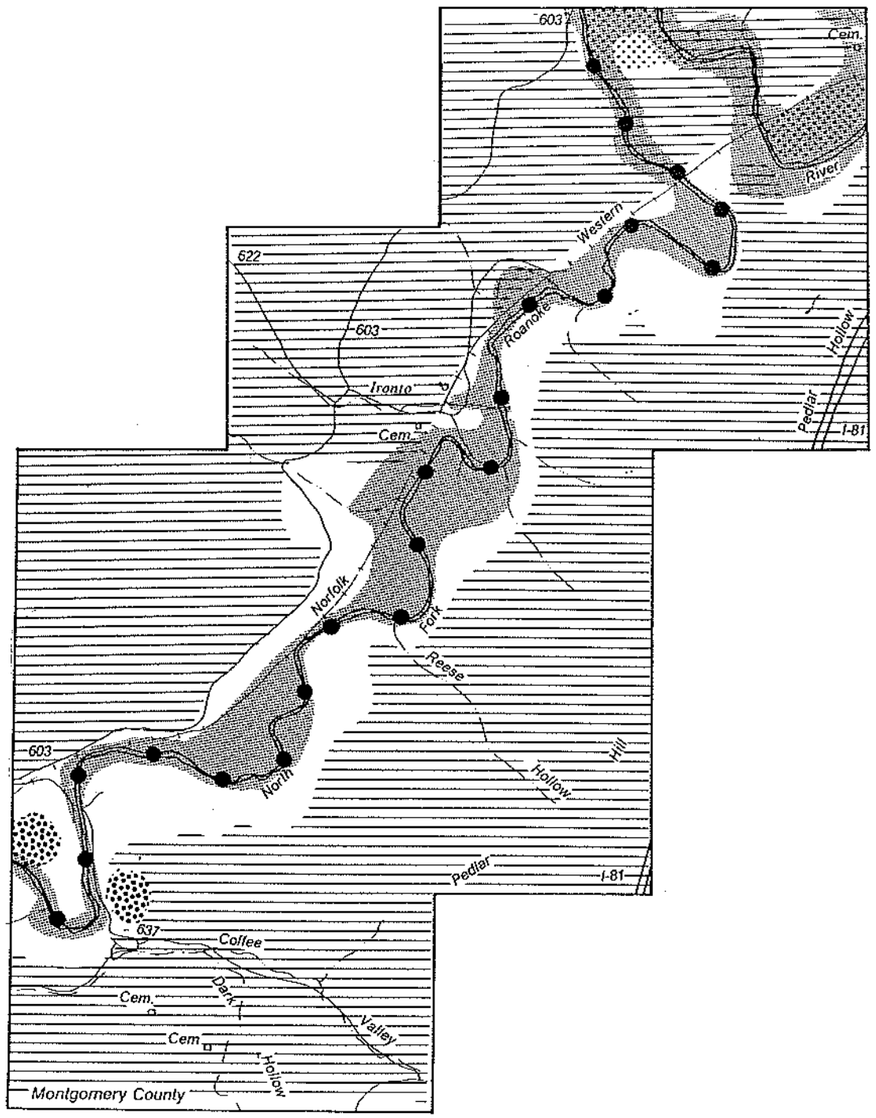

Ironto Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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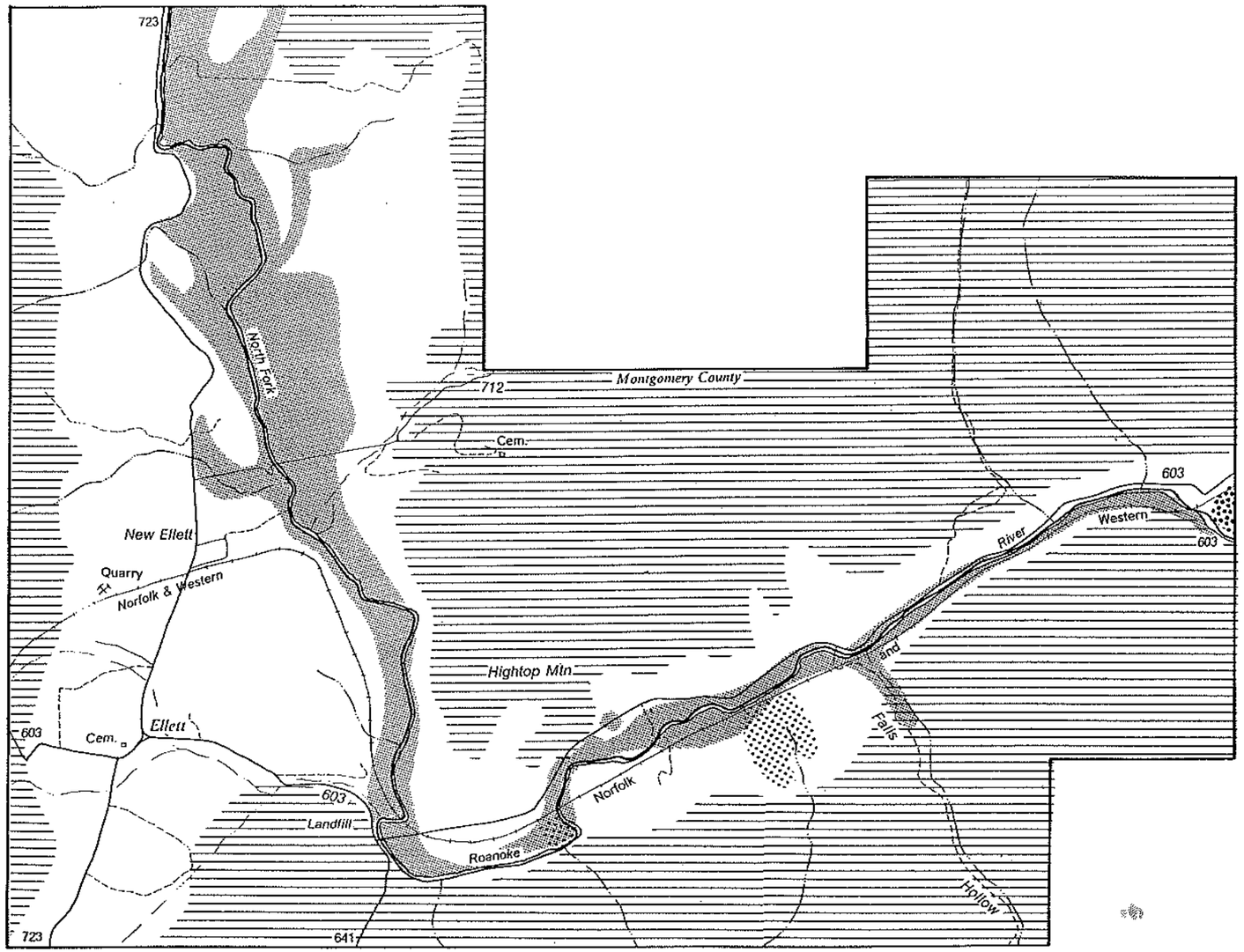

Ellett Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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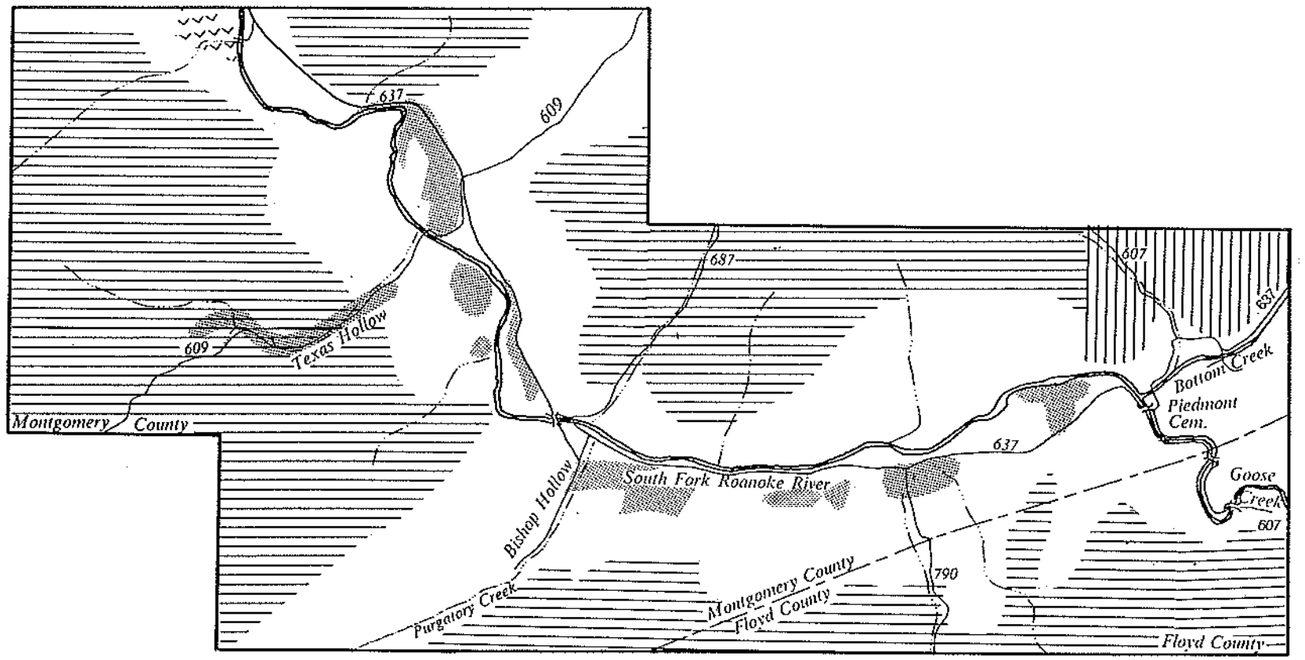

Calhoun Segment

Legend

- Parkland
- Deforestation/construction
- Wetlands
- Rare plants
- Crops
- Mixed Forest
- Coniferous Vegetation
- Valuable Soil Resources
- Range of Roanoke Log Perch
- Range of Orangefin Madtom
- Karst Topography

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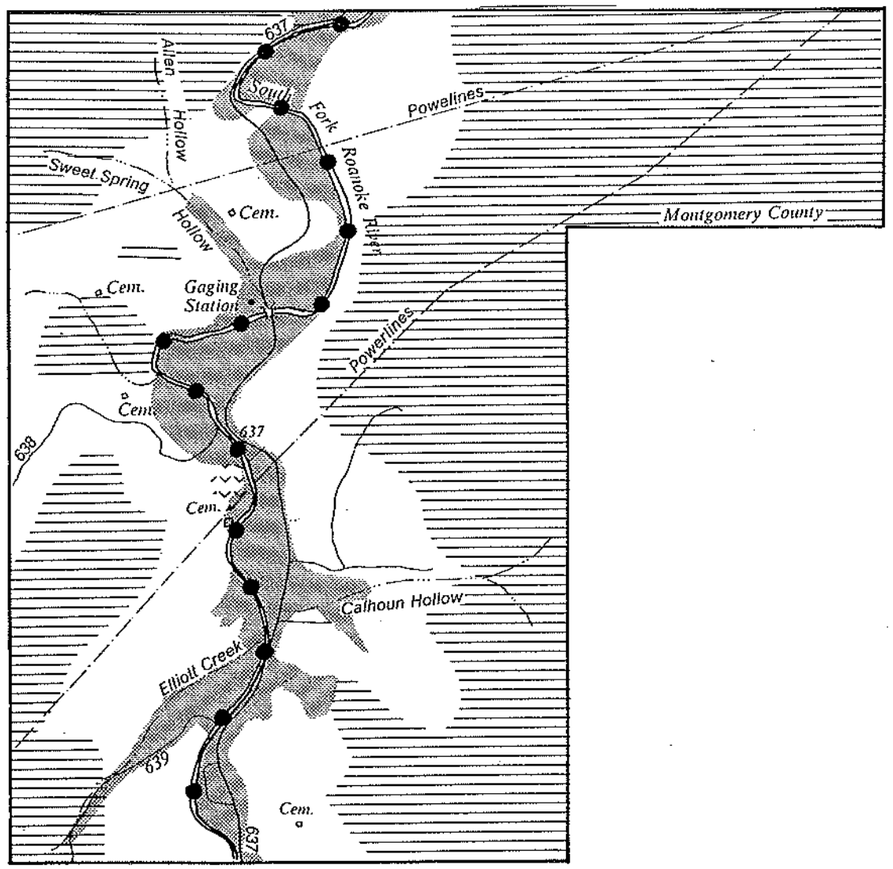

Piedmont Segment

Legend

- Parkland
- Deforestation/construction
- Wetlands
- Rare plants
- Crops
- Mixed Forest
- Coniferous Vegetation
- Valuable Soil Resources
- Range of Roanoke Log Perch
- Range of Orangefin Madtom
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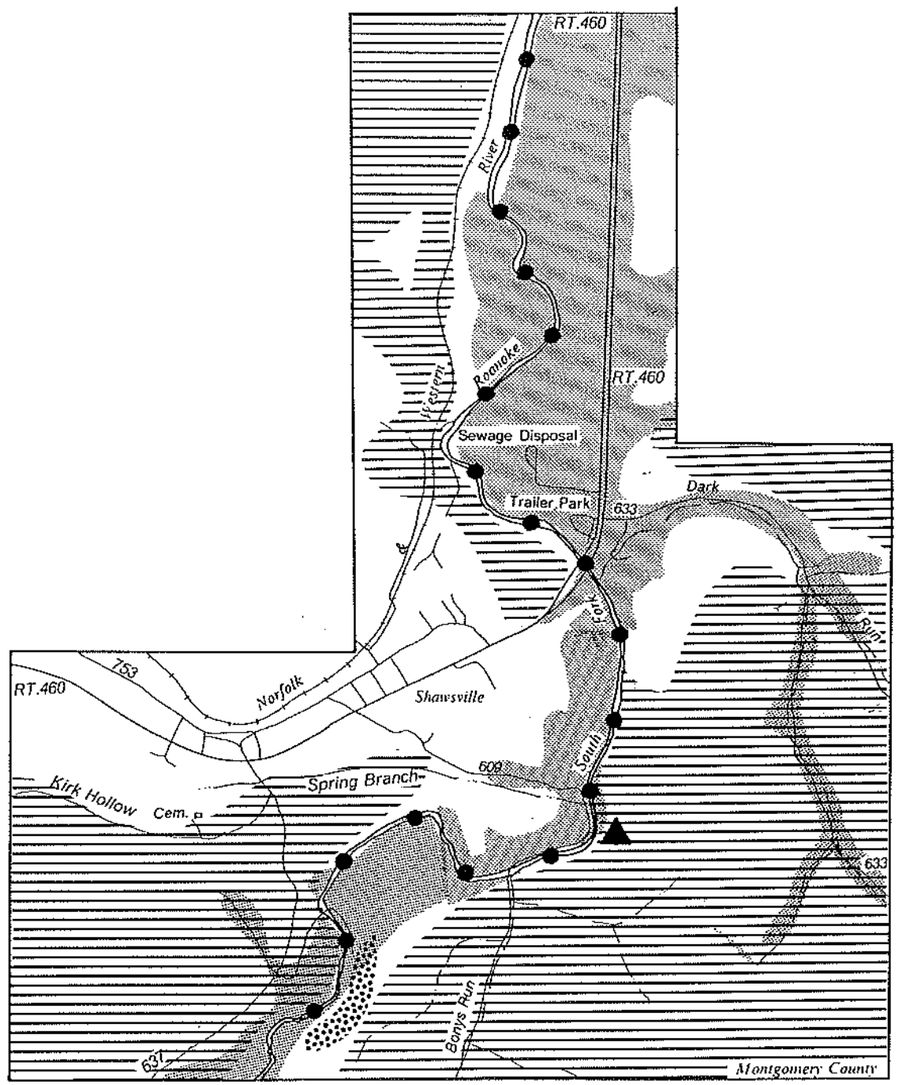
Scale: 1" = 1500'

North



Shawsville Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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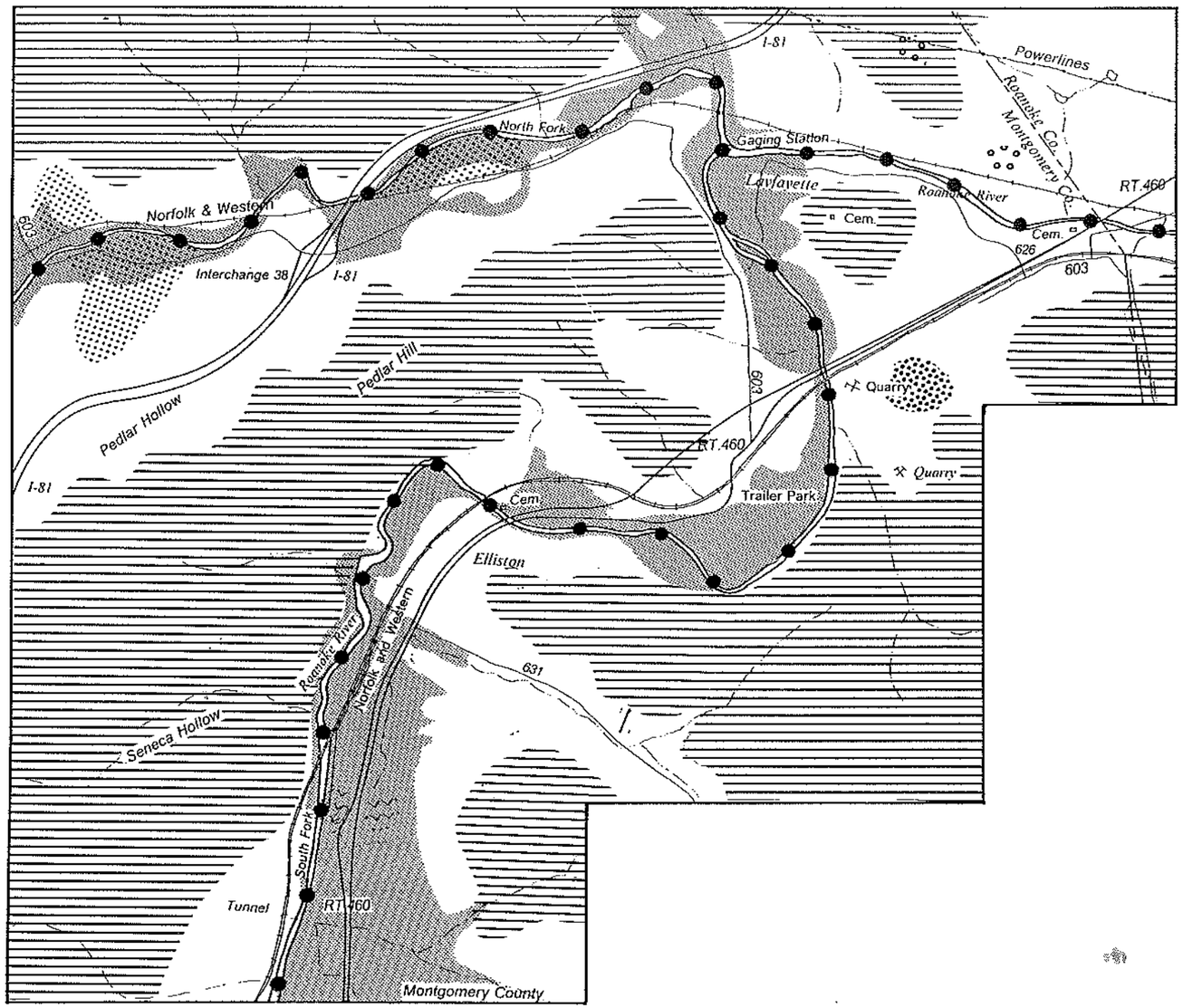
North



Lafayette Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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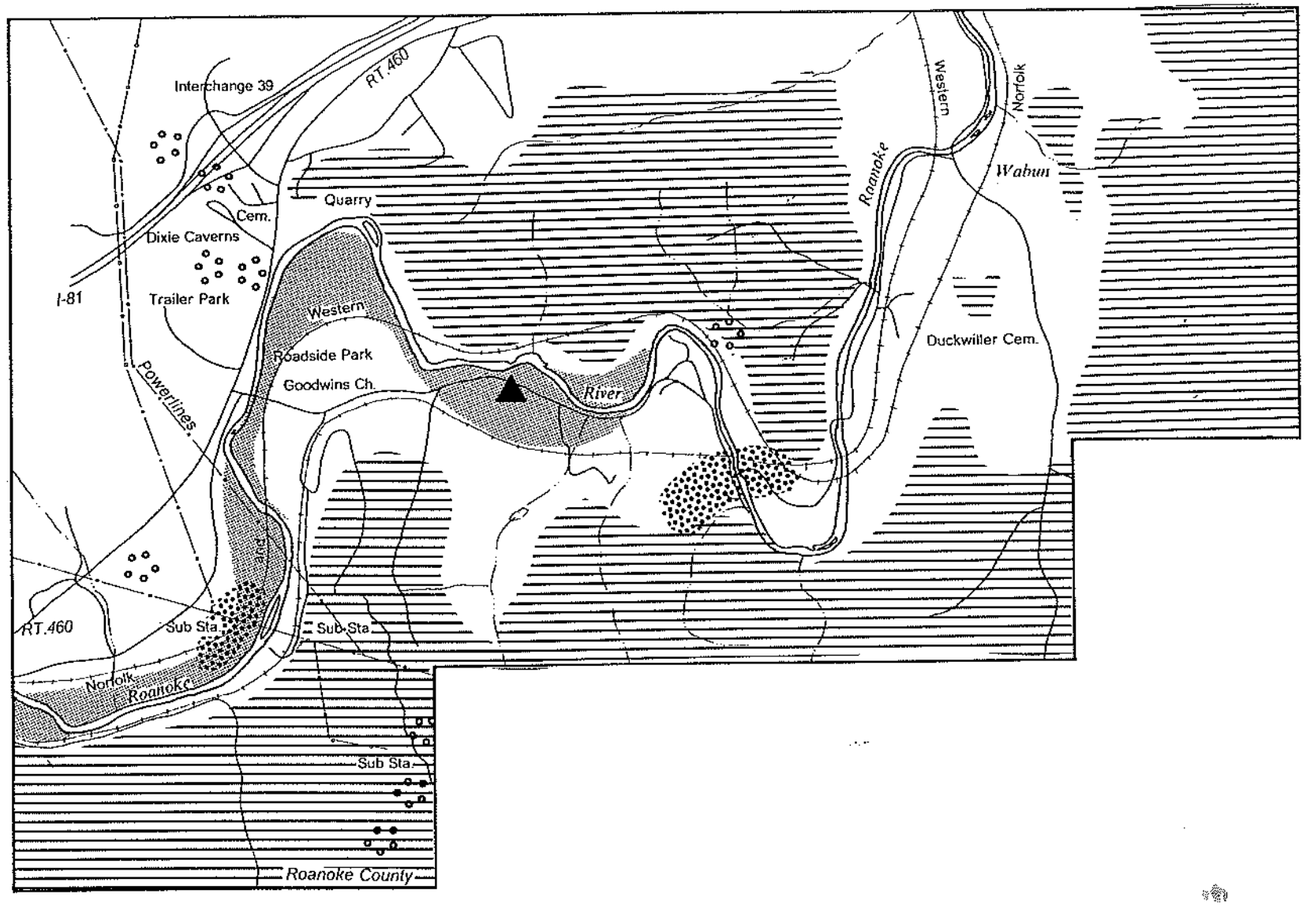
Scale: 1" = 1500'

