

GILL'S CREEK GREENBELT

Prepared by:

CITY OF COLUMBIA, SC PLANNING DEPARTMENT

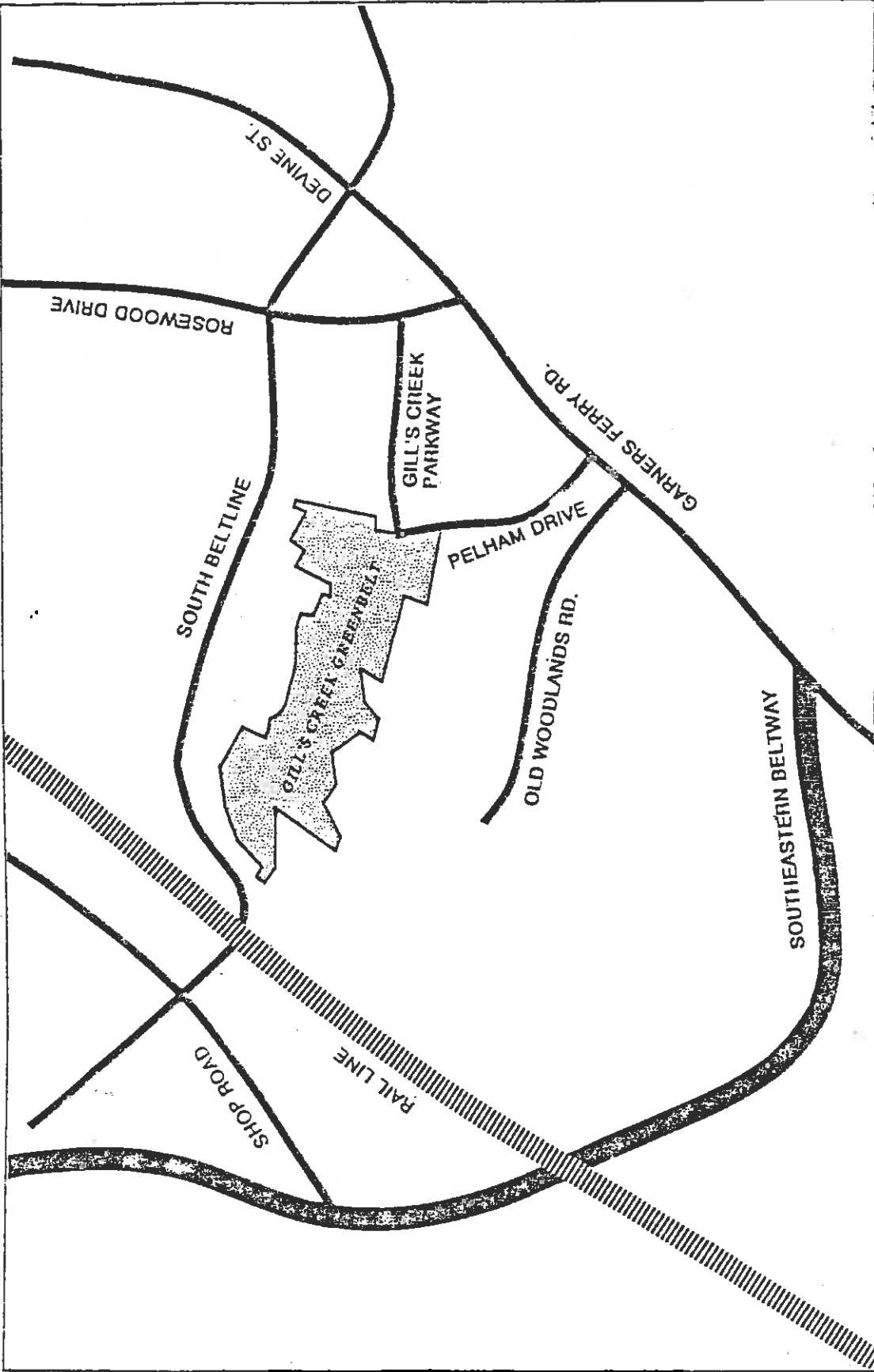
Nathaniel M. Griffin, Planning Director  
H. Lee Miller, III, Senior Design Planner

March, 1992

Special thanks to Mr. Wayne T. Smith, Planning Commissioner.

## TABLE OF CONTENTS

1. <u>TEXT</u>	page 2
I. INTRODUCTION	page 4
II. PROJECT HISTORY	
A. Review of Previous Studies	
B. Assessment of Environmental Considerations	
C. Property Owner Contacts	
III. RATIONALE: URBAN WETLANDS TO URBAN PARKS	page 7
A. Need for Additional Public Open Space	
B. Need to Protect an Environmentally Sensitive Area	
C. Unique Quality, Character and Location	
D. Ease of Acquisition	
E. Limitations on Using Floodplains for Urban Purposes/Lack of Development Potential	
F. Historical Potential	
G. Create More Rational City Boundaries	
H. Financial Consequences Will Be Minimal	
IV. SITE ANALYSIS/DEVELOPMENT CONSIDERATIONS	page 10
A. Annexation	
B. Development Patterns and Prospects in the Area	
C. The Natural Setting	
V. OWNERSHIP	page 12
A. City Owned Land	
B. Liberty Life Insurance Company	
C. Hampton Leas Parcel	
D. Hoefer Tract	
E. Flowers Tract	
F. Hampton Land Company	
G. Bowers Tract	
VI. CONCEPTUAL DEVELOPMENT	page 15
VII. COST ESTIMATE	page 16
VIII. CONCLUSION	page 19
2. <u>SURVEY REPORT</u> by South Carolina Department of Parks, Recreation and Tourism	



LOCATOR

# GILLS CREEK

G R E E N B E L T

Prepared by the City of Columbia Planning Department

NORTH ↗

## I. INTRODUCTION

Acquiring the Gill's Creek floodplain could become an important community priority. This area has significant potential for use as public open space and a municipal park. At the suggestion of Mr. Wayne Smith, local developer and City Planning Commissioner, a preliminary study of this area was undertaken. The preliminary study is now complete.

Based upon planning staff analysis, an environmental inventory by the South Carolina Department of Parks, Recreation and Tourism and ongoing discussions with property owners, we recommend the protection and development of this area as a municipally-owned, passive-use, public nature preserve. This document presents the rationale for developing of Gill's Creek as an open space reserve and urges its immediate acquisition by the City of Columbia.

This proposal was presented to City Council at a work session on January 22, 1992. Response was very favorable. A request to proceed with the study and negotiate for the Bowers tract was informally endorsed.

## II. PROJECT HISTORY

In the fall of 1991, the Planning Department was approached by Mr. Wayne Smith about accepting a donation of 48.5 acres along Gill's Creek from Liberty Life Insurance Company. Recognizing the unique and environmentally fragile character of this floodplain area, the Planning Department agreed to work with Liberty Life on the donation and to prepare a feasibility study for acquiring the area as a public open space reserve.

Staff was particularly sensitive to the fact that this is a large and relatively cohesive undeveloped area located adjacent to rapidly growing sections of both City and County. The opportunity to use the proposed donation as the nucleus of an expanded greenbelt along Gill's Creek seemed worthy of further consideration. Staff, therefore, decided to undertake a preliminary analysis of the environmental, social and economic ramifications of acquiring the floodplain for public use.

Property owners were located and the 100-year floodplain was delineated. That portion of the corridor deemed most suitable for acquisition and park development was identified. A schematic park design was developed.

Concurrently, Liberty Life Insurance Company agreed to convey its three parcels to the City. This transaction was consummated February 19, 1992. This added to the 31.8 acres along Gill's Creek already owned by the City, thus boosting public ownership in the area to more than 80 acres.

Additional steps in the planning process included:

### A. Review of Previous Studies

Planning Staff reviewed previous proposals for the area including the "Meadowfield Neighborhood Development Plan", prepared by Central Midlands Regional Planning Council for the City of Columbia in 1982. Past recommendations were evaluated in light of present development plans and possibilities. The "Meadowfield" study floodplain was either undesignated or suggested for residential use.

The Plan proposed extending the Gill's Creek Parkway, a four lane arterial connecting Rosewood Drive and Pelham Road, south to Shop Road. No further action has been taken on this proposal in the intervening ten (10) years. The Parkway is not a City endorsed COATS project.

## **B. Assessment of Environmental Considerations**

A visit to the Congaree Swamp National Monument provided a perspective of lowland open space preservation as practiced by the federal government. Monument staff responded enthusiastically to the preliminary development scheme for Gill's Creek. The two areas share important environmental characteristics. The Gill's Creek area can be considered an urban counterpart to the federal preserve in Lower Richland County.