North



Wabun Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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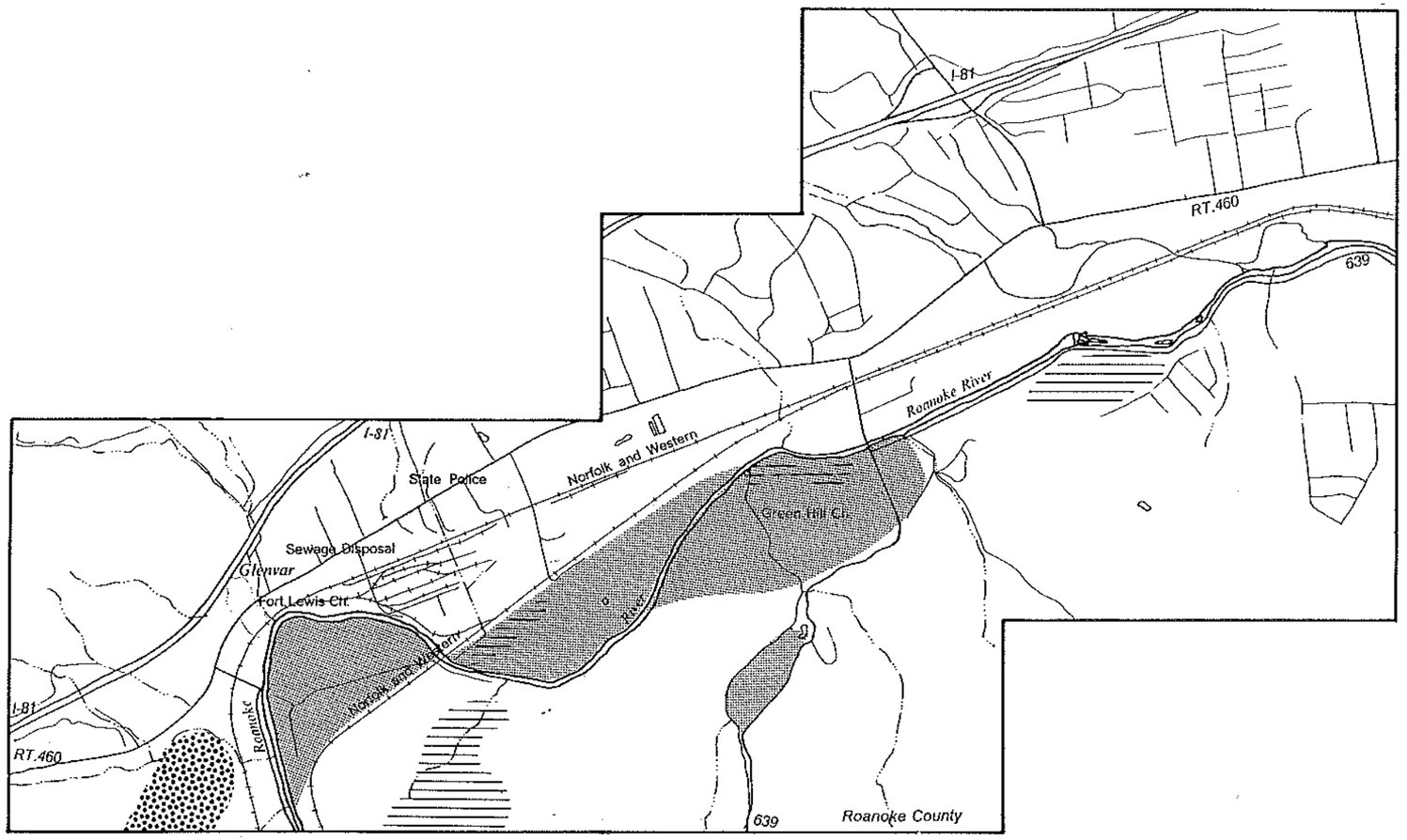

NOTE: No mapped soil survey available for Roanoke Co. Mapped soil resource units are likely areas based on physiography.

Glenvar Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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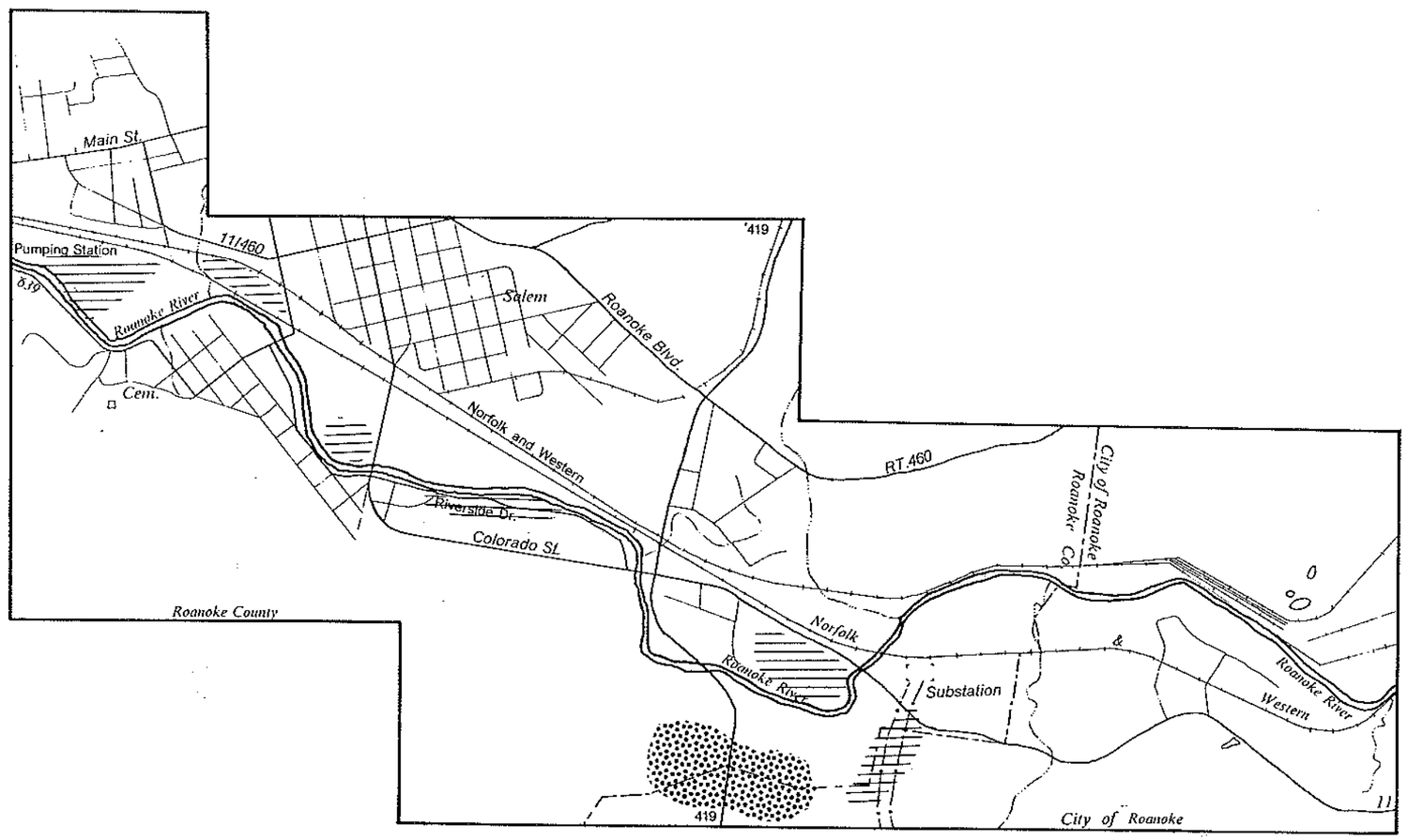

NOTE: No mapped soil survey available for Roanoke Co. Mapped soil resource units are likely areas based on physiography.

Salem Segment

Legend

- Parkland
- Deforestation/construction
- Wetlands
- Rare plants
- Crops
- Mixed Forest
- Coniferous Vegetation
- Valuable Soil Resources
- Range of Roanoke Log Perch
- Range of Orangefin Madtom
- Karst Topography

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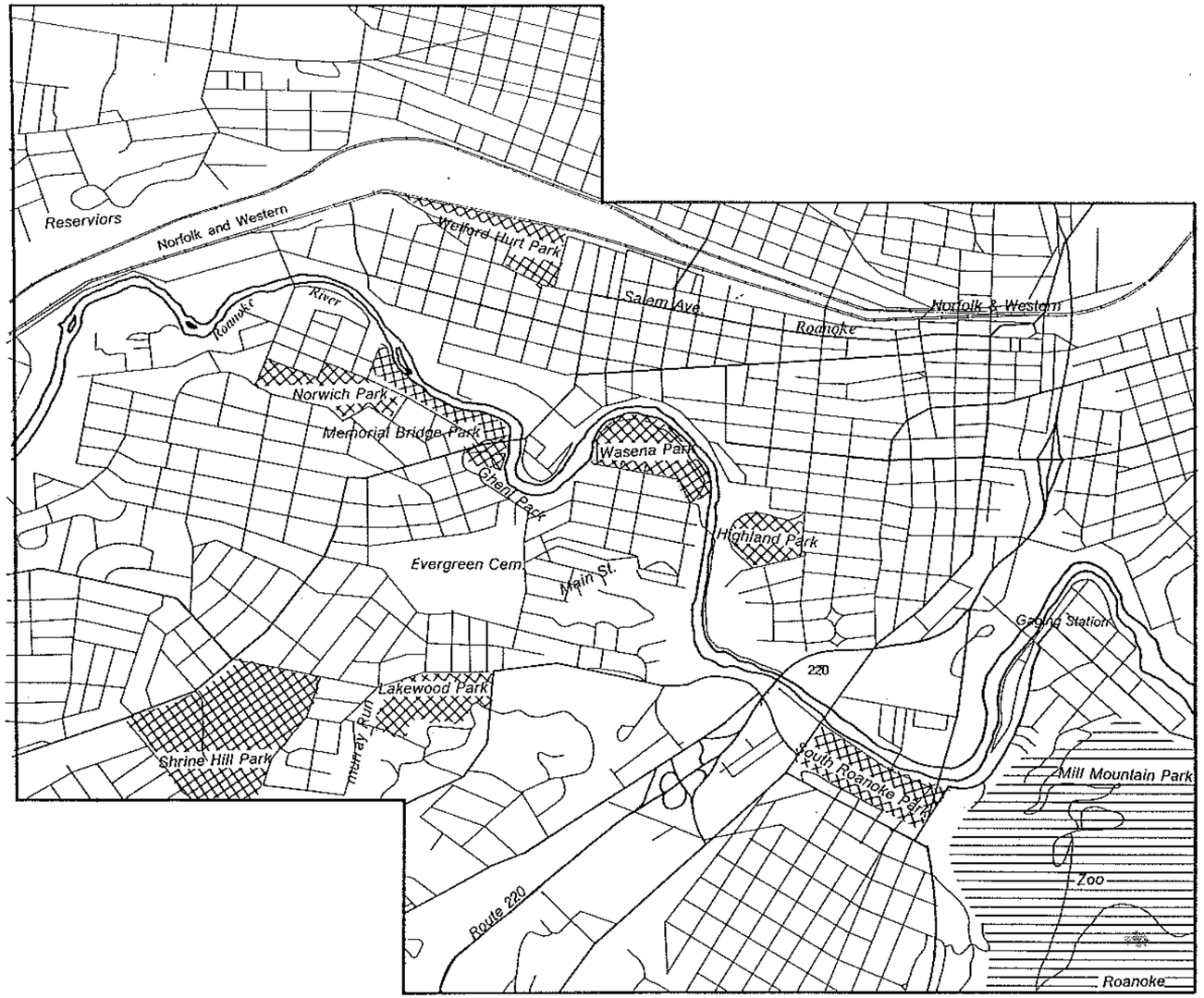

Roanoke Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
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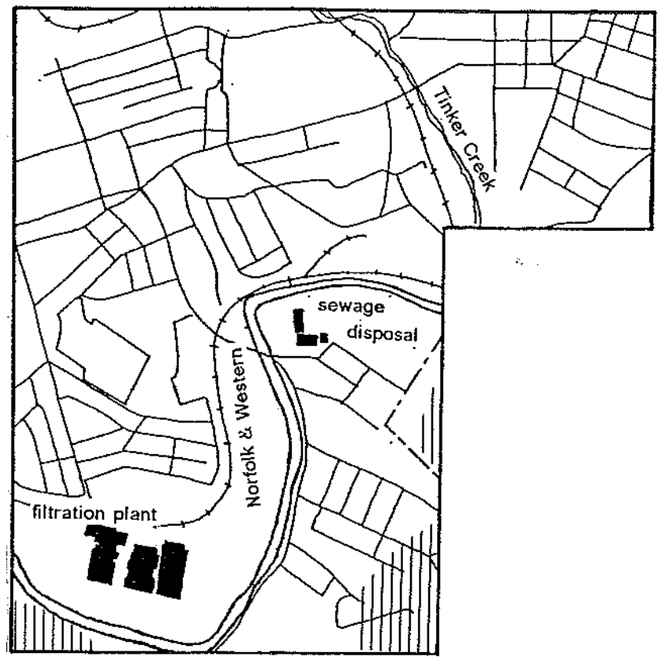

Roanoke Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

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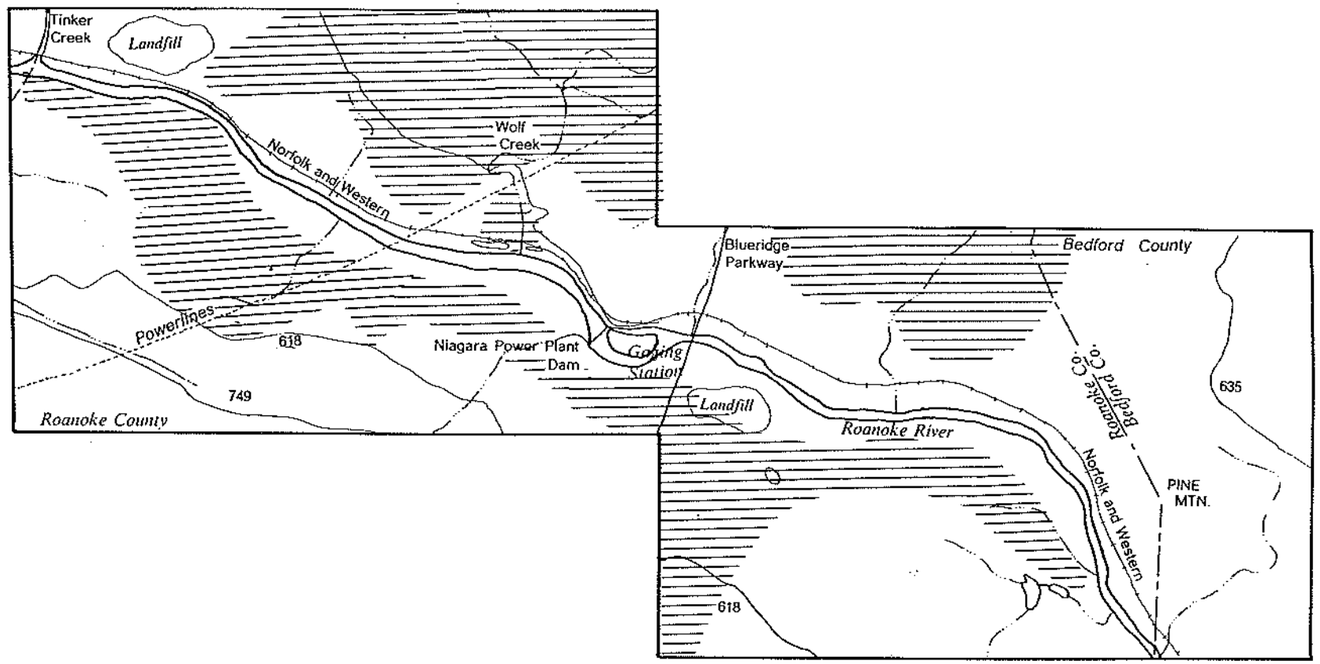

Vinton Segment

Legend

- Parkland
- Deforestation/construction
- Wetlands
- Rare plants
- Crops
- Mixed Forest
- Coniferous Vegetation
- Valuable Soil Resources
- Range of Roanoke Log Perch
- Range of Orangefin Madtom
- Karst Topography

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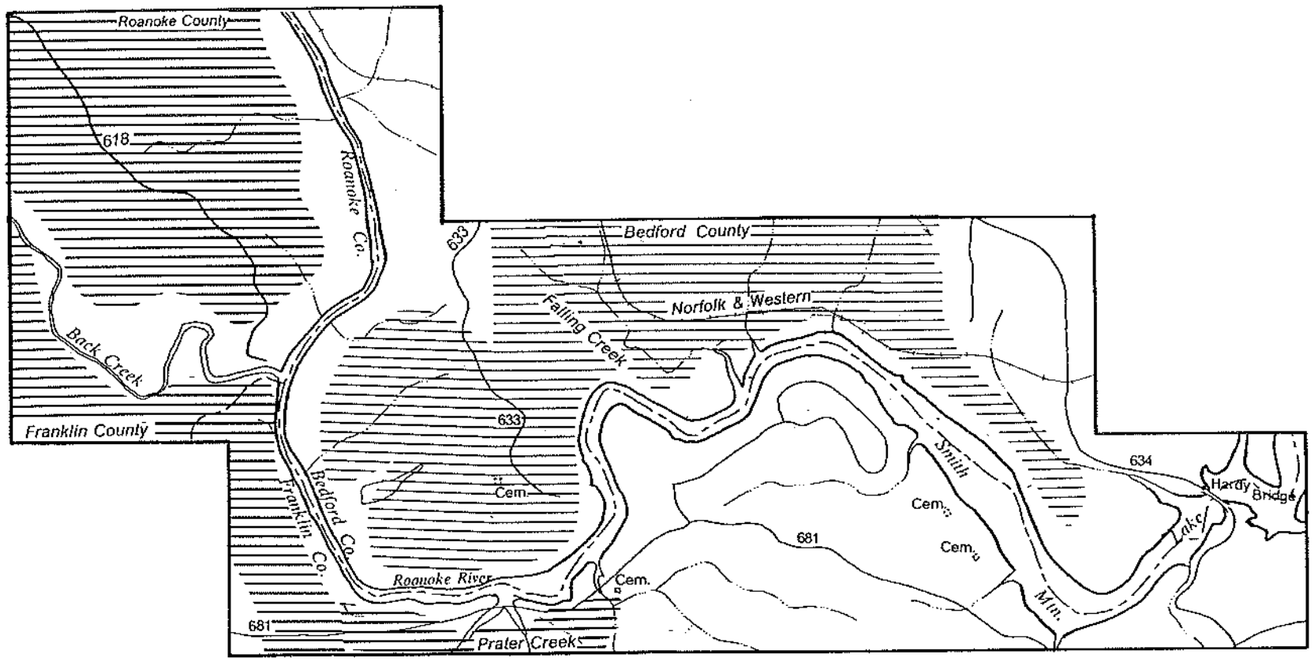

Hardy Bridge Segment

Legend

- *Parkland*
- *Deforestation/construction*
- *Wetlands*
- *Rare plants*
- *Crops*
- *Mixed Forest*
- *Coniferous Vegetation*
- *Valuable Soil Resources*
- *Range of Roanoke Log Perch*
- *Range of Orangefin Madtom*
- *Karst Topography*

NATURAL RESOURCES

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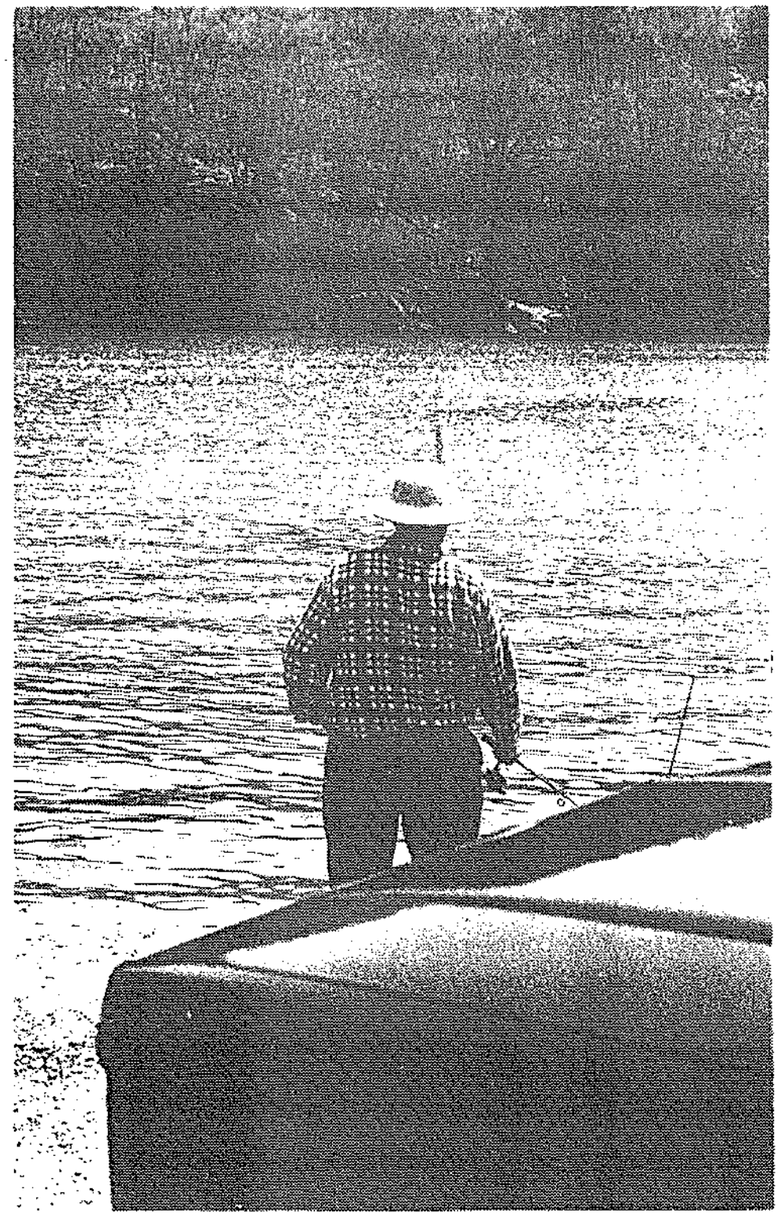


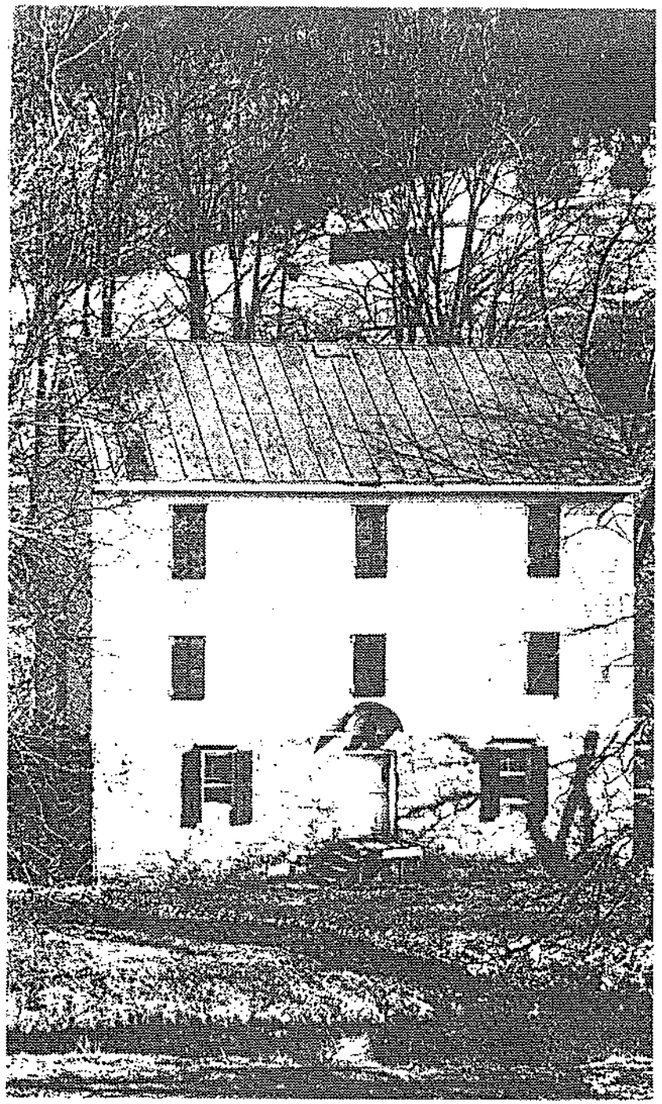
Angler at Hardy Ford Boat Landing

RECREATIONAL AND CULTURAL RESOURCES

People are attracted to the river for its recreational and aesthetic qualities. Recreation is the one resource that is capable of creating a better living environment and also generating revenue. The Roanoke River corridor is located in one of Virginia's most beautiful regions, however there is a surprising lack of recreational space along the river. A review of existing recreational facilities and cultural resources provides an opportunity to access current uses and better understand future needs.

PARKS AND RECREATION

Most of the public recreational facilities are centered around the eastern reach of the Roanoke River, specifically in the Roanoke area. The urban waterfront environment provides outstanding opportunities for recreational uses. The city of Roanoke utilizes a system of ten parks resembling "a string of pearls" along the river corridor. Norwich Park, the highest on the river, is accessible from Roanoke Avenue. Ghent, Wasena, and Memorial Bridge Parks follow and may also be accessed from Roanoke Avenue. The river may also be enjoyed in Highland Park, South Roanoke Park, Mill Mountain Park, Morningside Park, Smith Park, Victory Stadium Park, and Riverview Park. These parks serve a range of users and activities, but something is provided for all.



McDonald's Mill on the North Fork - Built in the Mid-1800's

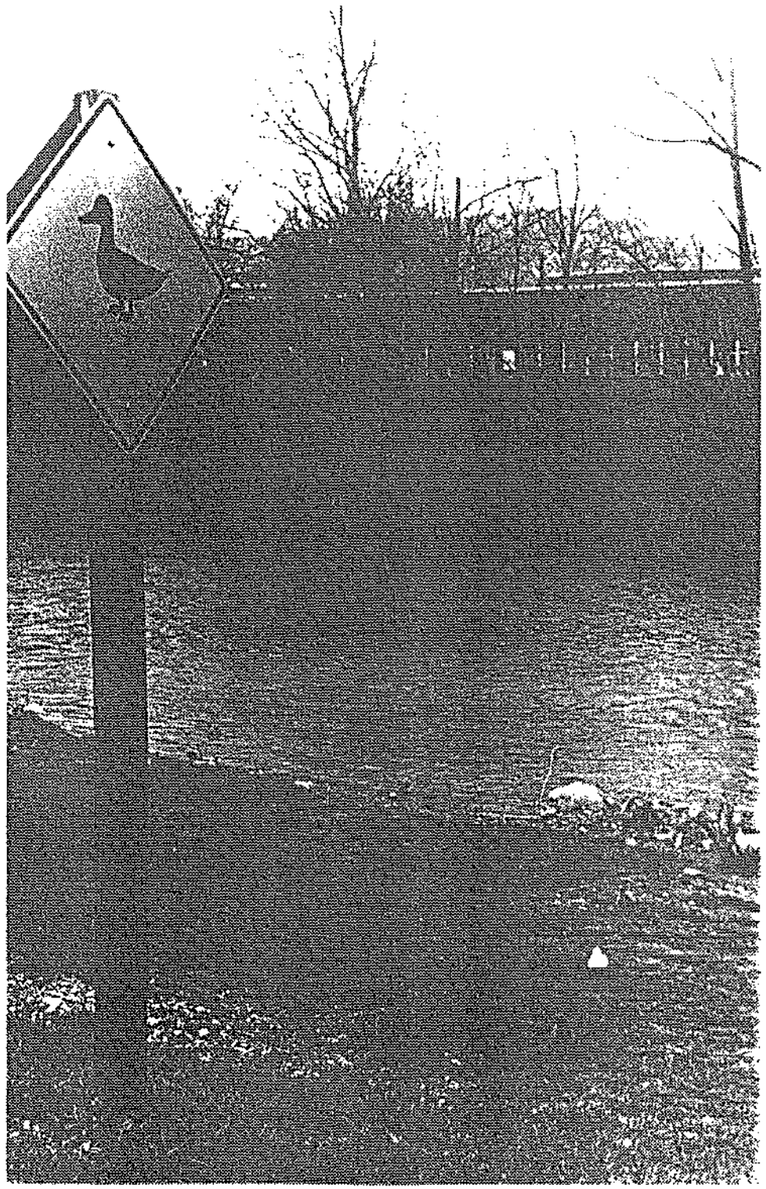
Scenic byways provide a unique form of recreation. Several exist, along the corridor, such as Route 785 at Luster's Gate. The potential exists for so much more.

Public access to the river itself does exist, but is difficult to find in most areas. In the western reaches no legal public accessways are provided, however, some bridges are used in such a manner. The Hardy Ford Bridge area provides the users of Smith Mountain Lake with boat landings, parkway trails, and the Blue Ridge Parkway. Other than this type of access, not much is available.

There are many "informal" areas utilized throughout the river corridor. These areas are indicated on the maps provided. Although these areas may not be specified recreational areas, they are important in the sense that these are areas where the public can go to enjoy the river. These areas are important to consider when visualizing future uses.

Some attempt of public river accessment has been made, however, the need for so much more is evident. We feel the institution of more public areas would not only increase the usability, but also add to the general aesthetics of the river.

HISTORICAL AND CULTURAL AREAS



Duck Crossing Along Riverside Drive in Salem

Southwest Virginia is not only an area with a rich heritage, but much of the same culture is still pertinent. With such a great history, these resources are important. These are marked on the map, but include Langhorne Mill Site in Salem; Tosh's Ford and Evan's Mill in Roanoke; and the Niagara Power Plant and Hardy Ford at Smith Mountain Lake.

MAPS AND METHODOLOGY

Most of the recreation sites, scenic, and cultural areas are depicted on the maps in this section. These include activities such as hiking, sightseeing, canoeing, and fishing.

Damming of river along North Fork.

VISUAL RESOURCES

INTRODUCTION

The upper Roanoke River basin, nestled in the Blue Ridge Mountains of Virginia, has many diverse and beautiful views, vistas, and overlooks. These scenic qualities help to create an enjoyable visual experience while traveling through the Roanoke River Corridor. There are a variety of different scenes including lush valleys, rock outcrops, mountain ranges, river rapids, unique water features and steep hillsides. Each locality has an individual visual quality which makes it special.

NORTH FORK

The headwaters of the north fork of the Roanoke River lie in Ellet Valley in Montgomery County. This part of the valley corridor is primarily agricultural and very scenic. As you pass through, you begin a journey filled with beauty of the natural elements--lush pasture land, riparian woods and scattered woodlands stretching to the foot of the surrounding mountains. From the beginning of the headwaters you are exposed to the view of the gentle slopes of Hightop Mountain. Taylor's Hollow creates a beautiful transition to Paris Mountain as it assumes the position as the looming figure in the valley, then smoothly sloping into the depths of Austin Hollow. The Jeep trail, on Johnson's Ridge, provides a grand overlook of the

View of Sycamores Along the River from Route 639 Bridge Near Dixie Caverns

River and out toward Peppers Run to the north. Then, like a guardian of time, Brush Mountain hovers in the sky to the north. The Ellett Valley area of the Roanoke River Corridor is one of the most scenic areas of the study with its mountains and hollows opening and closing the views of the valley.

SOUTH FORK

The South Fork area of the upper Roanoke River basin, like the North Fork, serves as the headwaters to the main body of the Roanoke River. This section of the corridor in Montgomery County is a very serene area containing mostly wooded, pasture, and cultivated land providing pastoral vistas. The South Fork is also an area of rolling hills and countless hollows surrounding the water. Although the area is very scenic as a whole, there are some areas of special interest that deserve special mention. The natural beauty of the rolling hills is especially grand as one looks from the river, near Sowders Chapel towards Fisher's View Mountain in the southwest and to the various surrounding hollows. The eastern skylight is occupied by the view of Poor Mountain. The South Fork's scenic vista ends at the Pedlar Mountains which separate the tributaries into the South and North Forks.

This sparsely populated section of the corridor is surrounded by beautiful views from the road and speckled with many overlooks from the mountains. This section of the corridor is fortunate to have a single road, Route 603, running with the river and providing a wonderful scenic byway. As you enter into Shawsville there are some exciting overlooks from the Pedlar Hills to the river and beyond to the steep hillsides. Approaching Elliston, one has a similar scenic view with a larger section of grassy plain surrounding the river banks. Overlooks to the south across various knolls continue the nice view across the river to the steep, wooded hillsides. Finally, approaching Lafayette, the view changes from steep slopes to rolling hills. The many knolls throughout provide a more delicate and broader view of the river. As one exits this section of the corridor, there are many high points outside the Roanoke County line which provide beautiful overlooks of Lafayette and the river winding through it.

IRONTO

As the North Fork of the Roanoke River passes New Ellett Ellett, the corridor enters the Ironto Route 603 section. Upon entering this area one has a beautiful view of High Top Mountain to the North. As you travel further along Route 603, there are various views allowed through thinly wooded areas toward Pedlar Hills. In the village of Ironto, scattered farms and many small dwellings provide a historic backdrop to the area. Where the Flatwood Branch and the Craig Branch join the North Fork, there are many vistas to the flatwoods and beyond to Paris Mountain. Pedlar Hollow continues along the North Fork until it meets the South Fork and the main main channel of the Roanoke River.

GLENVAR

The Glenvar section of the corridor has some interesting, but limited, views. As one enters this section near Riverside, there are good views north from Route 646 across the bend of the river and on toward the Fort Lewis Mountains. A little further down, where 639 enters Wabun, there are numerous foreground views of the river from the road. As a whole, this area has fewer scenic vistas than other sections of the corridor; yet, one finds several nice views to the hills. At Glenvar, towards the end of the section, views are more limited to industrial and urban land uses. The southeast section provides vistas to the mountains that extend along the southern side of the corridor. Finally the Green Hill Park extends a nice view across the river creating a foreground frame for the mountains to the south.

SALEM

The Salem segment of the corridor is not an area with a great deal of scenic attributes. The Roanoke River passes through some very unsightly areas here, and there is little room for scenic views or overlooks. One scenic view occurs near the South Salem School.

Wooded Area Along South Fork of Roanoke River

A vista south of the hill past the Church Hill Cemetery does provide a good view of the mountains.

ROANOKE CITY

As the corridor enters the most urban area, the views change considerably. The looming mountains are still present in the background but the industry and inner city workings distract from the scenic qualities. Although there are some areas of interest, views must be selected carefully. There are some parks along the river front which provide areas with natural and aesthetic views. As one travels along the various access roads, there are good views to and from the parks. From Wasena Park, the first major park along the corridor, one can see across the river toward the historic area of Roanoke City. There are also some nice views from across the railroad tracks and the river south to Highland Park. A good duel side view can be found where the river runs between South Roanoke Park and Maher Field. And finally, making it all seem not quite so bad, there is the view up Mill Mountain which acts as a backdrop to the south. There is still a great deal of scenic quality despite the mass of industry.

VINTON AND FRANKLIN COUNTY

At the end of the study frame for the corridor, the river becomes practically invisible. There are limited views and overlooks which

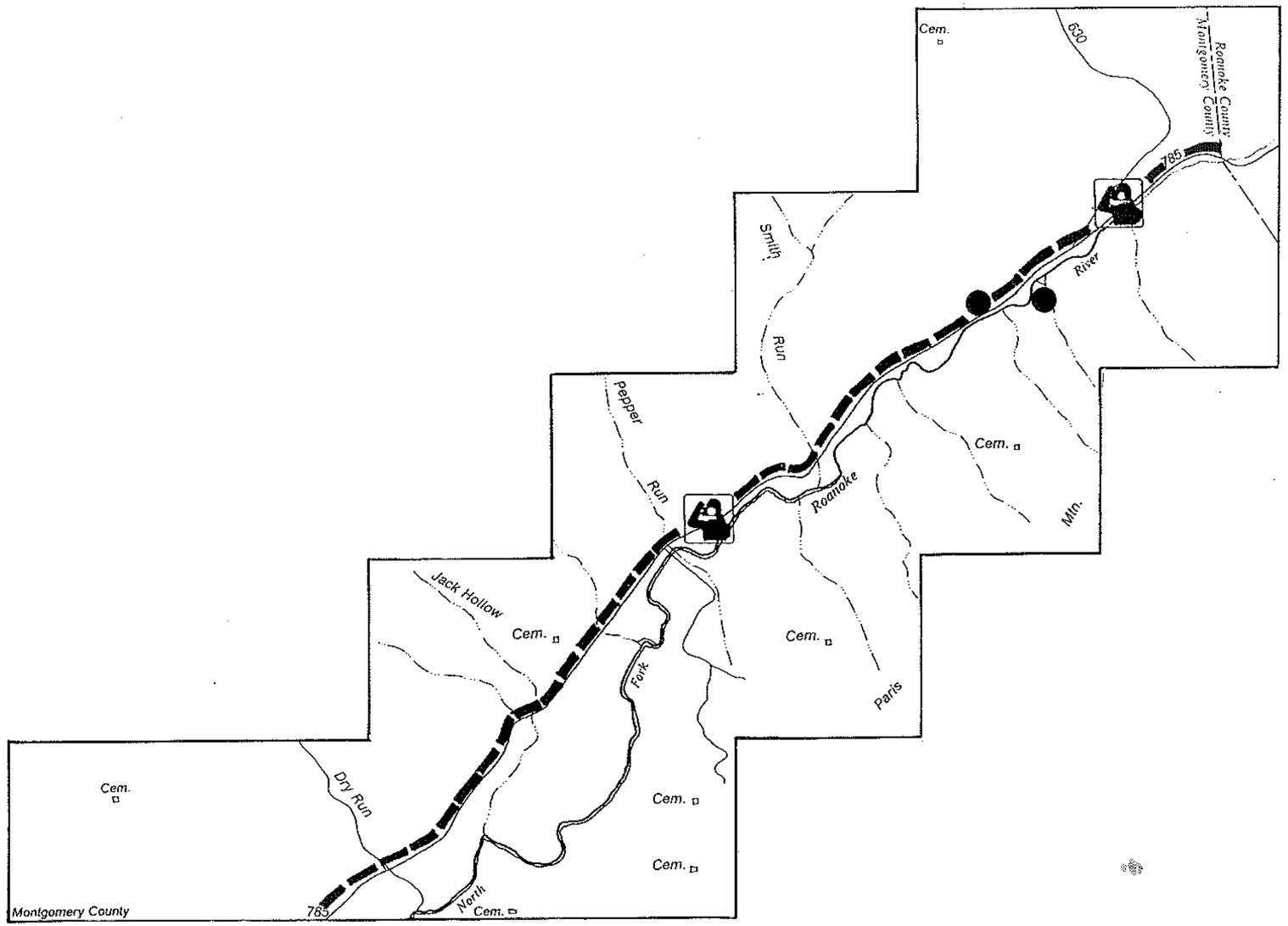
are close enough to the roadways and not totally blocked by the layers of dense vegetation. Toward the middle section at the Blue Ridge Parkway, there is a nice view to the north toward the Niagara Dam. At the Hardy Ford Bridge, the waters of Smith Mountain Lake open between the surrounding mountains. The lack of vehicular access to many areas helps to limit the number of views.

CONCLUSION

The Roanoke River Corridor, from the headwaters in the North and South Forks to the Hardy Ford Bridge, provides a diverse scenic journey. This is a rich area which reflects the landscape of the river and its surrounding valleys. Much can be learned from the wonderful views, vistas, and overlooks that make the corridor beautiful.

MAPS AND METHODOLOGY

The information for the scenic qualities analysis was obtained from sources including the USGS Topographic Maps of the counties of Montgomery, Roanoke, Franklin, and Bedford and the 4th year design studio in the Landscape Architecture Program at Virginia Tech in the Spring of 1989.