The Audubon Society, active in South Carolina environmental issues and currently operating a lowland nature preserve near Harleyville, SC (Four Hole Swamp), has expressed its support of the idea.

The State Parks, Recreation and Tourism Department performed a brief environmental survey of the area to identify its environmental characteristics and potential. Particular emphasis was placed upon the area's fauna and flora and the degree to which the corridor has been impacted adversely by proximity to the urban area. On December 10, 1991, biologists, planners and recreation staff traversed the site. PRT's report was completed in early February, 1992 and is included in this report.

## **C. Property Owner Contacts**

The conceptual development plan was presented to Hampton Leas Recreation and Neighborhood Association, a landholder. Response was favorable. Three neighborhood concerns surfaced. The first had to do with the implications an open space reserve would have on neighborhood security. The second addressed plans for a neighborhood swim club on a portion of their property. This possibility is to be evaluated in greater detail by the Hampton Leas Community Association. The third related to the proposed extension of Gill's Creek Parkway, which was opposed by the residents.

Four additional properties are found within the remaining area proposed for acquisition by the City. These include the Flowers heirs, the Bowers tract, the Hampton tract and the Hoefer tract. Each of these owners has been contacted by Planning Staff and briefed on the conceptual development. All are favorable to the idea but have differing expectations concerning terms of acquisition.

The owner of the Bowers tract has presented an offer to Planning Staff, a circumstance which suggests a high degree of interest in working with the City to achieve this community objective.

Given the generally favorable response and the perceived ability to successfully implement the concept in a timely manner, Planning Department made acquisition of this area an immediate priority for 1992.

### **III. RATIONALE: URBAN WETLANDS TO URBAN PARKS**

Increasingly stringent federal restrictions have been placed upon the commercial and private development of wetlands. Generally speaking, areas lying within the 100 year floodplain must be flood-proofed before development is possible. Areas within the floodway itself are precluded from any development at all. While these regulations are still evolving, it is clear that most of the Gill's Creek corridor has little or no development potential. This circumstance is tacitly recognized by the fact that the area has become an island of open space within the rapidly developing city.

In the future, building construction and even modest site alteration will become even more difficult. Consequently, these areas, when privately owned in an urban setting, are in danger of becoming a neglected wasteland.

Public ownership is the best way of preventing property neglect and abuse. Conversely, it is common practice for government to acquire property to protect it and make it available for public use. Acquiring urban wetlands for public parks seems an appropriate way of protecting environmentally sensitive landscapes and creating a community amenity while expanding the city park system. These benefits are particularly important in metropolitan Columbia where parks and public open space have not always been an important governmental priority.

More specifically, the rationale for acquiring and developing this particular corridor as public open space is as follows:

#### **A. Need For Additional Public Open Space**

According to accepted municipal park standards, municipalities require approximately 8.5 acres of public park per 1,000 people. Using this standard, the City of Columbia had a deficit of 497.5 acres in 1990. Acquiring 170 acres along Gill's Creek would boost existing City park acreage by 27.8 percent to 611.5 acres.

Preliminary evaluation suggests that acquiring floodplain land and low-lying property represents the best way for Columbia to create a Greenbelt system of recreational amenities throughout the city. Work is proceeding on a park strategy for the Congaree River frontage and additional opportunities no doubt exist elsewhere.

#### **B. Need To Protect an Environmentally Sensitive Area**

The Gill's Creek Floodplain is an environmentally sensitive area in close proximity to a substantial urban population. Historically, the surrounding area has been subjected to severe abuses such as illegal dumping and stockpiling of hazardous materials. Of particular concern have been the

activities of the now closed Columbia Organic Chemical Company and illegal dumping occurring upstream along Gill's Creek. Public ownership is the best way of preventing these abuses.

Unique fauna and flora in a relatively pristine condition require protection. If the area remains in private ownership, slow but steady degradation of the forest cover in the area seems likely. Such an eventuality could negatively impact property values in the South Beltline and "Hamptons" communities.

This is an opportunity for the City of Columbia to make a dramatic contribution to the emerging environmental consciousness both locally and across the country.