Paris Mtn. Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

Landscape Architecture Progaram

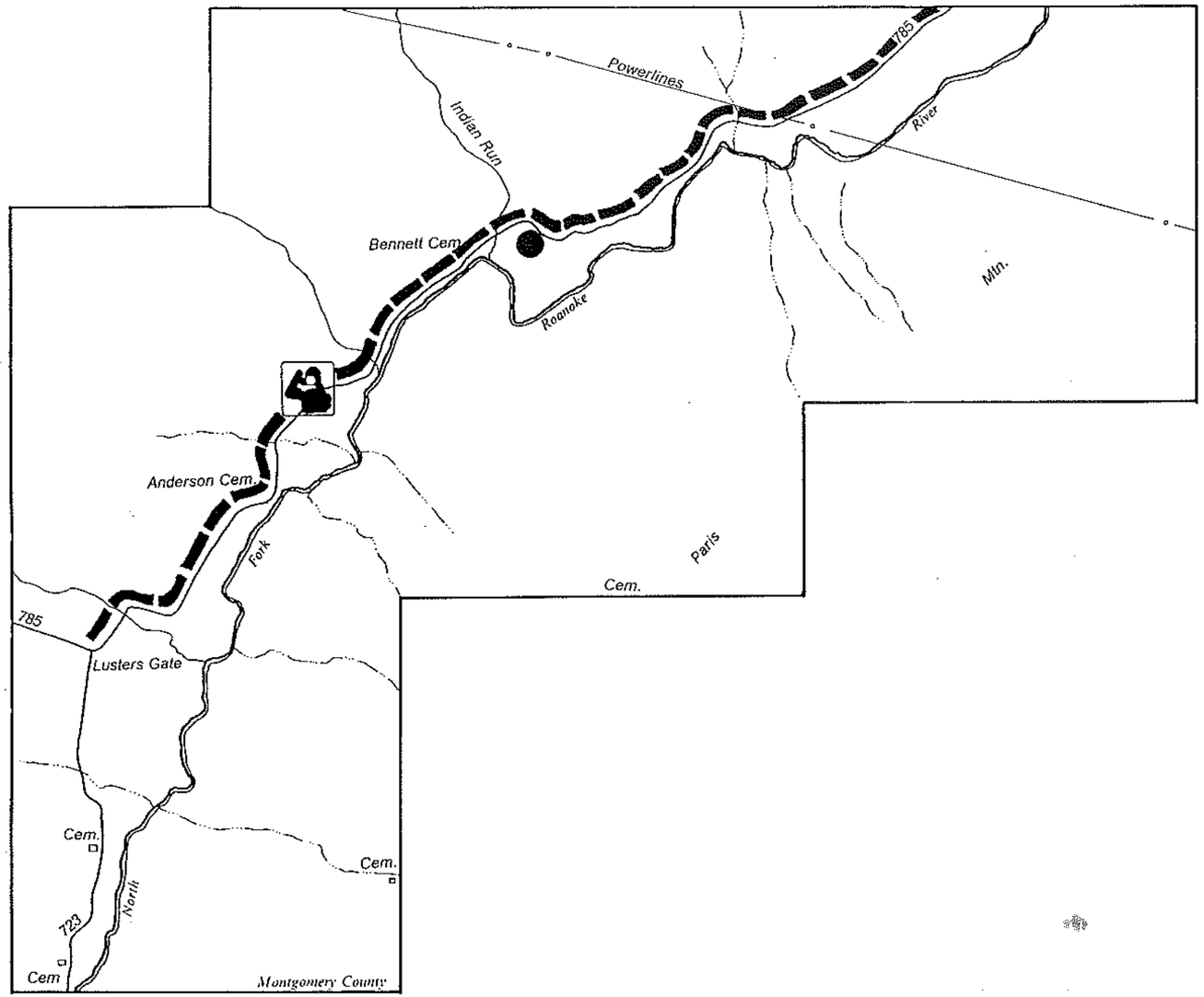
Virginia Polytechnic Institute & State University

April 26, 1989

D 1

Scale: 1" = 1500'

North



Lusters Gate Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

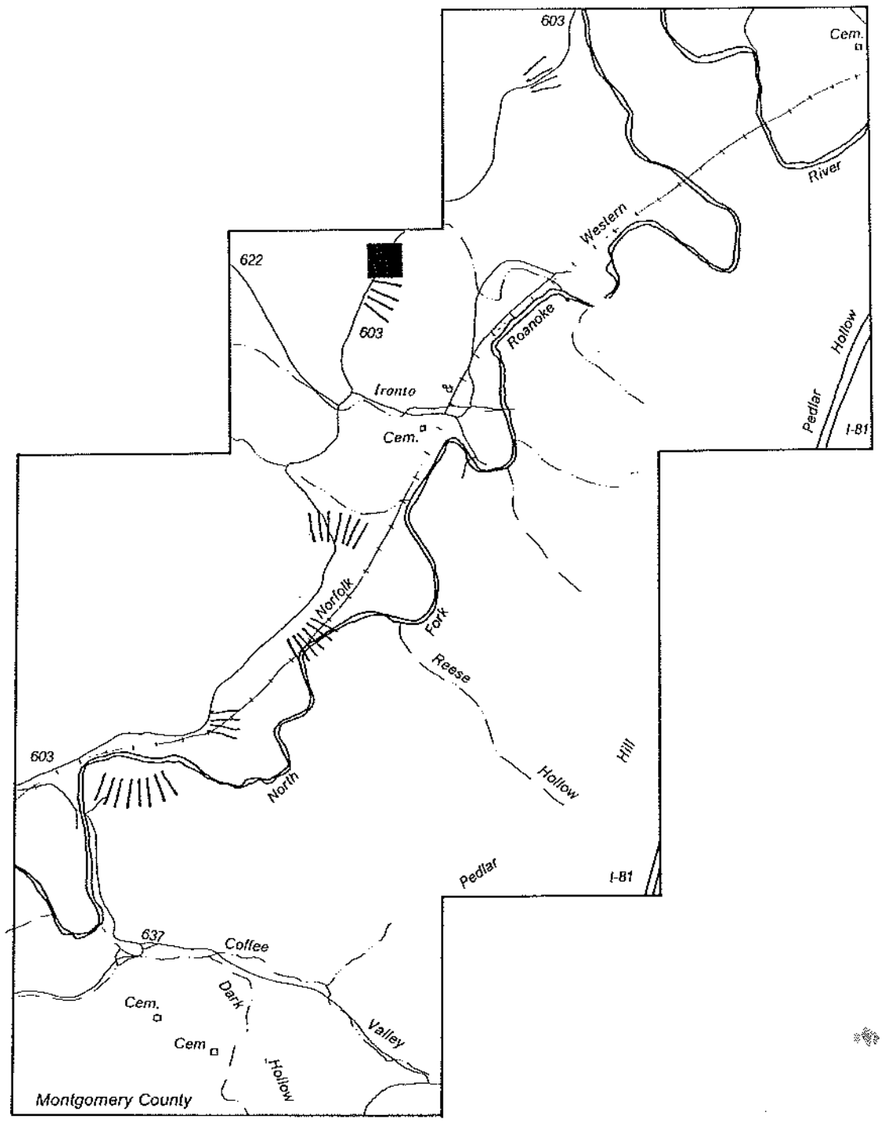
Landscape Architecture Progaram

Virginia Polytechnic Institute & State University

April 26, 1989 **D 2**

Scale: 1" = 1500'

North



Ellett Segment

Legend

- Public Parks
- Scenic byways
- Hiking
- Fishing
- Picnic area
- Boating
- Informal Recreation Area
- Pull-Offs
- Cultural Landmark
- Views
- Vista

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

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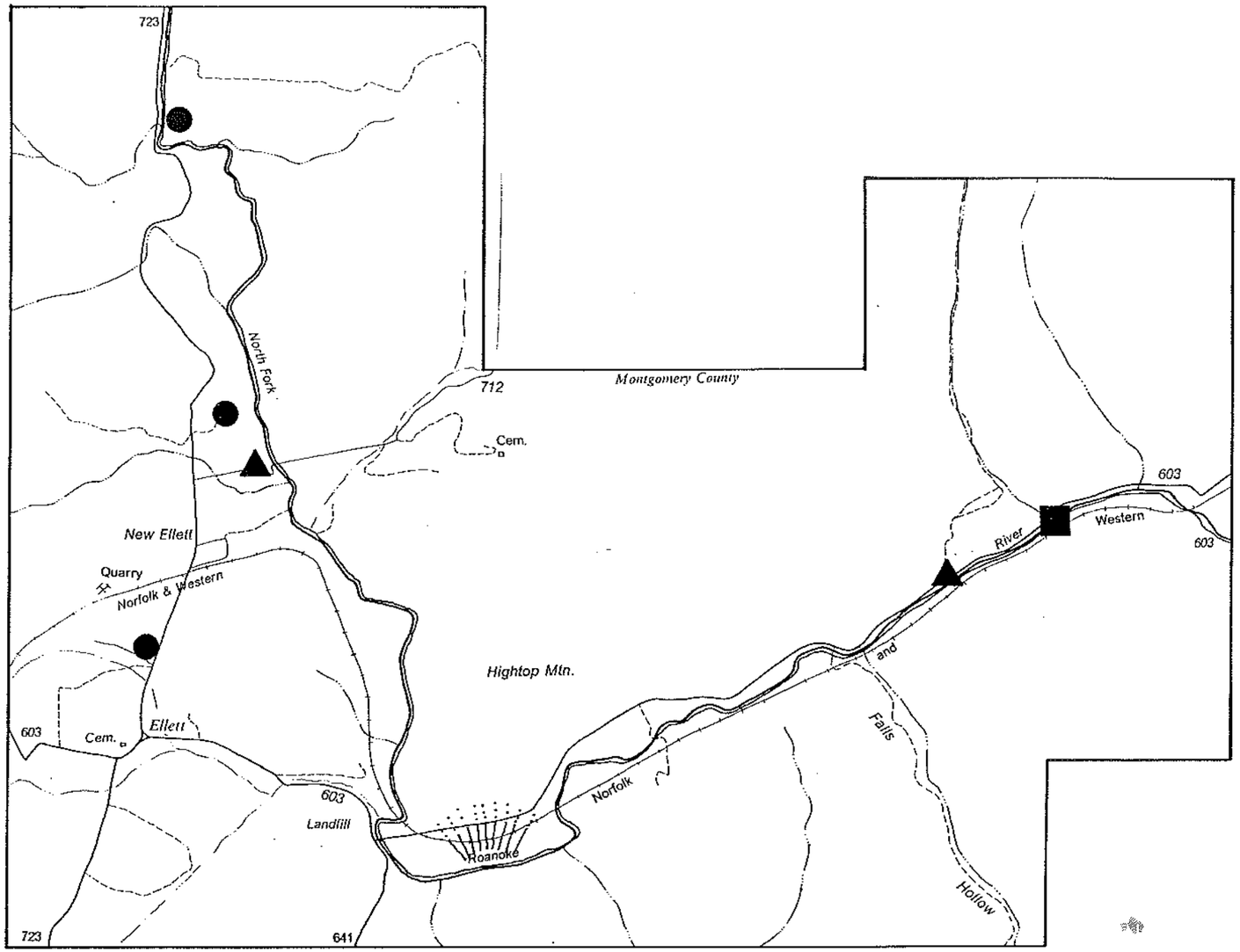
D 3

Scale: 1" = 1500'

North



Ironto Segment

Legend

- Public Parks
- Scenic byways
- Hiking
- Fishing
- Picnic area
- Boating
- Informal Recreation Area
- Pull-Offs
- Cultural Landmark
- Views
- Vista

RECREATION CULTURAL & VISUAL RESOURCES

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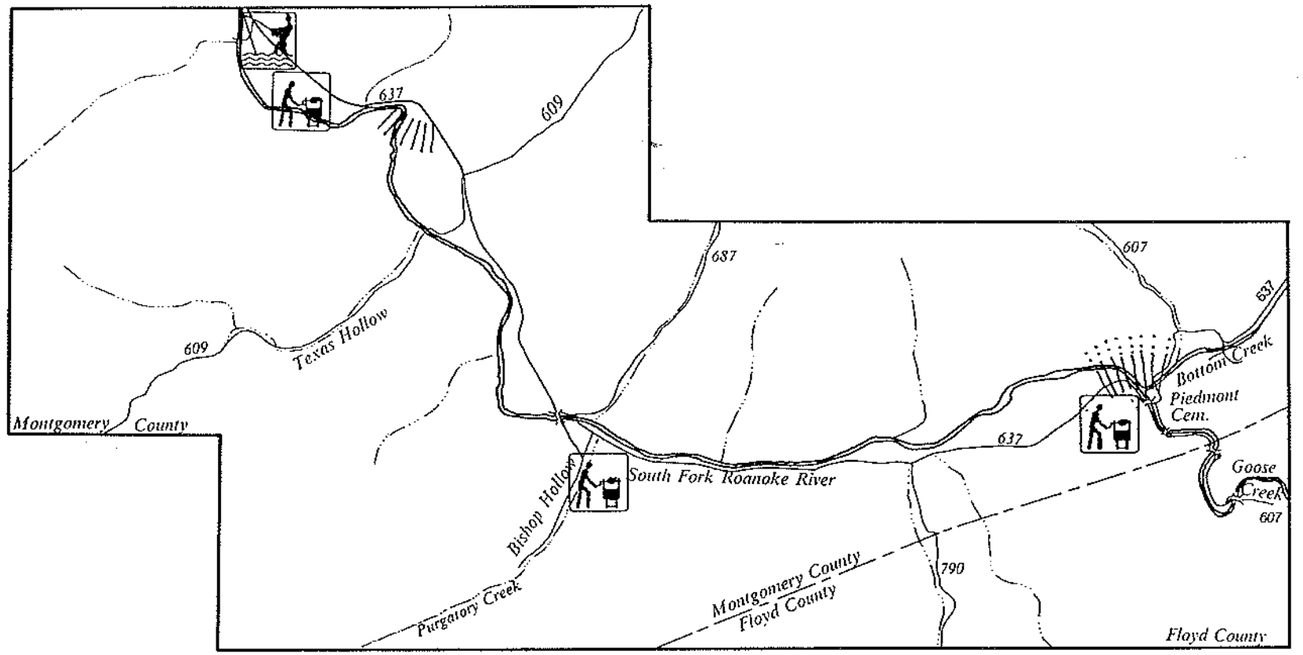
D 4

Scale: 1" = 1500'

North



Piedmont Segment

Legend

- Public Parks
- Scenic byways
- Hiking
- Fishing
- Picnic area
- Boating
- Informal Recreation Area
- Pull-Offs
- Cultural Landmark
- Views
- Vista

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

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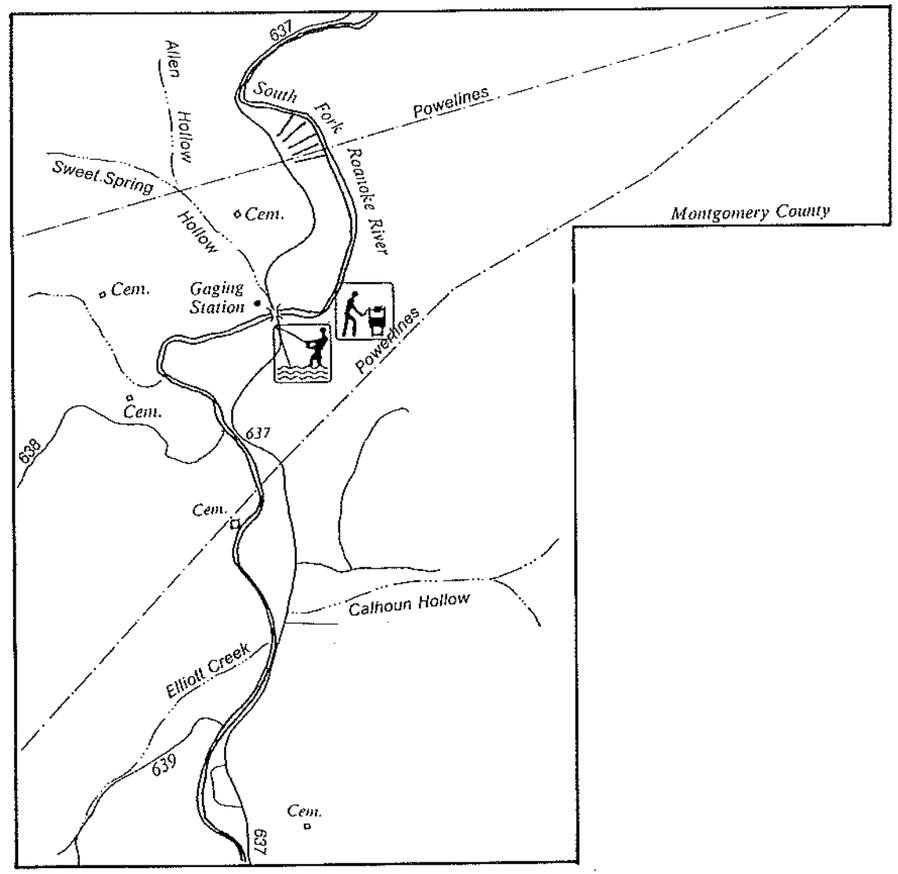
D 5

Scale: 1" = 1500'

North



Calhoun Segment

Legend

- Public Parks
- Scenic byways
- Hiking
- Fishing
- Picnic area
- Boating
- Informal Recreation Area
- Pull-Offs
- Cultural Landmark
- Views
- Vista

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

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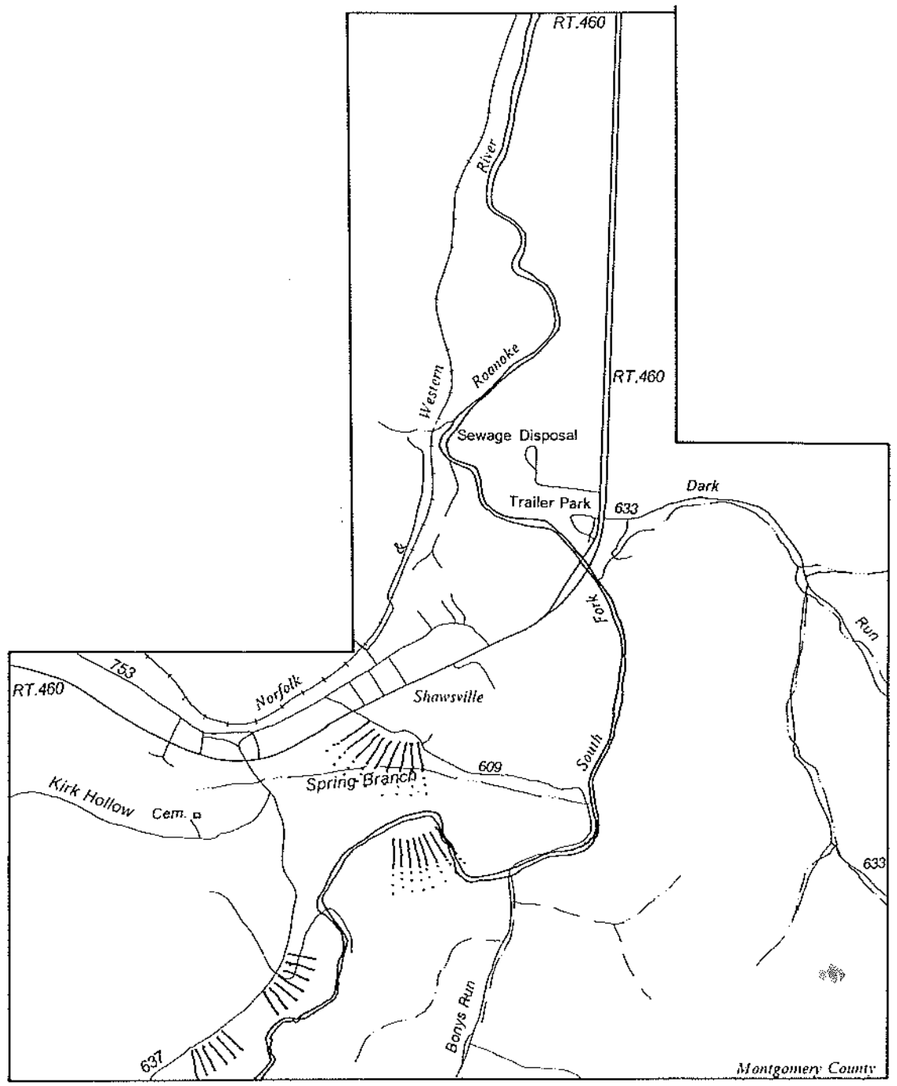
D 6

Scale: 1" = 1500'

North



Shawsville Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

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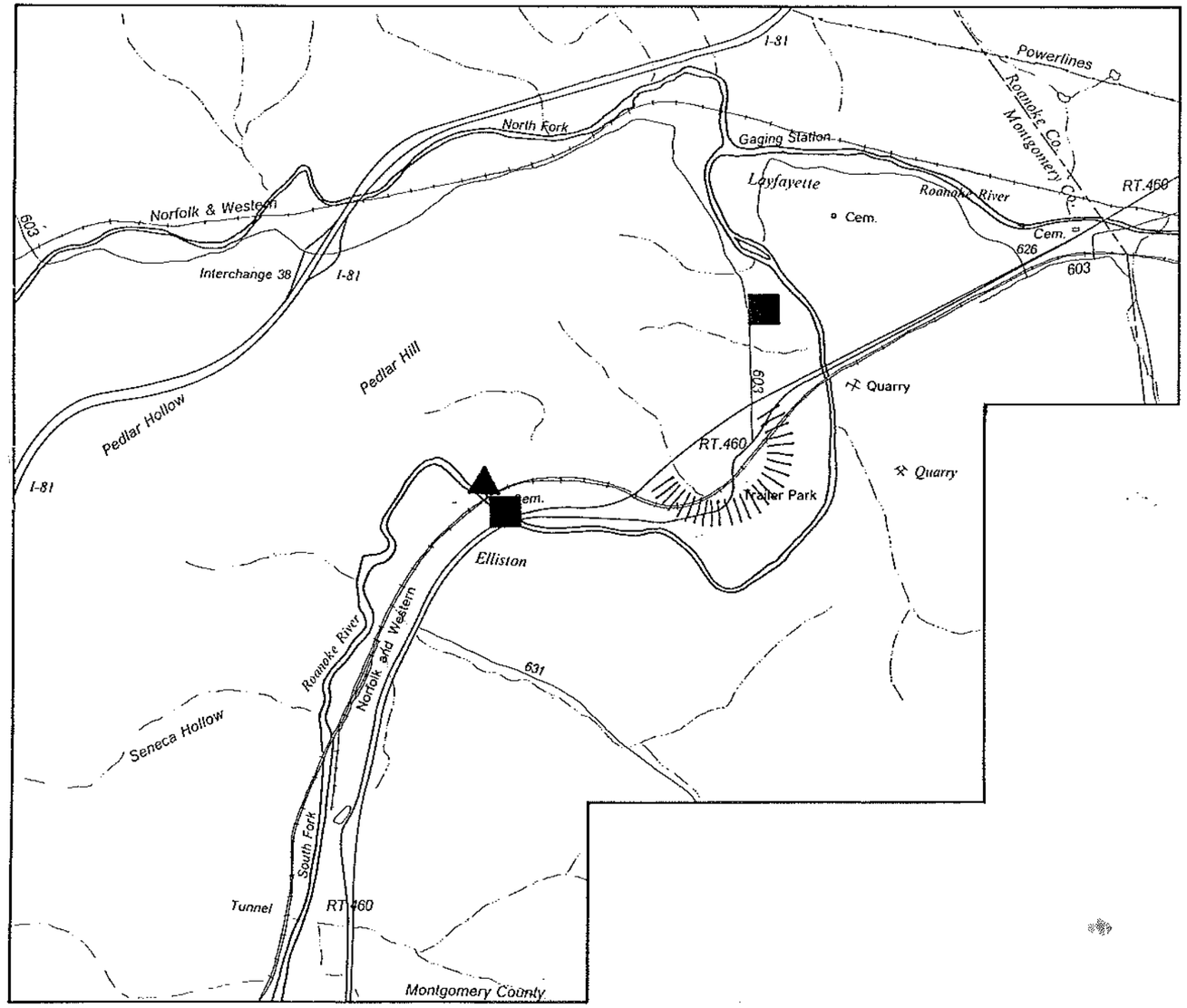

Lafayette Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

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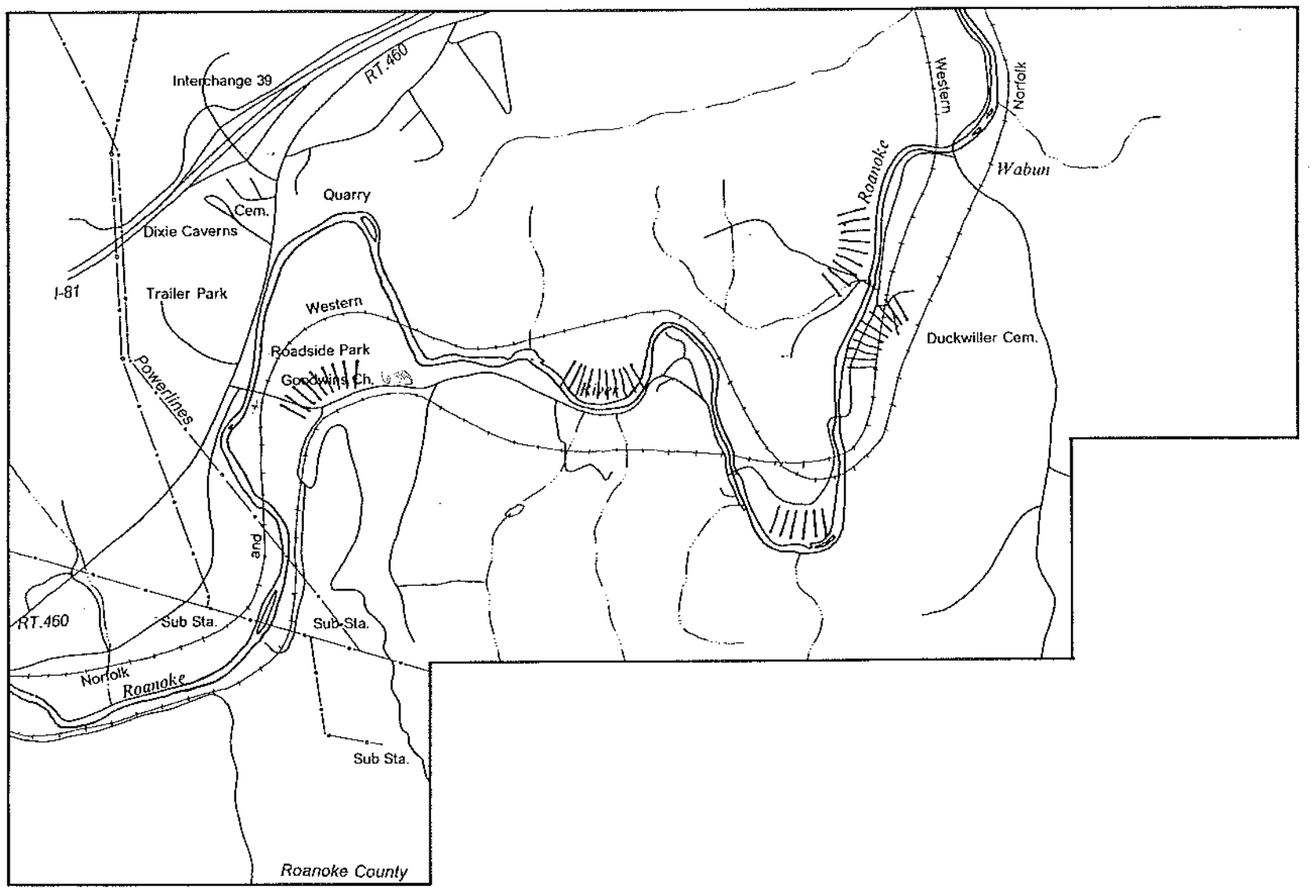
D 8

Scale: 1" = 1500'

North



Wabun Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

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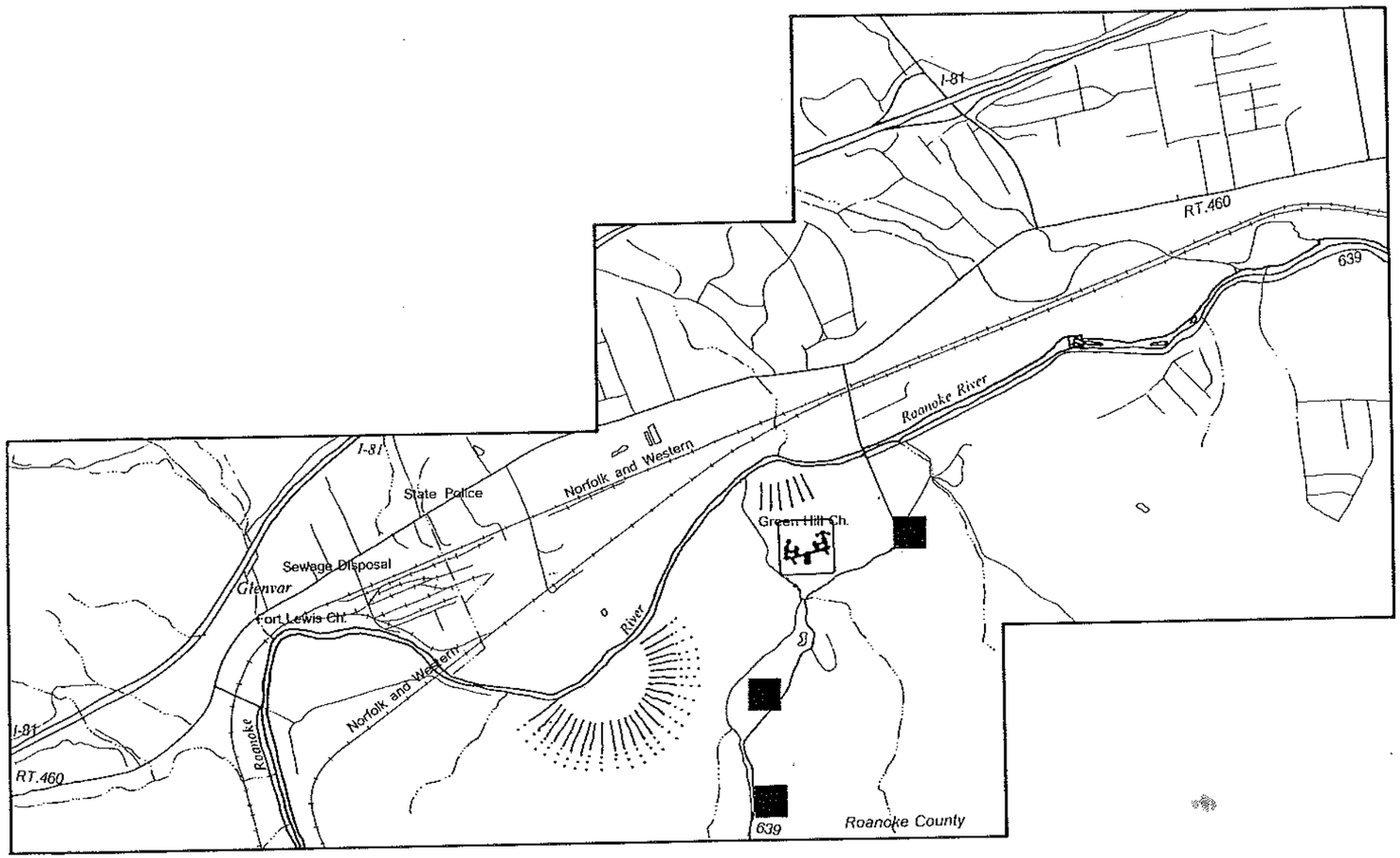
Scale: 1" = 1500'

North



Glenvar Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

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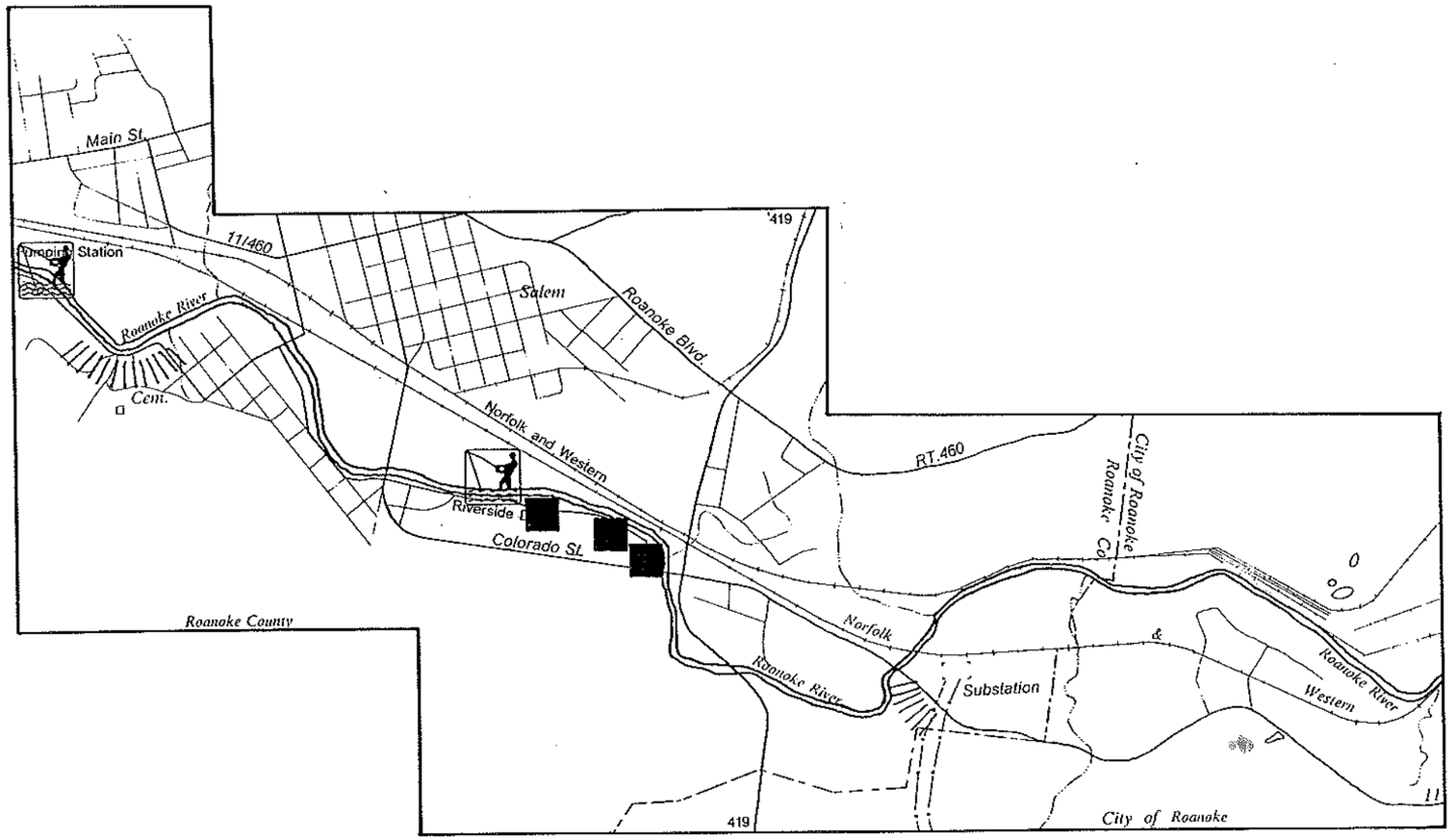
Scale: 1" = 1500' *North*



Salem Segment

Legend

- Public Parks
- Scenic byways
- Hiking
- Fishing
- Picnic area
- Boating
- Informal Recreation Area
- Pull-Offs
- Cultural Landmark
- Views
- Vista

RECREATION CULTURAL & VISUAL RESOURCES

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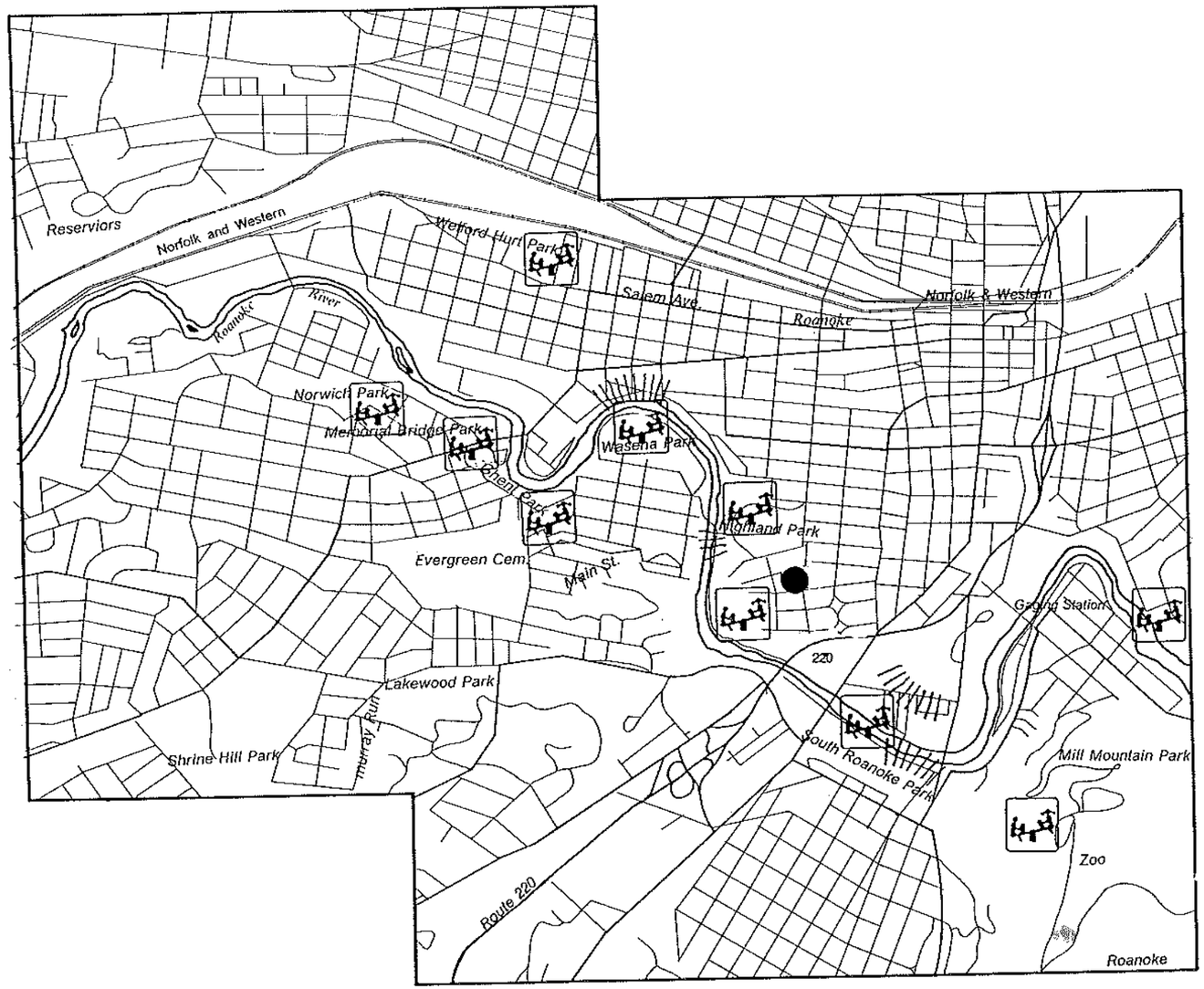
D 11

Scale: 1" = 1500'

North



Roanoke Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

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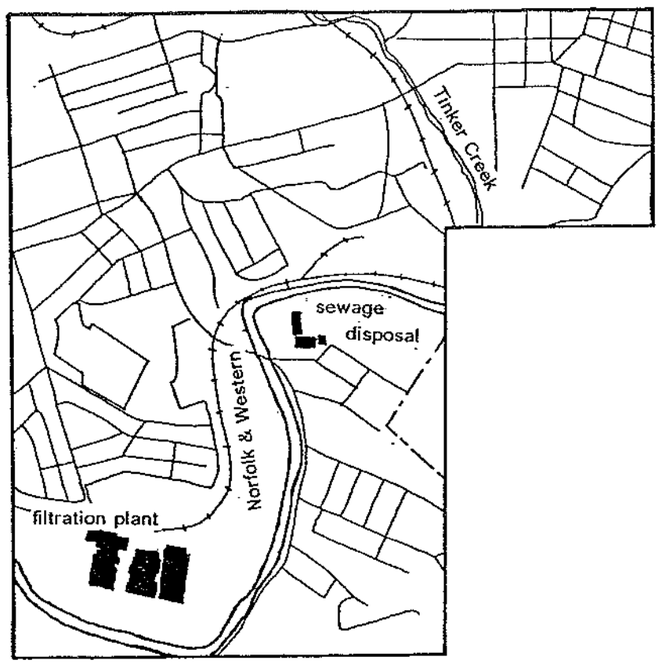
Scale: 1" = 1500'

North



Legend

- Public Parks
- Scenic byways
- Hiking
- Fishing
- Picnic area
- Boating
- Informal Recreation Area
- Pull-Offs
- Cultural Landmark
- Views
- Vista

RECREATION CULTURAL & VISUAL RESOURCES

Roanoke Segment

ROANOKE RIVER CORRIDOR STUDY

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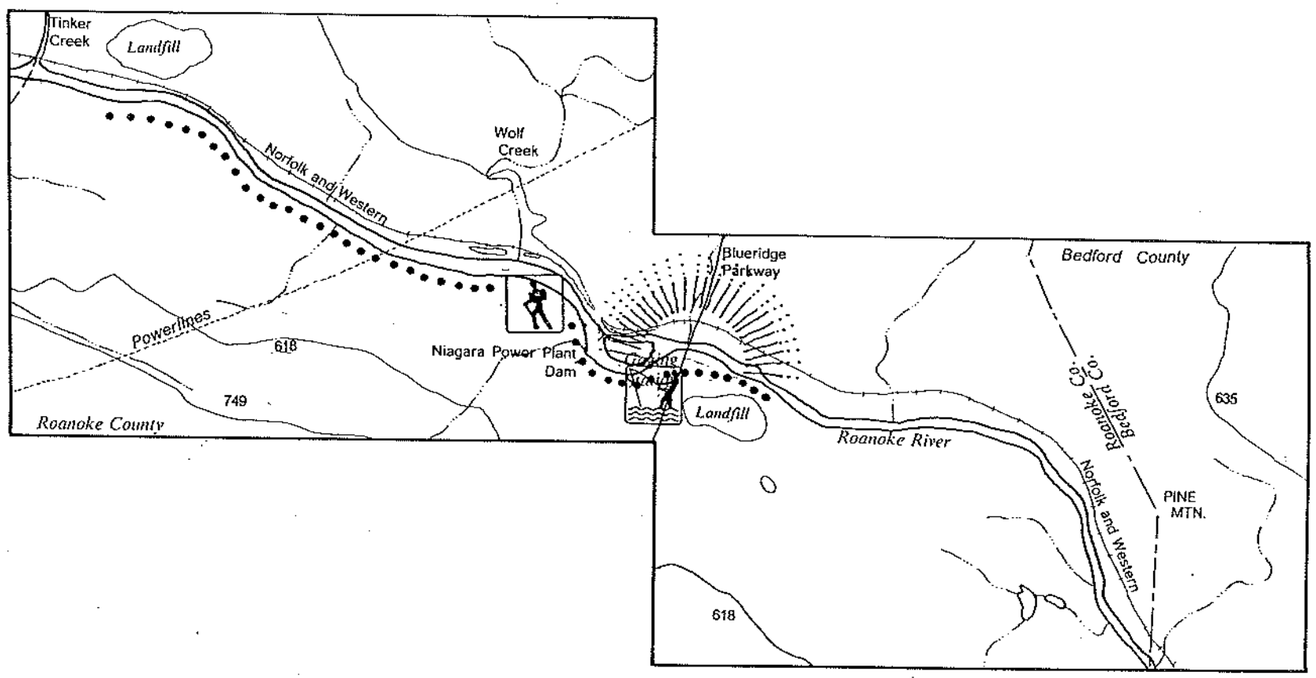
D 13

Scale: 1" = 1500'

North



Vinton Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

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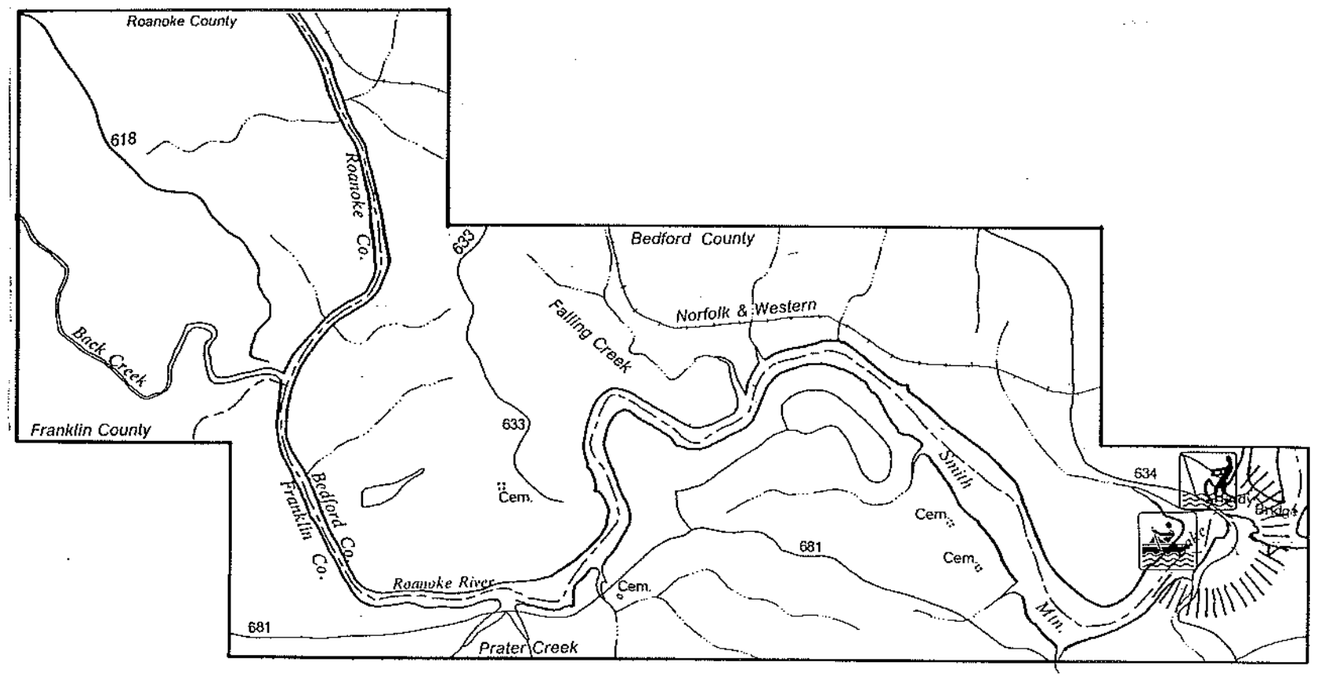
Scale: 1" = 1500'