#### **C. Unique Quality, Character and Location**

Few cities are fortunate enough to have more than 300 acres of contiguous undeveloped lowland property in the midst of a heavily developed area. Furthermore, environmental damage along the creek has been limited. The area retains much of its original natural character. With public acquisition, reversion to a truly wilderness character can become a relatively short term reality. As the PRT biologists have emphasized: this is Columbia's last best hope of developing a nature preserve of this size and richness within the city.

#### **D. Ease of Acquisition**

Acquisition of the corridor, once it has become a public priority, will be a relatively simple task. The City already owns 80 acres. Thus a nucleus of public property has already been established. Remaining parcels are relatively large. Other property owners have expressed their willingness to work with the City in achieving this goal. Thus additional donations are possible. Where purchase is required, the commonly acknowledged lack of development potential suggests that cost of acquisition will be reasonable.

#### **E. Limitations on Using Floodplains for Urban Purposes / Lack of Development Potential**

This area has little or no development potential from a serious commercial or residential standpoint. This is true not only because of restrictive land use regulations but also because of public recognition that the area is flood prone.

#### **F. Historical Potential**

This area was once part of Millwood Plantation, the estate of Wade Hampton and showplace of the ante-bellum era. Little or nothing has been done by the city to place Millwood in the context of Columbia and South Carolina history. This

property, a last fragment of that historic plantation, could be used to commemorate the significance of Millwood to the state and nation.

#### **G. Create More Rational City Boundaries**

Although surrounded by City boundaries on three sides, nearly all the Gill's Creek floodplain lies outside the city limits. Most of this area is within the South Beltline annexation petition which was certified by planning staff in August 1991. City Council has indicated its willingness to formally annex South Beltline in December 1992. Whether or not this occurs, city ownership of Gill's Creek would insure its annexation, thereby permitting more orderly planning. At present, the southern portion of Columbia is characterized by chaotic city boundaries, thereby making orderly planning virtually impossible. =

#### **H. Tax Consequences Will Be Minimal**

According to 1991 Richland County Tax Maps, the total appraised value of the proposed park is \$191,400 dollars. For the city this area generated \$875.13 dollars in tax revenues in 1991. Public acquisition would not shift productive private land into tax exempt status. For a comparative analysis see Table 1 on page 14.



#### **IV. SITE ANALYSIS / DEVELOPMENTAL CONSIDERATIONS**

The Gill's Creek corridor is generally bounded by Garner's Ferry Road, the CSX Railroad, the South Beltline community and the Hampton's neighborhood. Only a small portion of the area is within the city limits. Of roughly 300 acres; 95% is within the 100-year floodplain. The area is bounded on two sides by intense residential development, on one side by a commercial concentration and, on the fourth side by railroad rights-of-way. The residential developments to the southeast are the fast-growing and up-scale "Hampton" developments.

##### **A. Annexation**

In August 1991, the South Beltline community and most of the area being considered for park use successfully completed an annexation petition. City Council is expected to act upon that petition in December, 1992. When that action takes place, a sizable irregularity in Columbia's municipal boundaries will be eliminated.

##### **B. Development Patterns and Prospects in the Area**

The southeast Columbia area, including portions of unincorporated Richland County, is experiencing rapid urban development. The city is carrying out several sewer improvement projects in conjunction with residential annexations.

But more importantly, completion of the Southeast Beltway will materially enhance the accessibility of this area within metropolitan Columbia and should trigger significant new commercial development and redevelopment in the vicinity of Garner's Ferry Road and the freeway interchange. Major growth is projected for nearby Fort Jackson. Currently, a developer is putting together a 120,000 sq. ft. shopping center project where Gill's Creek crosses Garner's Ferry Road. This is a harbinger of things to come.

Resolution of the Gill's Creek Parkway issue will be needed. Use of the area as a transportation corridor would conflict with the open space objectives of this proposal. The Parkway, a four (4) lane arterial, would traverse the Gill's Creek corridor, linking Rosewood Drive and Shop Road. It has already been extended to Pelham Road but substantial fill and environmental disruption would be required to extend it any further. It is unlikely that this can occur.

##### **C. The Natural Setting**

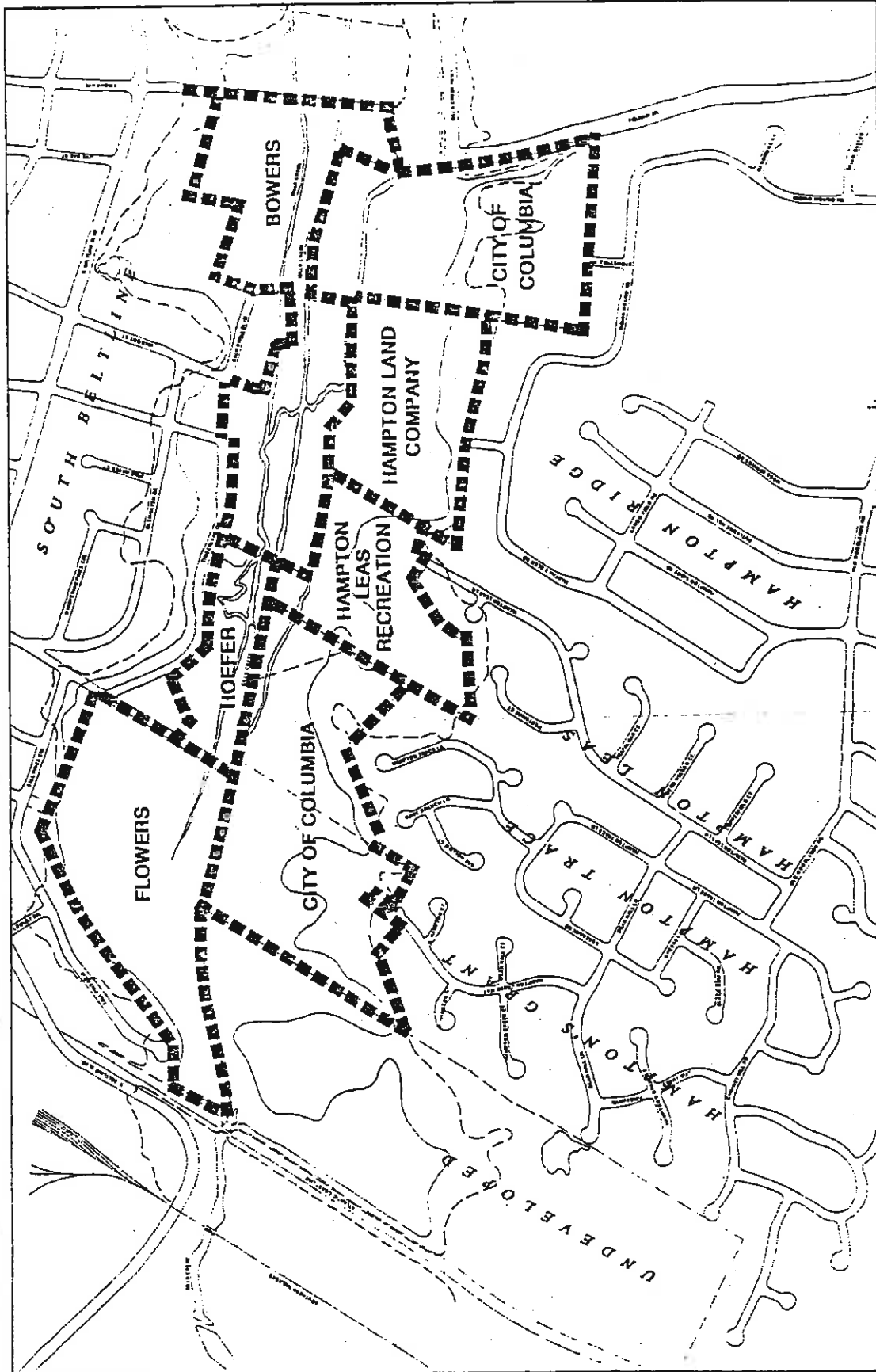
The floodplain area itself is densely wooded and contains a variety of landforms from broad swampland to precipitous bluffs. The east bank of the area is broad and sloping. State Parks biologists have discovered a relatively unique plant assortment in this area. For example, Mountain Laurel and Southern Magnolia,

species not commonly found within this specific forest type, occur with moderate regularity in this area.

The western portion of the corridor has been most impacted by urban development. Several private incursions into the floodplain have been made and various non-native plant species, like the privet, occupy portions of the forest understory. Overall, this area is characterized by extremely dense vegetation and wet conditions.

At the request of the Planning Department the State Parks Recreation and Tourism Department is documenting the environmental quality and nature preserve potential of the entire 200 plus acres. First impressions of the biologists have been very positive. A similar response has been received from the Audubon Society and the Congaree Swamp National Monument staff.