North



Hardy Bridge Segment

Legend

- *Public Parks*
- *Scenic byways*
- *Hiking*
- *Fishing*
- *Picnic area*
- *Boating*
- *Informal Recreation Area*
- *Pull-Offs*
- *Cultural Landmark*
- *Views*
- *Vista*

RECREATION CULTURAL & VISUAL RESOURCES

ROANOKE RIVER CORRIDOR STUDY

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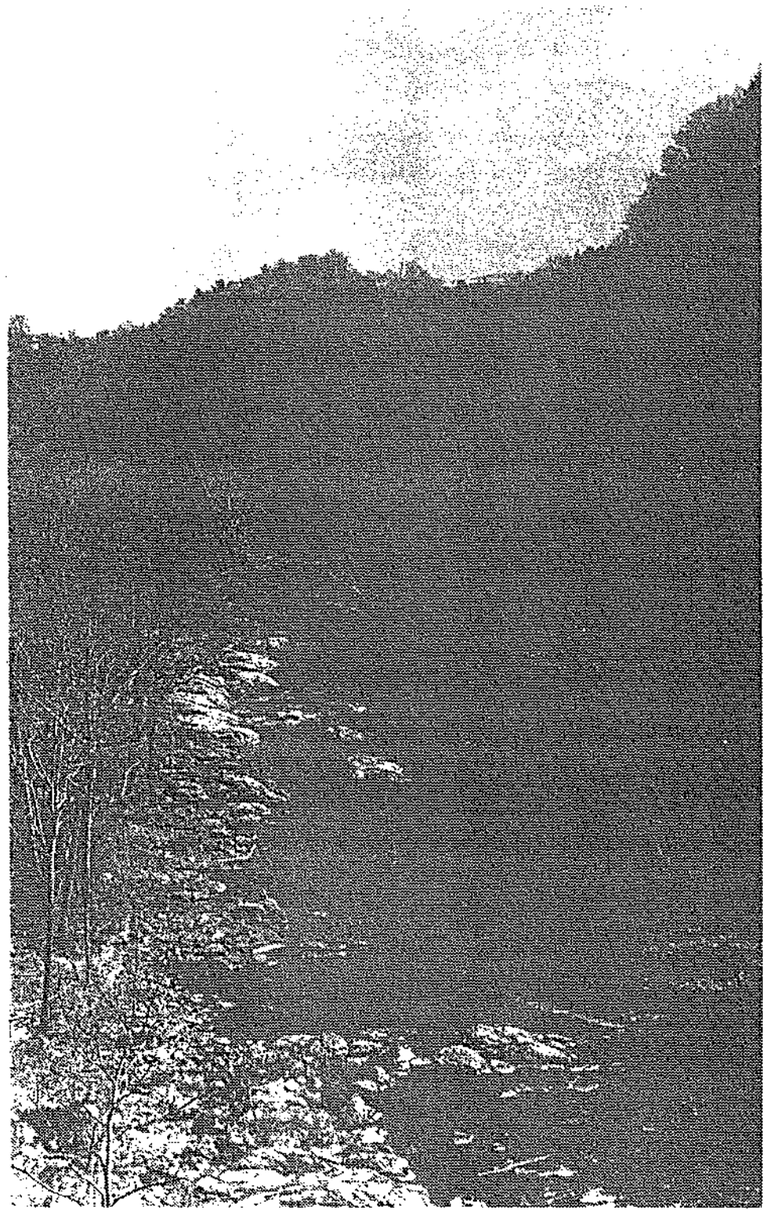
D 15

Scale: 1" = 1500'

North



Proposed beginning of Explore Project near Blue Ridge Parkway.

POTENTIALS

There are many potentials which the Roanoke River creates. A river which flows through areas as diverse in nature as the Roanoke River creates many potentials for recreational opportunities. The danger of increased river degradation is a damaging influence which needs to be prevented. River potentials, though varied and many, need to be environmentally sound. These potentials must respect the integrity of the river and not destroy it. This review of potentials will be divided into two categories and there will be correlations between them. First, there are the funded large-scale projects which include: the Explore project, the river parkway, and the Army Corps of Engineers' flood control plan. These projects have received extensive media coverage, so these will be covered in less detail. The latter category consists of smaller-scale projects that could be supported by local governments or organizations within the Roanoke River basin. These proposals include: bike trails, canoeing facilities, and local park systems. These project ideas will be discussed in more detail and often relate back to the projects of larger scale.

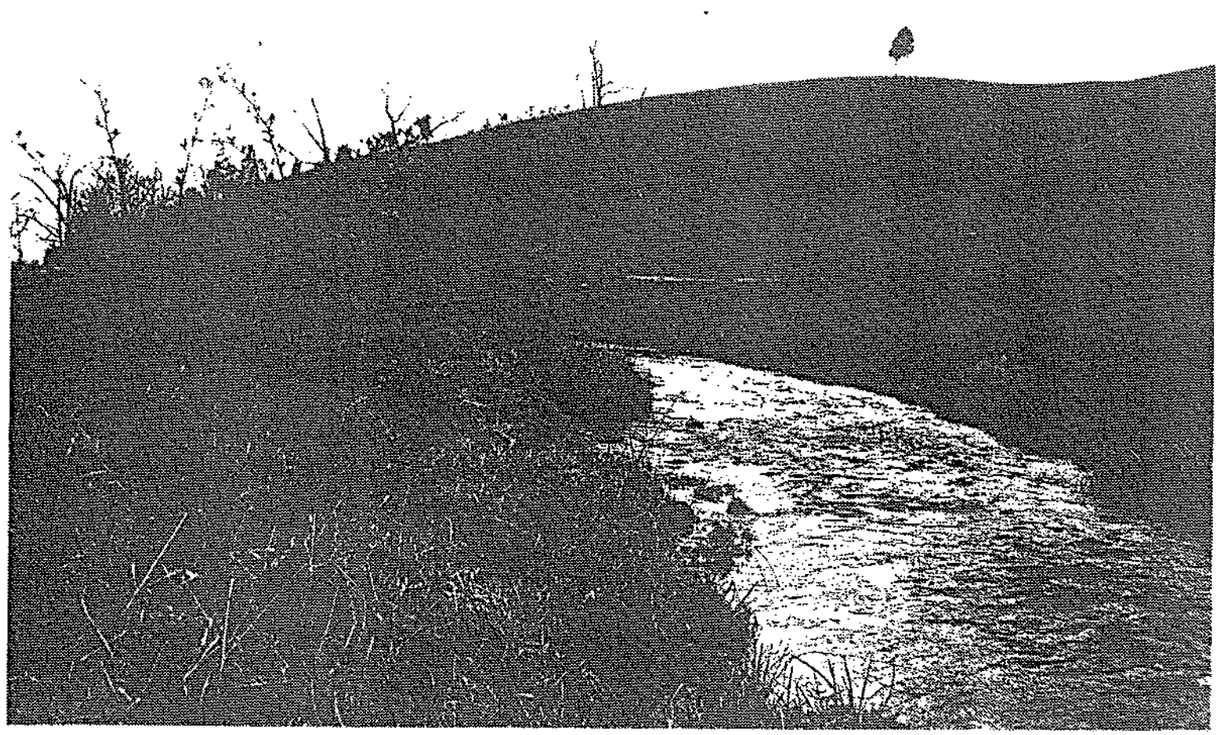
The Explore project is a large-scale project which will not be completed until the 21st century. The Explore project site extends from the area around the Niagara Power Plant Dam down to the inflow of Back Creek and into the Roanoke River. The project basically consists of different sections depicting areas of the country such as the Rocky Mountains, Alaska, and Missouri, and how these areas relate

Riparian Vegetation above the Niagara Power Plant Dam

to the exploration of America. Along with these would be an area depicting a typical Blue Ridge town and an Indian village. A zoo that would be one of the largest in the country is also in the planning stages. A project this large would have a great initial impact on tourism and the economy for the Roanoke Valley.

A proposal that would give motorists better access to the river as a scenic and possibly recreational resource would involve a parkway. This stretch of road would more or less follow the entire course of the river from the Dixie Caverns in Glenvar to Hardy Ford bridge, and then to the Booker T. Washington Memorial near Smith Mountain Lake (see map for proposed course of parkway). Along with the roadway there are vegetation buffers, bridges crossing the river where needed, and a system of parks currently in the plan. With the increasing urbanization of eastern Roanoke County, where the Blue Ridge Parkway runs, the Roanoke River Parkway might be a well-timed proposal to reroute the existing parkway through a more natural and scenic environment.

Although the referendum for the Crops of Engineers' river flood control plan has been approved, the nuts and bolts of how the project will be implemented has not yet been resolved. This creates opportunities to look into creative, long-term solutions that are ecologically sound instead of short-term solutions which fail to address all present and potential future problems. Flood control solutions have been planned and implemented successfully in other



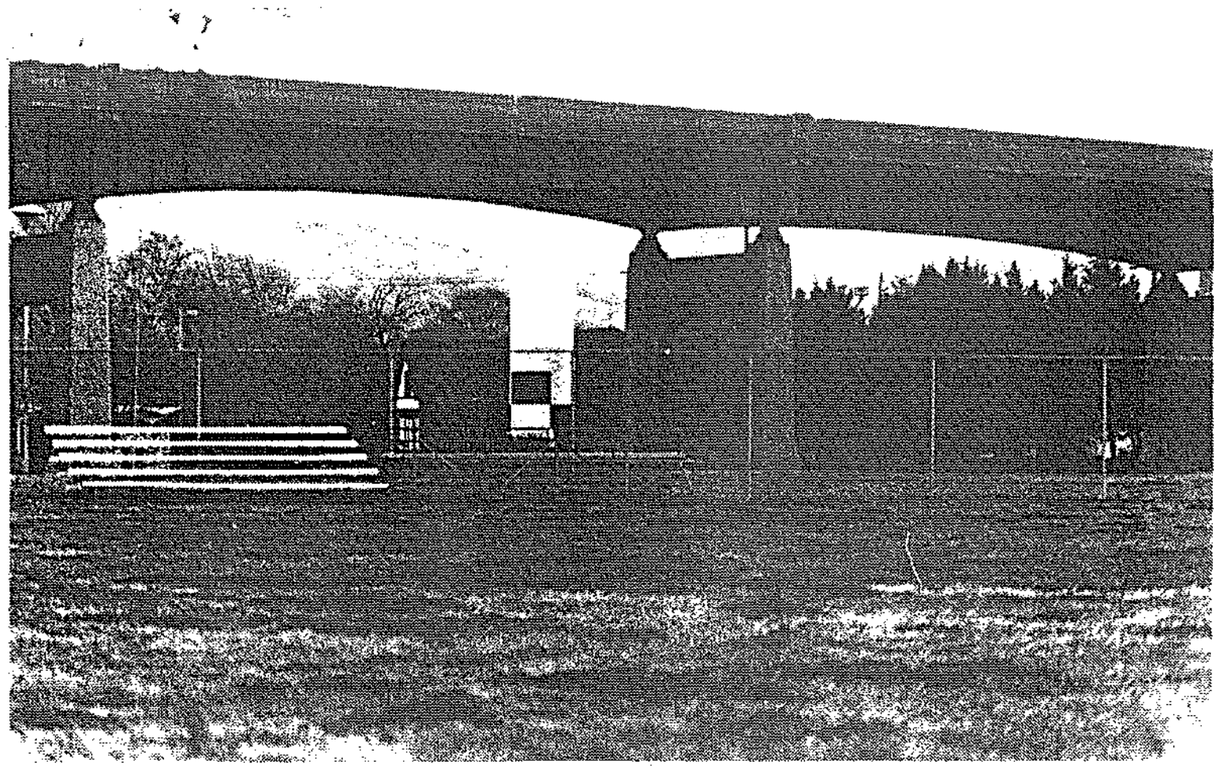
Agricultural Grazing Land Along the North Fork

large urban communities. The city of Roanoke should be no exception.

One idea which would be an extension of the river parkway is a series historical museums which may cause citizens to become interested in their area of the river. This could also entail exposing parkway travelers to the way the river was utilized by different people and cultures throughout the history of man's involvement with the river.

In the rural areas such as the North Fork, museums could display and inform people of the ways of agriculture, mill work, and trade pertinent to that area. Another example could be a museum which depicted a typical Indian village which existed in the Glenvar area. These museums could also incorporate small parks providing public access to the river. Eventually the museums could extend from the north fork to the Booker T. Washington memorial.

Also included in the museums could be examples of local artists' work. In the rural areas of the North and South forks, the art could reflect the more rural, Appalachian aspect of the area. As the areas become more urban, as in Salem and Roanoke, the art could reflect the more metropolitan nature of the area and culminate in an actual sculpture center located on the site of the old transportation museum. The work at the center could interact with the river. The mu-



Old Site of the Transportation Museum - Wasena Park

seum system gives a continuity to the river while explaining the river's history and meaning.

Along with the existing parks, such as Wasena Park and South Roanoke Park, there could be more parks implemented to create a series or system which are all interconnected (see map). This park system could consist of large parks accessible by the parkway, biking/hiking trails, and smaller, more intimate parks accessible only by the hiking/biking trails. Larger parks could be located near the museums to add to the continuity of the parkway. These parks, whether large or small, would provide points of public access to the river. They also provide a nice place for recreation in the forms of athletic fields and playgrounds.

An idea which would attract many city residents to the river for recreation is a system of hiking/biking trails along the river extending from Salem to Vinton. These trails could easily coexist with the river parkway or even the Corps of Engineers flood control plan. These trails could also act as connectors between a series of small parks. Such parks could be accessible only by trails, giving them a sense of privacy. Another positive aspect of the trails is the greenspace buffer they would create between existing or future development and the river. This would help reduce and filter the direct runoff into the river. Another idea, which has been a success is the Platte River project in Denver, Colorado, and would provide greater access to the river trails is to extend side trails along the tributaries of the

Hardy Ford Bridge at Smith Mountain Lake

Roanoke River. Many of the tributaries extend into residential areas. These sidetrails would provide easy access for a large population of people to the main trails, completing a complex and continuous biking or hiking greenspace. There is a great opportunity for recreation and increased public use in a system of river trails.

Part of making people aware and appreciative of the Roanoke River is to allow them to have fun in it. Canoeing is a recreational activity that can be implemented in areas such as the section through Glenvar or the stretch from the Blue Ridge Parkway bridge to the Hardy Ford Bridge. Canoe rental facilities could be implemented with shuttle services between starting and finishing points (see map). Improved access for canoeing and fishing would be a good use of the recreational resources of the Roanoke River corridor.

Museums and park displays would provide a good opportunity to convey topical information about the river. A different topic could come up possibly on a monthly basis that would deal with water conservation, pesticide runoff, or a variety of other environmental concerns. These exhibits would not just focus on basic problems but would outline the various actions an individual or group could take to help solve them. Direct-action programs could also be sponsored by the museums.

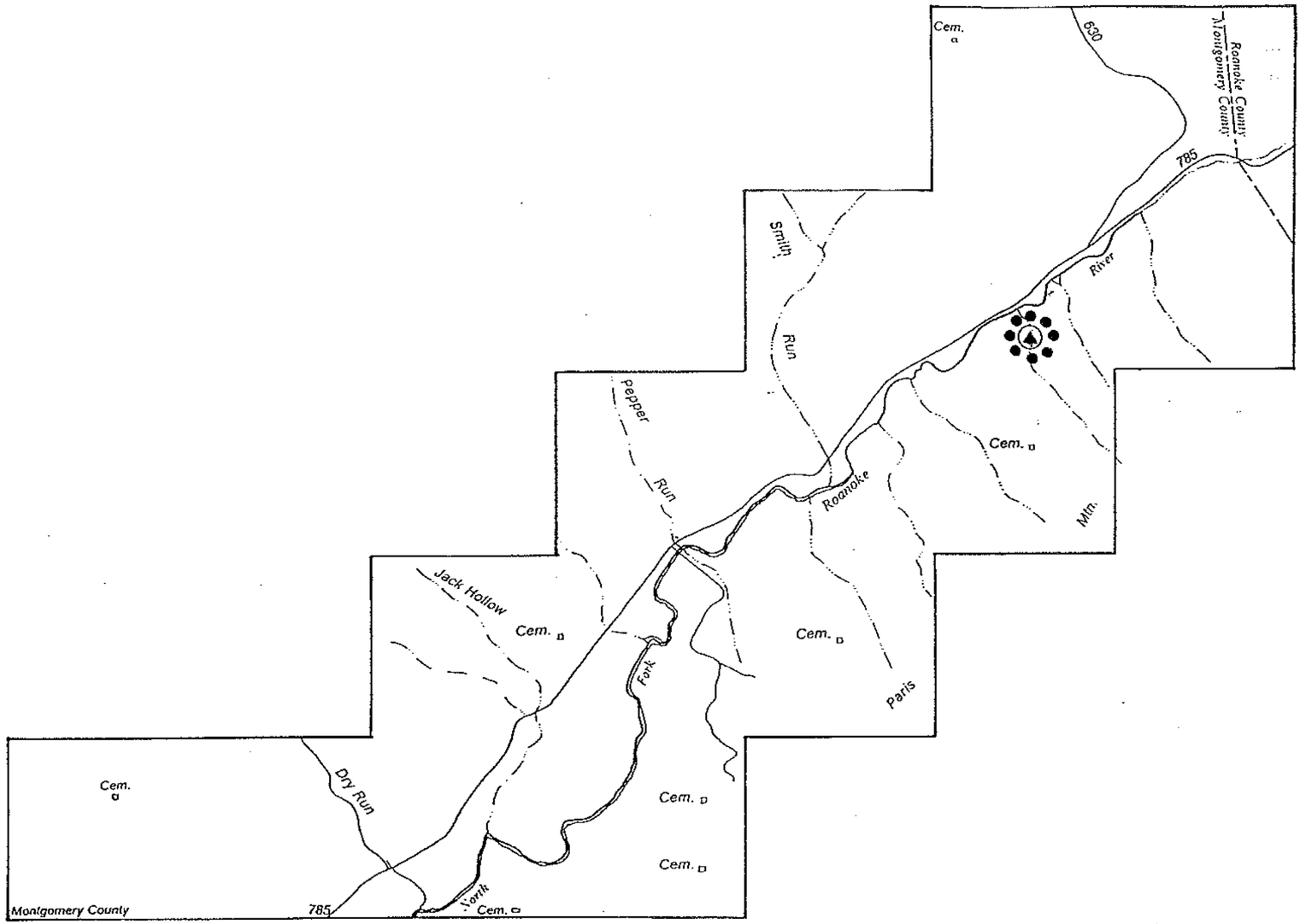
An idea derived from successful "adopt-a-highway" and "adopt-a-trail" projects is to allow various clubs and civic organizations to

Possible "adopt a river" site in Glenvar.

"take charge of" sections of the river to insure that trash is removed, trails are maintained and erosion (or other environmental problems) is kept in check. Such as program would not only be cost effective, but also would allow citizens to feel directly responsible for part of their community.

CONCLUSION

Enabling people to have greater interaction with the Roanoke River would be a positive development for the Roanoke Valley. Proposals for any sort of development along the dynamic yet fragile river corridor should be carried out with a great deal of careful thought. Through conceptual planning to actual implementation, any riverside project should be inspired by the environmental cultural betterment of the valley and its citizens. All too often, even the most well-intentioned projects have fallen short in their promises of flood control, increased employment, and economic windfalls. However, on the flip side of the coin, holistic, far-sighted flood control designs, such as the Platte River Project in Denver, prove that successes can be achieved. There is no reason why the Roanoke River cannot strive to such accomplishments.