While the park proposal addresses only 200 acres, an additional 100 acres at either end of the suggested boundaries share similar characteristics with the land to be acquired. Depending upon the level of community interest, these areas could be added to the greenbelt at some later date, thereby creating a 300 acre open space within the city. Few communities are fortunate enough to have this kind of opportunity.



**OWNERSHIP**

# GILLS CREEK

**G R E E N B E L T**  
 NORTH

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## V. OWNERSHIP

The entire area is divided into seven (7) tracts totaling 201.1 acres. (See Table 1.)

### A. City Owned Land

The City of Columbia owns two tracts totaling 31.8 acres at the northeastern end of the area (TMS 13711-2-4 and 13715-1-2). Acquired when the Gill's Creek Parkway concept was being actively pursued, this property contains some non-floodplain land and is being suggested as the location of a visitors center to serve the new park.

### B. Liberty Life Insurance Company (City of Columbia)

An additional 48.5 acres within the central and southwestern part of the area has come into city ownership via donation from Liberty Life Insurance Company. This tract (formerly three tracts: TMS 13612-1-27; 13709-3-5; 13709-3-3) was formally accepted by the city February 19, 1992.

### C. Hampton Leas Parcel

Hampton Leas Community Association holds a 16.0-acre tract (TMS 13710-3-17) at the end of Hampton Leas Lane and was favorable to negotiating for a major part of the tract at a meeting held October 29, 1991. The association hopes to construct a neighborhood swim club on Hampton Leas Lane Drive adjacent to the subdivision. The 16.0 acre tract could be subdivided, with a portion retained by the Association for the swim club and the residual transferred to the City for the Gill's Creek greenbelt. These endeavors seem mutually compatible, although several issues would have to be resolved.

One issue is a request for a buffer between the greenbelt and the subdivision. Another is the need for security and control of pedestrian traffic accessing the neighborhood. Residents recognize, however, that maintenance of the floodplain as permanent open space is in their best interest.

### D. Hoefer Tract

Theodore Hoefer owns a 10-acre tract (TMS 13709-3-2) between city owned property and the Hampton Leas parcel. This owner would be willing to donate this land in exchange for certain considerations by the city. By virtue of its location, this piece is essential to achieving the objectives of the greenbelt proposal.

#### **E. Flowers Tract**

Representatives of the majority interests of the Mildred Flowers, et al tract (TMS 13612-1-10) are also willing to negotiate for their property. This 35.6 acre tract is located at the west end of the proposed acquisition area and is the least desirable in terms of park development potential.

#### **F. Hampton Land Company**

Over the past decade, Hampton Land Company has subdivided and developed the south side of the Gill's Creek corridor for residential purposes. This process has left a 19.4 acre residual parcel which is still owned by Hampton Land Company (TMS 13710-3-8). The owner representatives are also thought to be favorable to negotiation. --

#### **G. Bowers Tract**

A 39.8 acre parcel in the northeastern part of the area was recently purchased by William Bowers from Commercial Credit Corporation, formerly Guardian Fidelity (TMS 13711-2-3). Mr. Bowers and partners have expressed interest in negotiating for this parcel. They have verbally stated a sale price of \$15,000. A lower offer could well be entertained. This parcel is particularly important to the present development scheme because ownership of it will provide a link from city owned land to the newly city-acquired Liberty Life land. The city then would become the majority landholder within the area controlling a large portion of the land most desirable for park development. This issue requires immediate resolution. Currently, city management has directed planning staff to maintain dialogue with Bowers and partners concerning this tract.

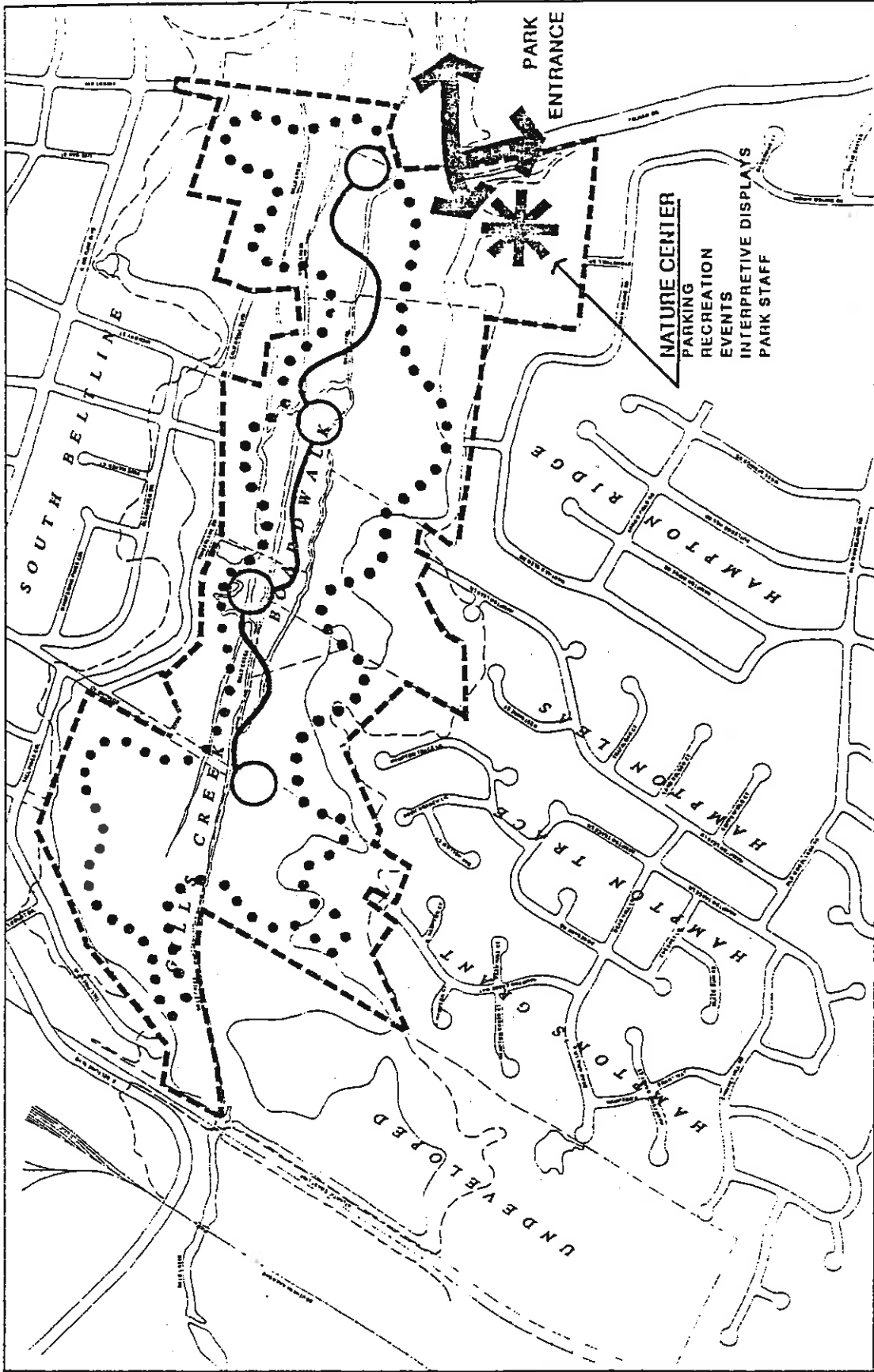
TABLE 1.

PROPERTY WITHIN THE PROPOSED GILL'S CREEK GREENBELT

<u>OWNER (PARCEL)</u>	<u>IN CITY LIMITS</u>	<u>ACRES</u>	<u>PROJECTED CO. TAX (b)</u>	<u>PROJECTED CITY TAX (b)</u>	<u>APPRAISAL VALUE (a)</u>
BOWERS	N	39.8	\$57.59	N/A	\$3,700.00
CITY OF COLUMBIA	Y	6.2	N/A	N/A	N/A
	Y	25.6	N/A	N/A	N/A
HAMPTON LAND CO.	N	19.4	\$150.97	N/A	\$9,700.00
HAMPTON LEAS REC.	Y	16.0	\$48.08	\$20.35	\$3,200.00
HOEFER	N	10.0	\$20.23	N/A	\$1,300.00
FLOWERS	N	35.6	\$107.03	N/A	\$6,900.00
LIBERTY LIFE INS. (now City of Columbia)	Y	24.4	\$2,019.23	\$854.78	\$134,400.00
	N	3.3	\$62.26	N/A	\$4,000.00
	N	20.8	\$438.90	N/A	\$28,200.00
<b>TOTAL</b>		<b>201.1</b>	<b>\$2,904.29</b>	<b>\$875.13</b>	<b>\$191,400.00</b>

(a) 1991 Richland County Tax Maps.