Paris Mtn. Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

ROANOKE RIVER CORRIDOR STUDY

Landscape Planning & Management Studio

Landscape Architecture Progaram

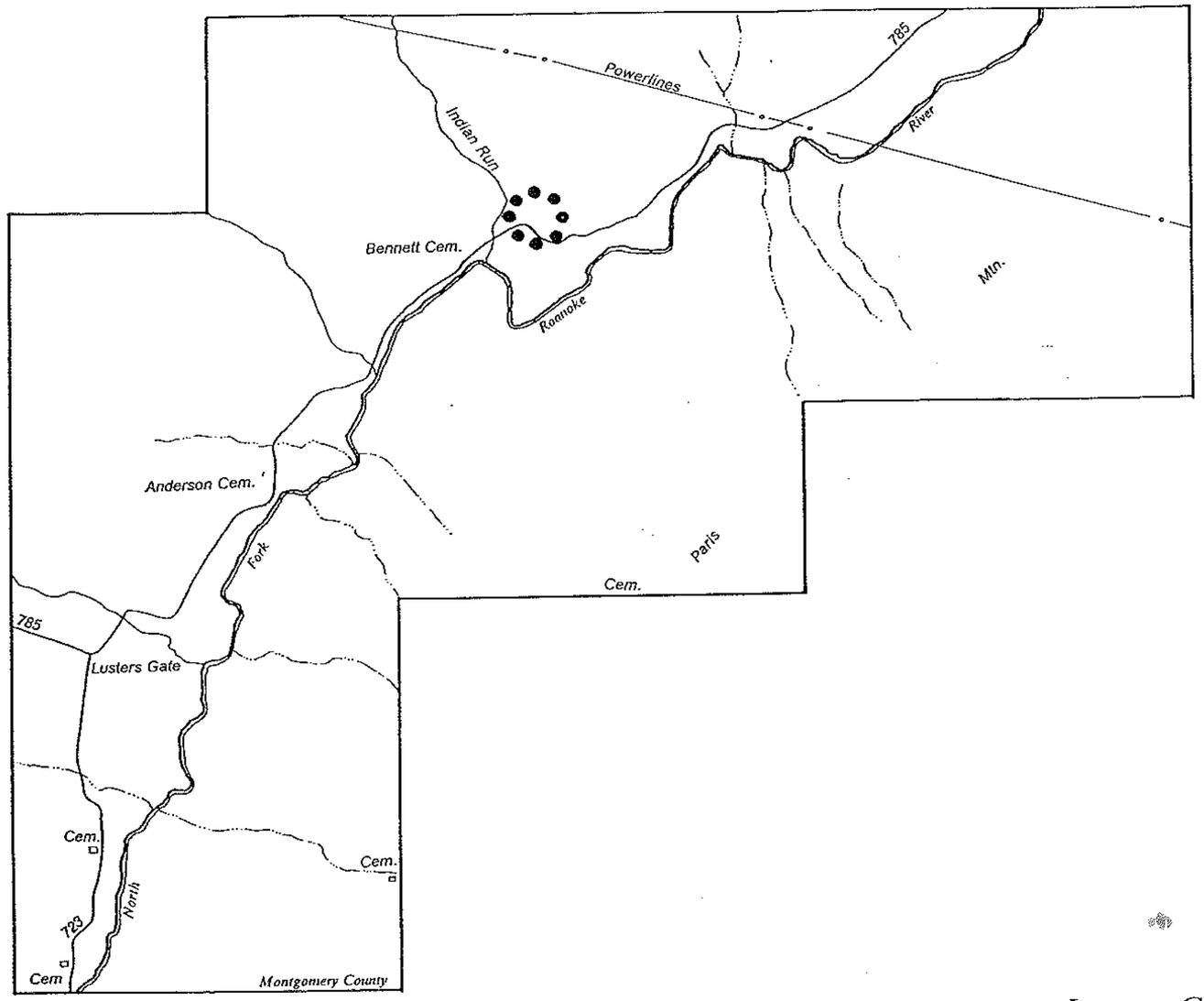
Virginia Polytechnic Institute & State University

April 26, 1989

E 1

Scale: 1" = 1500'

North



Lusters Gate Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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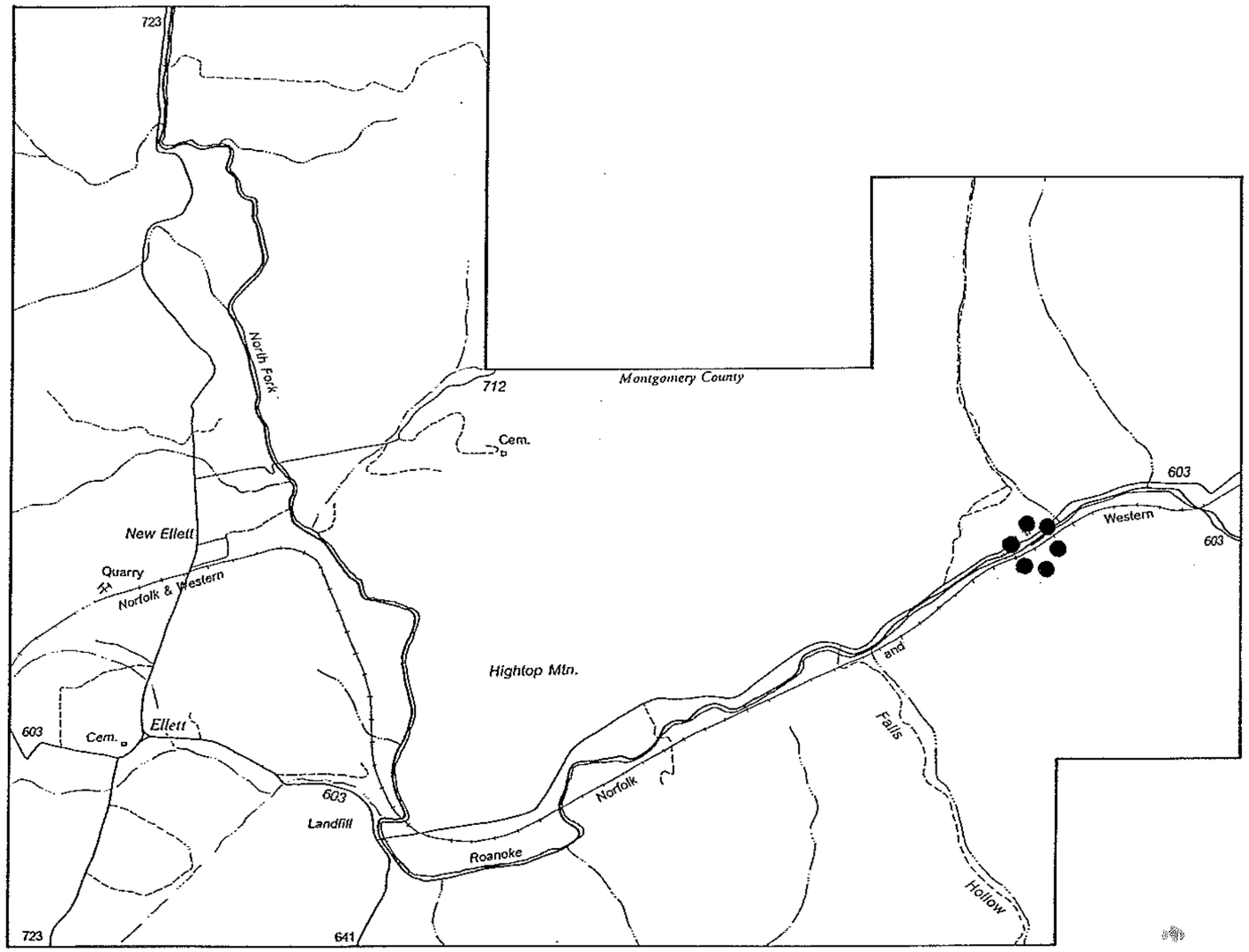
E 2

Scale: 1" = 1500'

North



Ellett Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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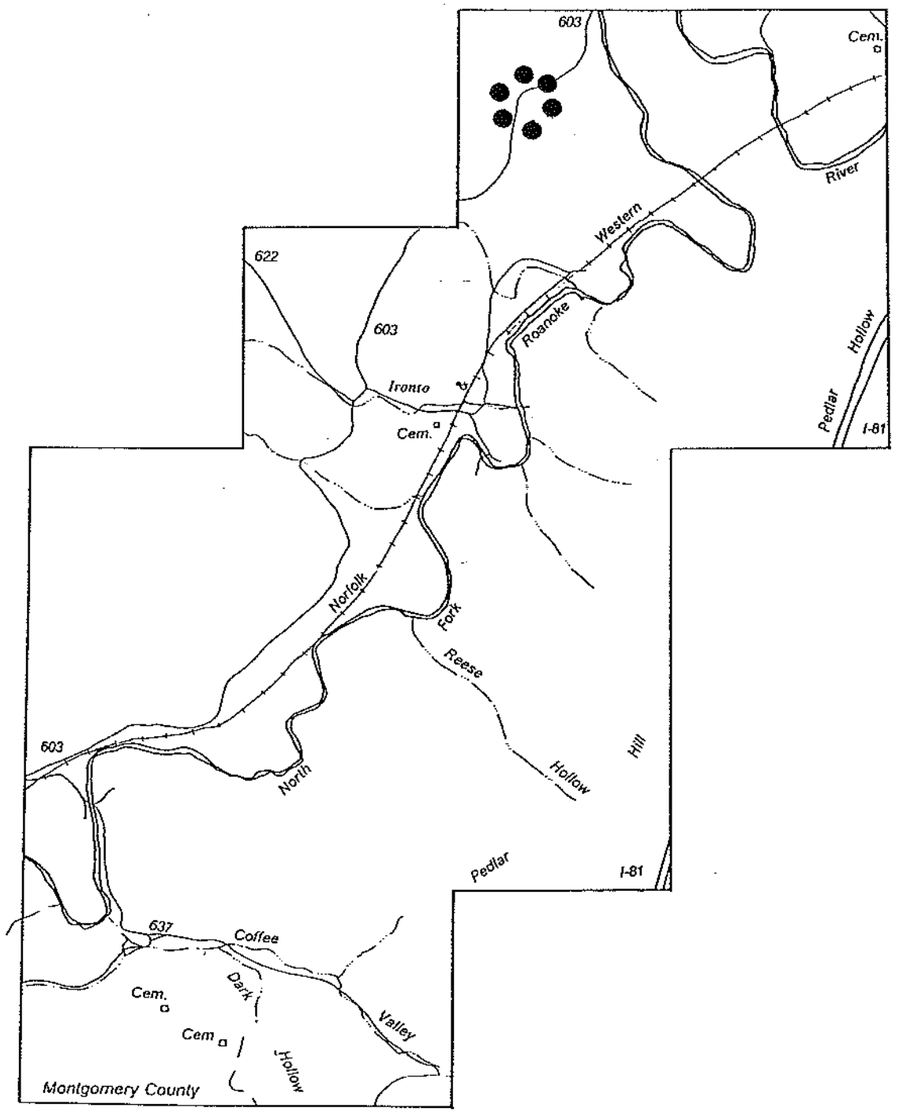
E 3

Scale: 1" = 1500'

North



Ironto Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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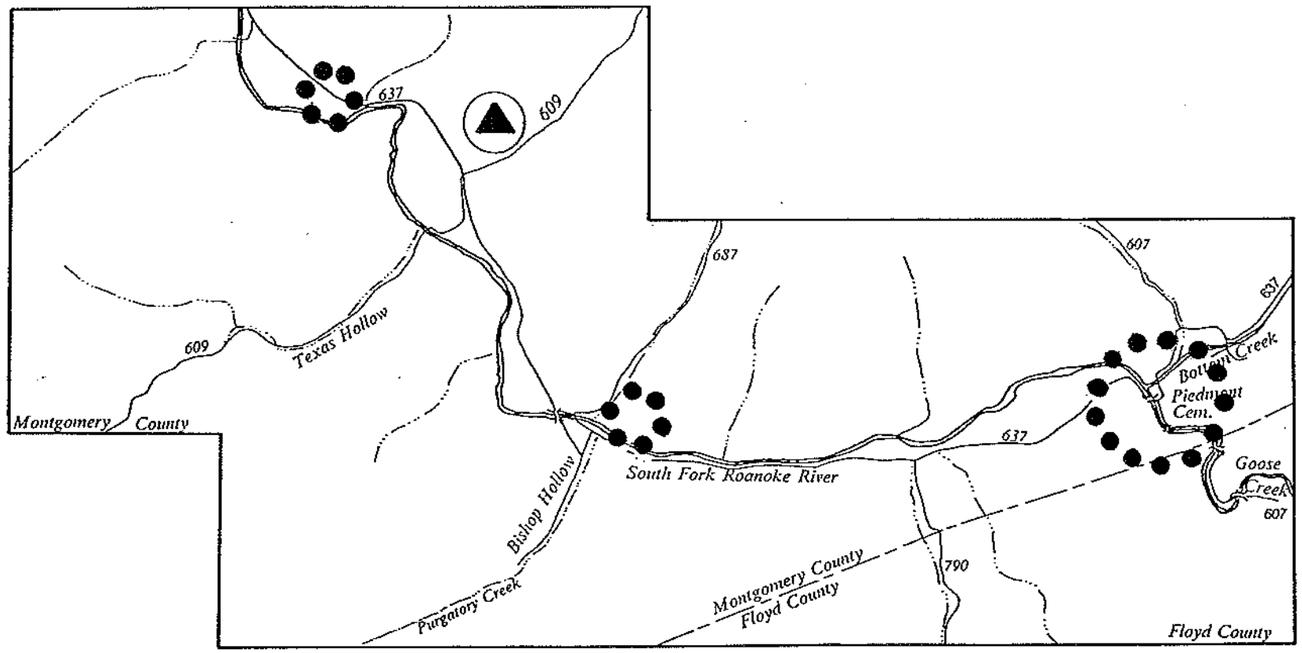
E 4

Scale: 1" = 1500'

North



Piedmont Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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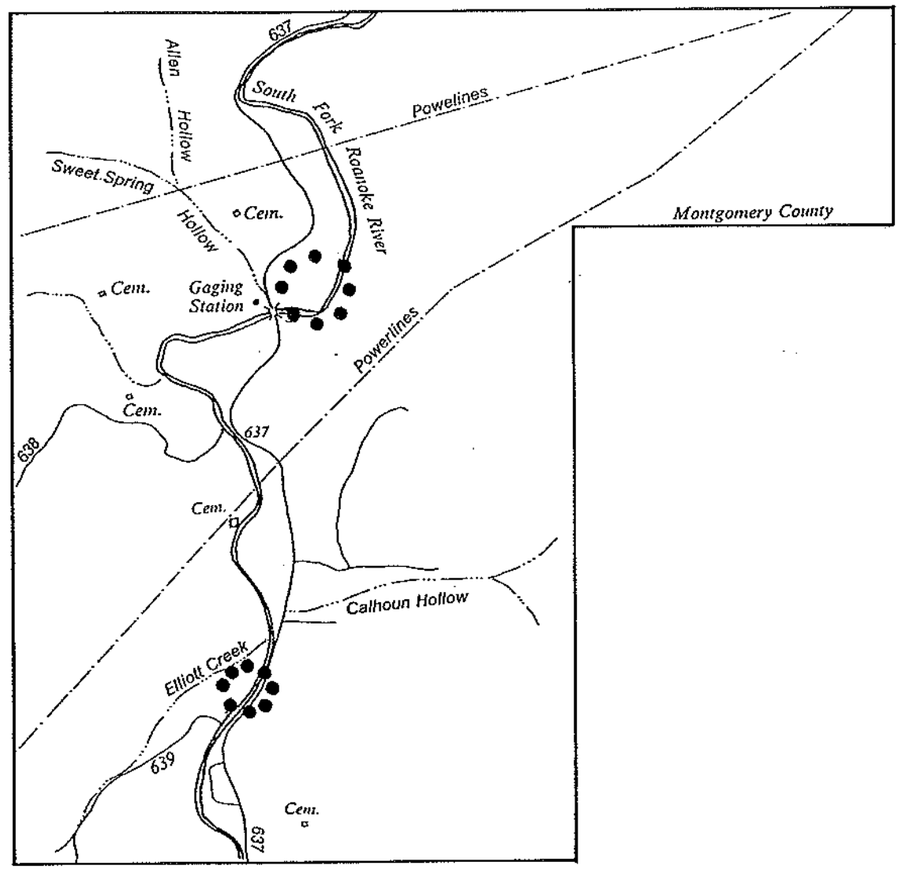
Scale: 1" = 1500'

North



Calhoun Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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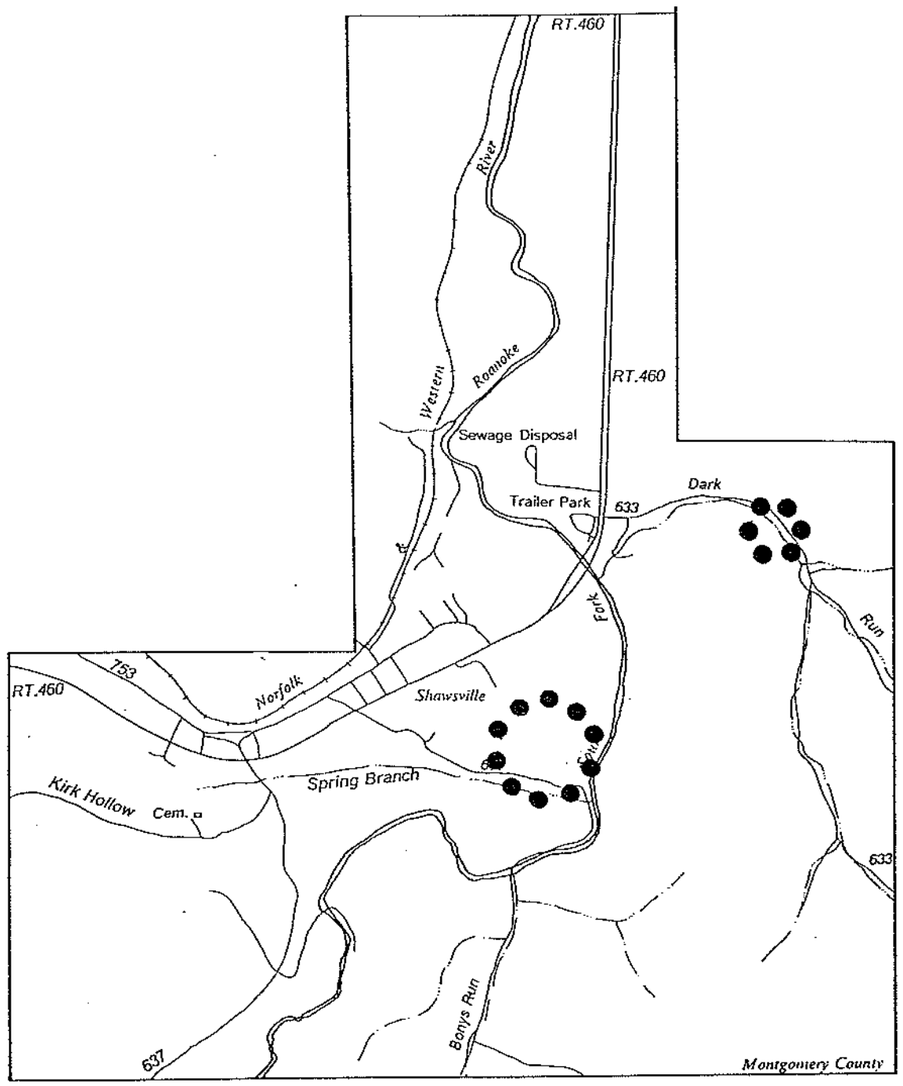
E 6

Scale: 1" = 1500'

North



Shawsville Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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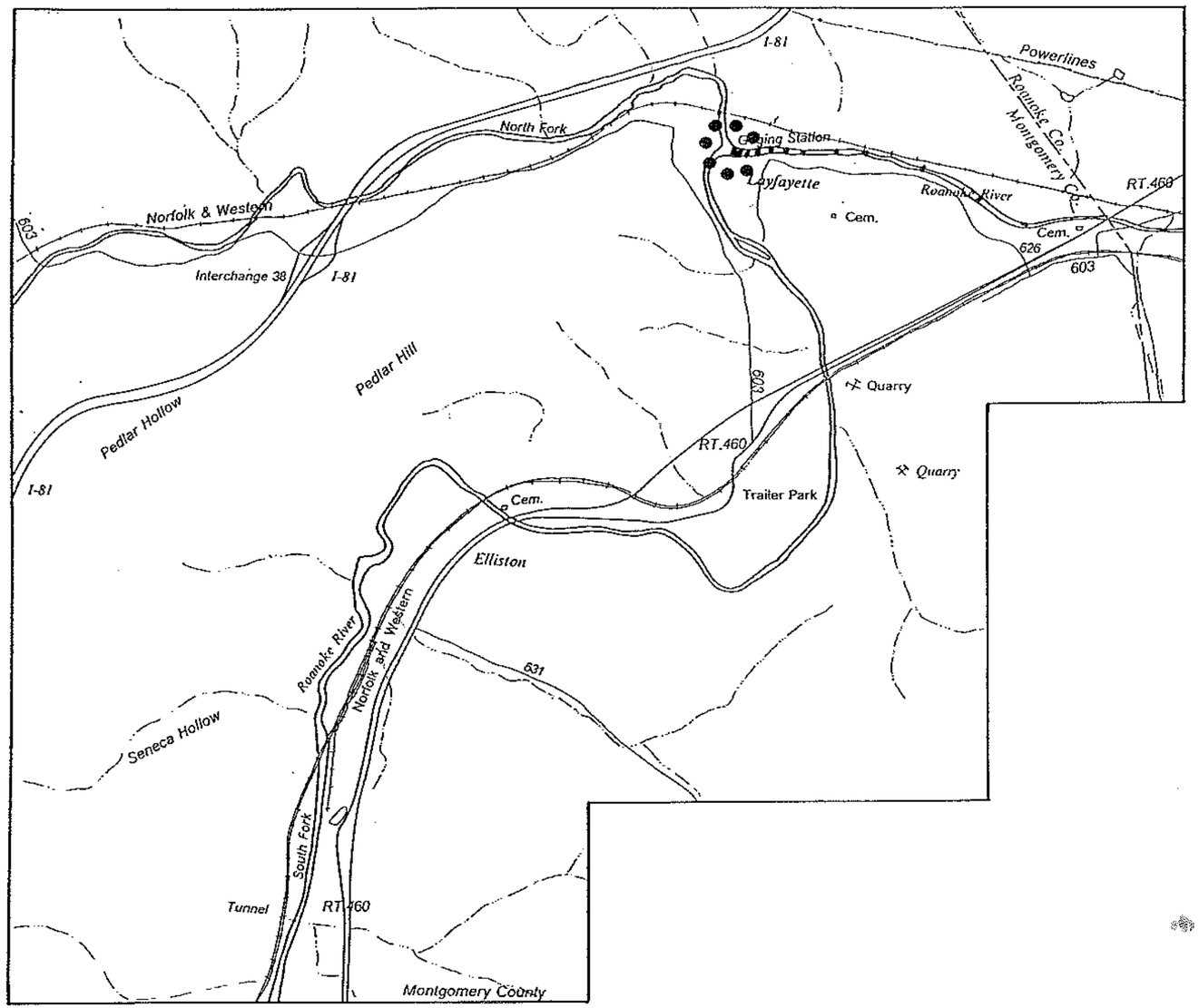
E 7

Scale: 1" = 1500'

North



Lafayette Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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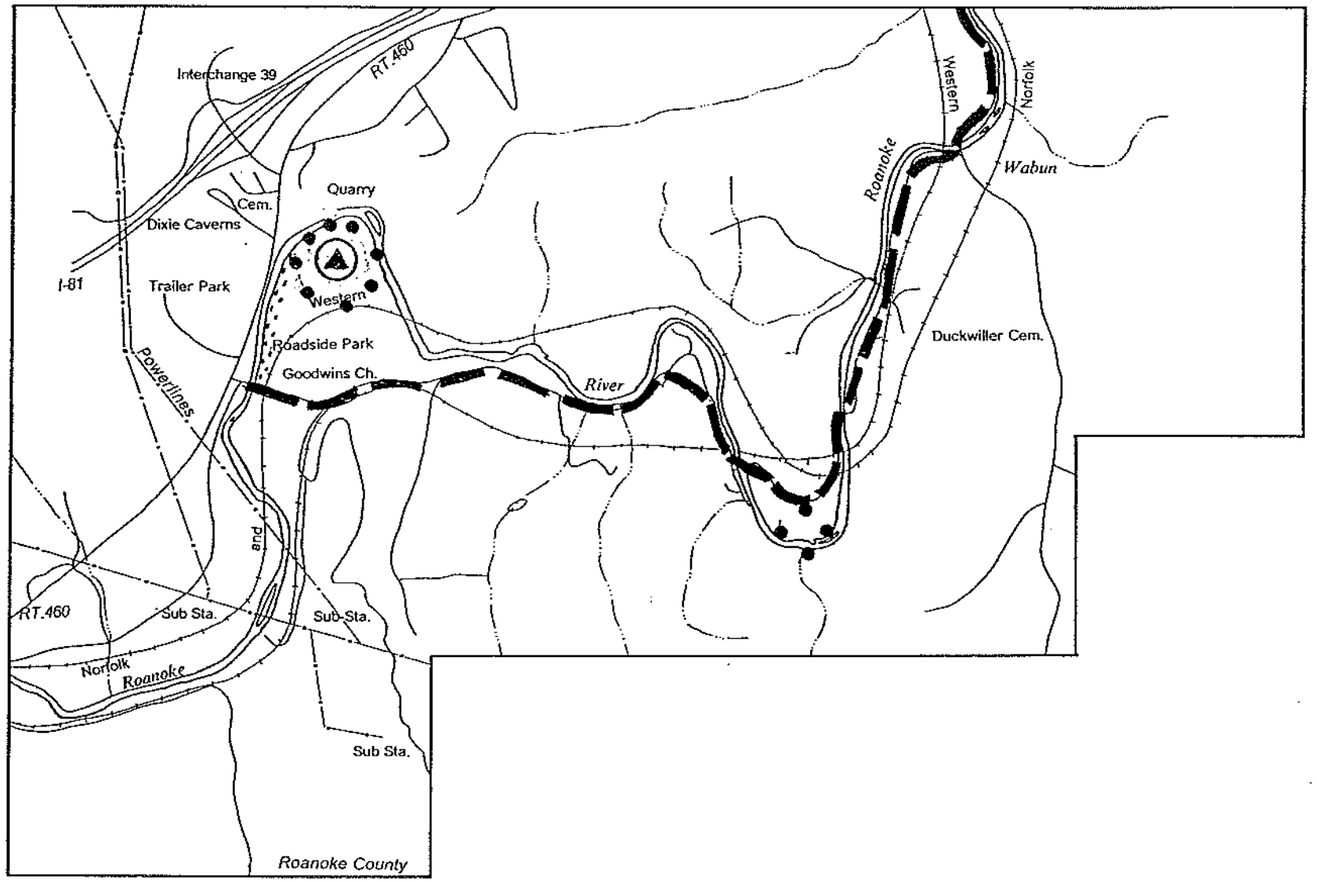
Scale: 1" = 1500'

North



Wabun Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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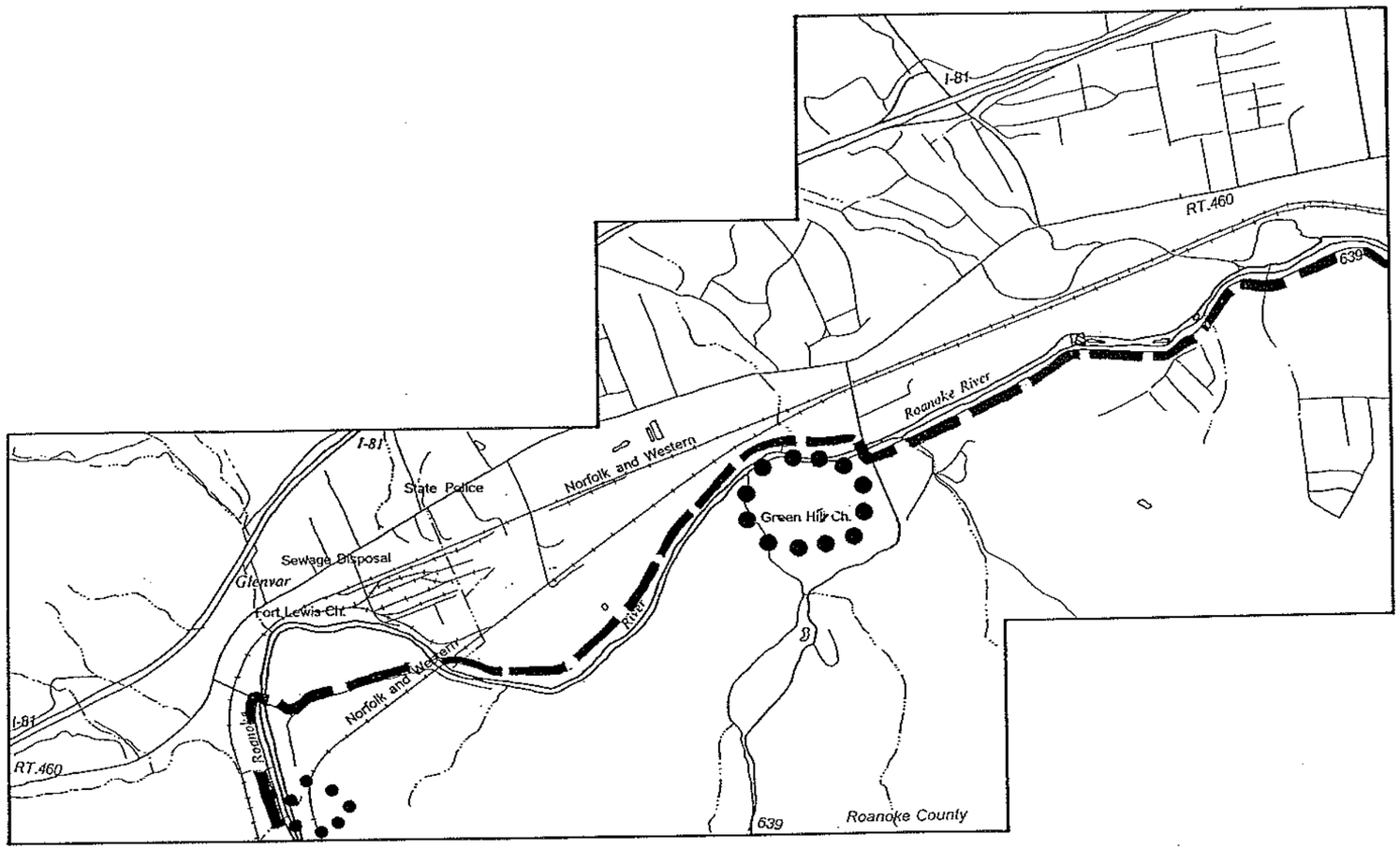
E 9

Scale: 1" = 1500'

North



Glenvar Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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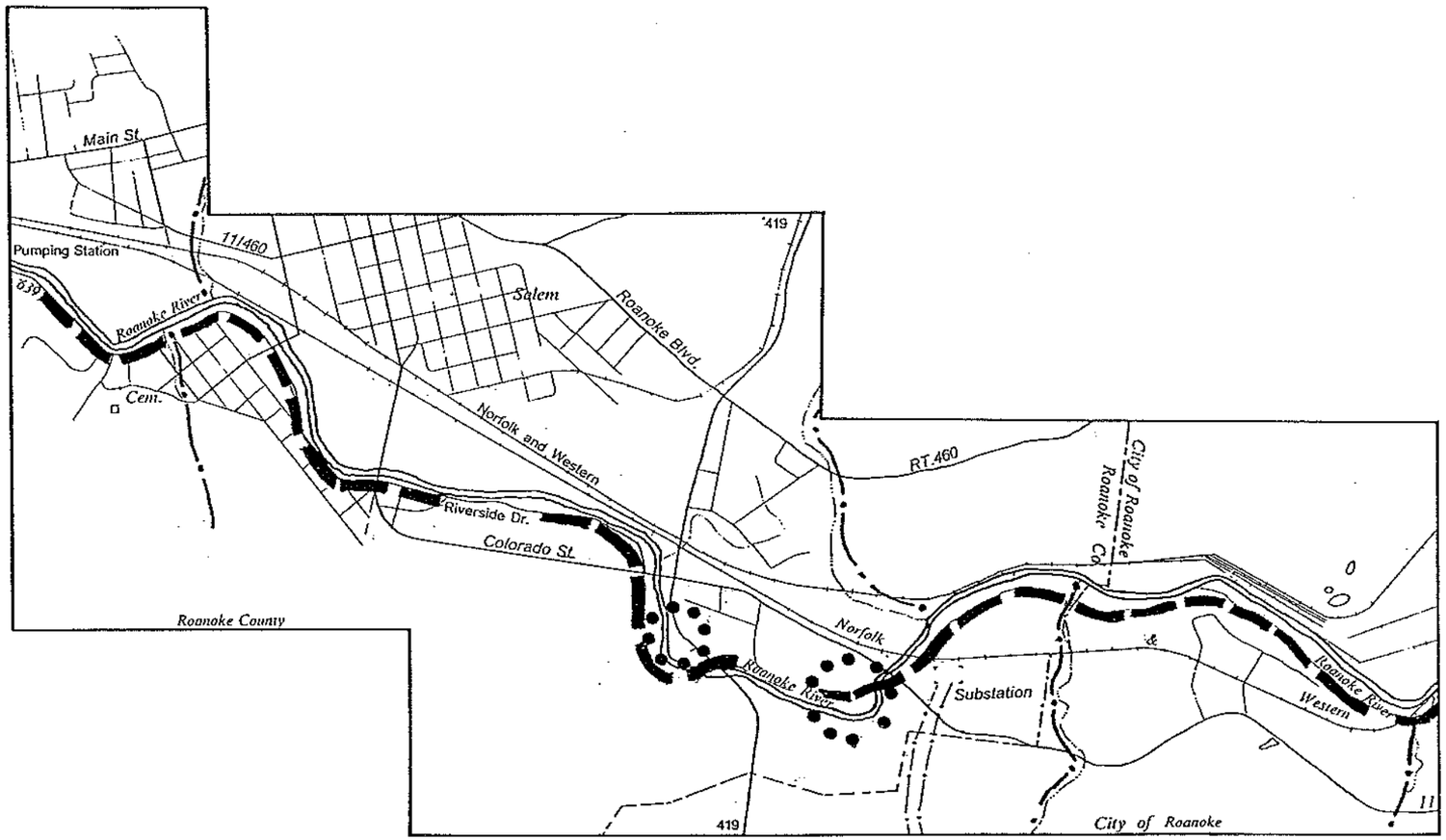
Scale: 1" = 1500'

North



Salem Segment

Legend

- Museums
- Parkway
- Canoeing Routes
- Park areas
- Biking/Hiking
- Explore Project
- Hiking Trails

POTENTIALS

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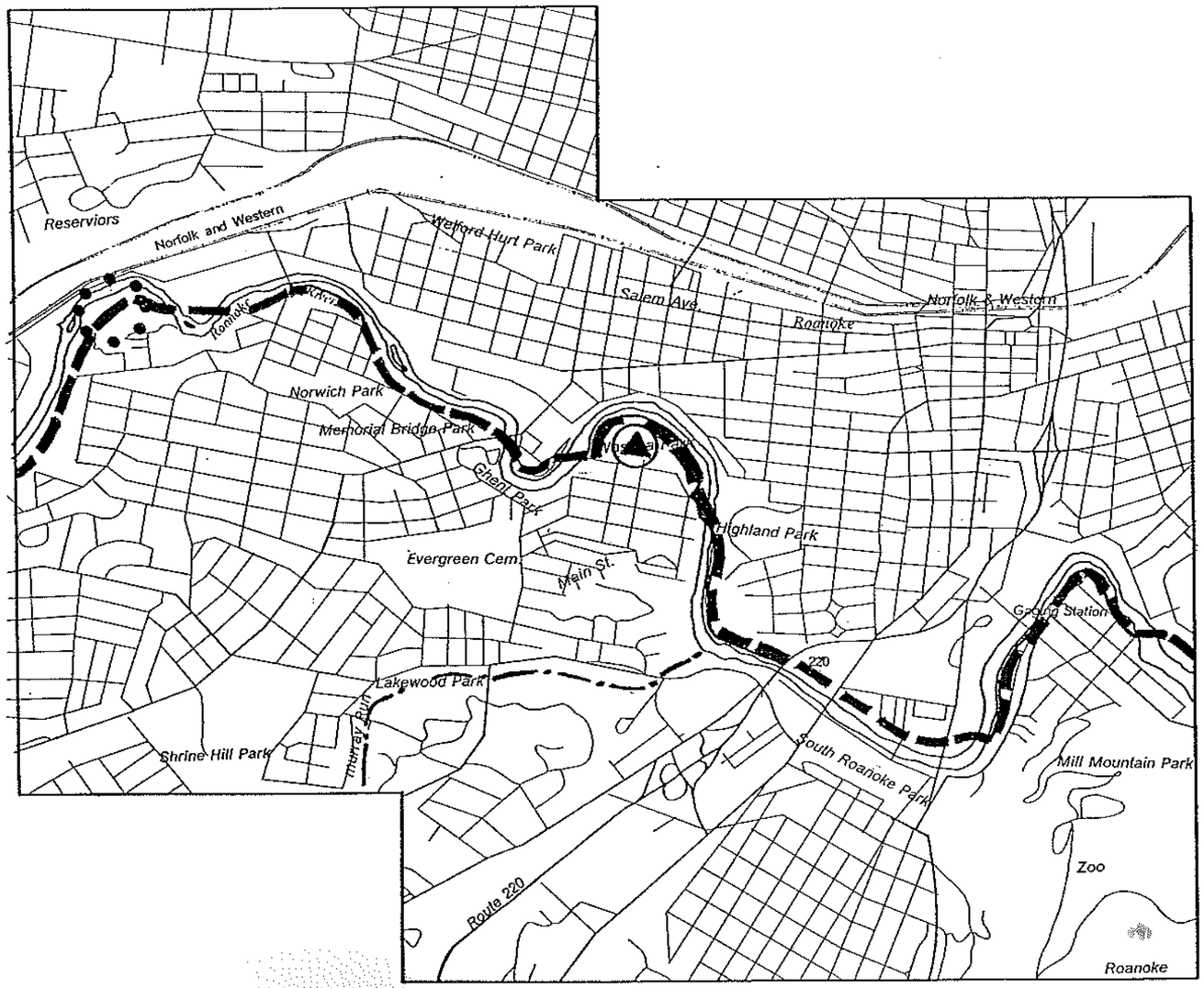
E11

Scale: 1" = 1500'

North



Roanoke Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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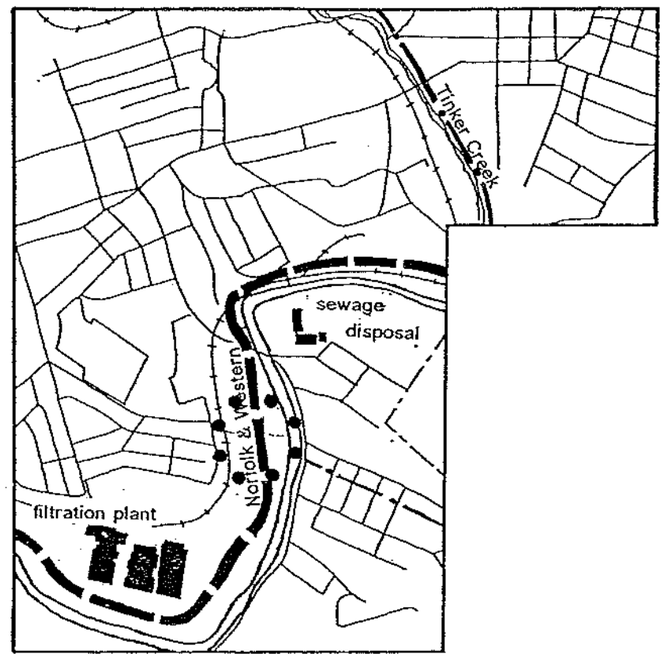
E 12

Scale: 1" = 1500'

North



Roanoke Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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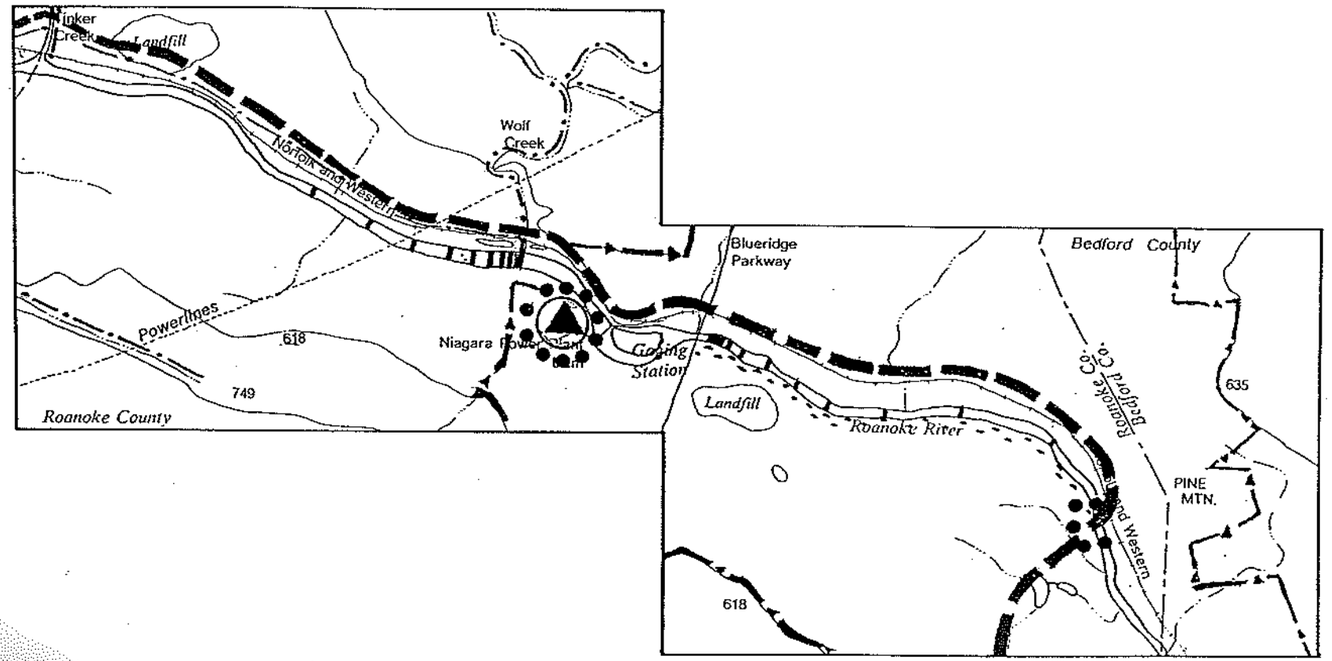
April 26, 1989

E 13

Scale: 1" = 1500'

North



Vinton Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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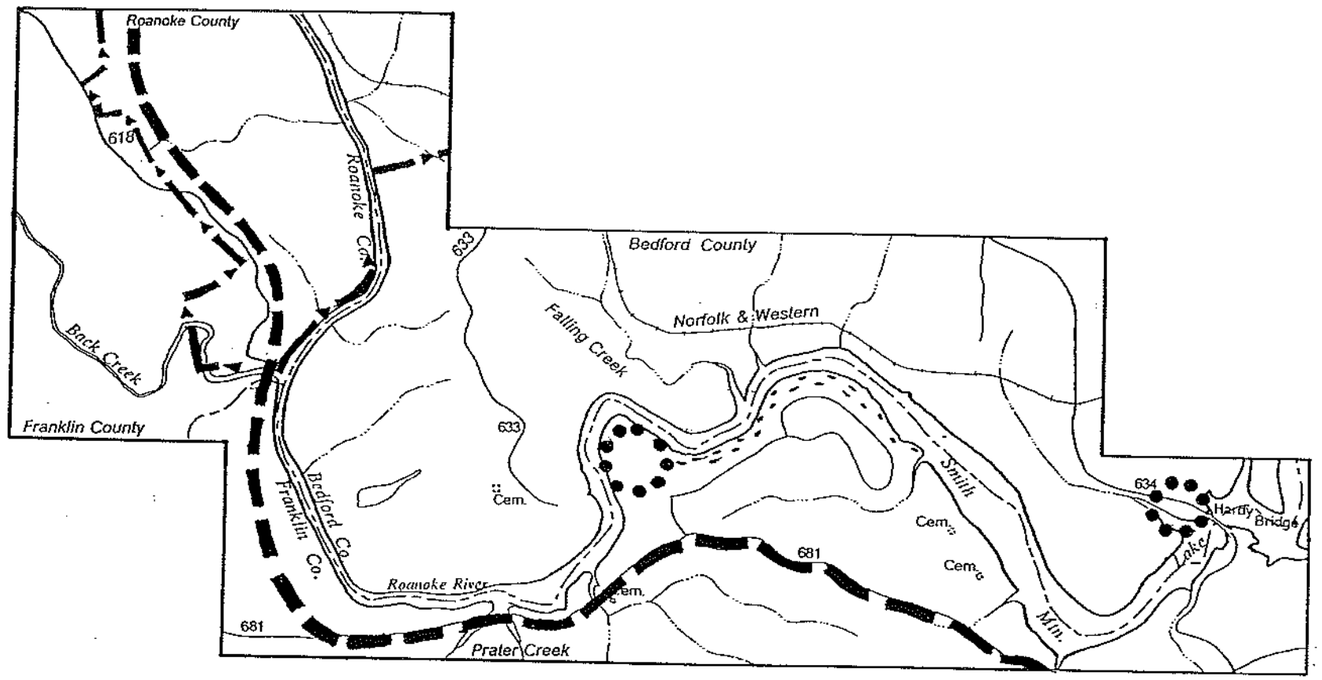
E 14

Scale: 1" = 1500'

North



Hardy Bridge Segment

Legend

- *Museums*
- *Parkway*
- *Canoeing Routes*
- *Park areas*
- *Biking/Hiking*
- *Explore Project*
- *Hiking Trails*

POTENTIALS

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E 15

Scale: 1" = 1500'

North

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