(b) Estimates based on 1991 millage rates.



**CONCEPTUAL DEVELOPMENT**

--- PROPOSED PARK BOUNDARY

●●● HIKING/JOGGING TRAIL

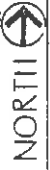
— BOARDWALK

○ BOARDWALK PAVILIONS

**GILLS CREEK**

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## **VI. CONCEPTUAL DEVELOPMENT**

The Planning Department has developed a preliminary concept for a nature-oriented, passive-use, city-owned, public park for this area modelled somewhat after the Congaree Swamp National Monument. The concept includes the following elements:

### **NATURE CENTER**

The Nature Center would be the main park building built on non-floodplain land already owned by the city. This building would be the welcome center for park visitors housing interpretive displays, park personnel and special events.

### **BOARDWALK SYSTEM**

The boardwalk system will meander over the creek and adjacent swamps. At certain points on the boardwalk, wider, covered pavilions will be placed for rest, observation and interpretation of indigenous plants and wildlife. As illustrated, the boardwalk is approximately 1 mile in length.

### **RECREATIONAL TRAILS**

This trail system snakes around the periphery of the park and is conceived as a hiking and jogging trail. These trails may also link the neighborhoods to the boardwalk at certain points. As drawn, the peripheral trail is approximately 3 miles in length.

In addition, every effort will be made to restore the area to a natural and authentic condition. Non-natural species will be removed, together with structures and any other features incompatible with a natural environment.

## VII. COST ESTIMATE

A very rough Capital Improvements Program Request was submitted for this project in the Fall of 1991. Attached as Addenda 1 and 2 on the following pages is the 1992-1993 CIP Request. The scope of the project is not yet final. Therefore, cost figures must be generalized. But, they do suggest the scope of ultimate proposed construction. It is significant that land acquisition costs will be minimal. An appropriate course of action for the city would be to assemble the land now and program on-site improvements for a later date.

ADDENDUM 1

**CITY OF COLUMBIA  
CAPITAL IMPROVEMENTS PROGRAM  
BUDGET REQUEST**

CIP PROJECT TITLE: Gill's Creek Greenbelt  
Departmental Priority:                      / Ranking:                     

FUND	CODE	TITLE-DESCRIPTION
HP/ANCH GOVT	01	General Fund
DEPT./DIV.	05	Community Develop
PROJ./ACTIVITY	XAP	Planning
	FC	Planning/Research

RESERVED

CIP PROJECT NO: \_\_\_\_\_

PRIORITY: \_\_\_\_\_; RANKING: \_\_\_\_\_

BUDGET APPROVAL: \_\_\_\_\_

OTHER: \_\_\_\_\_

**GENERAL INFORMATION:**  
Location: Gill's Creek W. of Palham Dr. to RR  
Est. Completion Date: 1995  
Anticipated Lifespan: Ongoing

**TYPE IMPROVEMENT:**  
 Land  
 Structures  
 Machinery, Furnishing, Equip.  
 Major Maintenance

**DESCRIPTION:** Develop a nature-oriented interpretive, passive-use public park on 200+ acres within the Gill's Creek floodplain to include Nature Center Building, recreation equipment, boardwalk system, and trails.

**JUSTIFICATION:**  
1. Area is unsuited for any other types of development.  
2. Need to prevent destruction of floodplain/floodway by inappropriate use and development.  
3. Need to prevent illegal activity by proper supervision and operation of the area.  
4. Need to protect unique environmental qualities.  
5. Expand the city's park/open space system.  
6. Provide recreational opportunities.

**OPERATING BUDGET IMPACT (REOCCURRING ANNUAL EXP.)**

No. Additional Personnel:	2
Personal Services:	\$ 75,000
Operating Expenses:	\$ 50,000
Service Expenses:	\$ 10,000
Capital Outlay:	\$ 697,600

**RELATIONSHIP TO FUTURE IMPROVEMENTS:**  
Reinforces the waterway/open space park development strategy.  
It is in an area petitioned for annexation.  
Enhances quality of adjacent neighborhoods.

**CONSEQUENCES/IMPACT OF NO FUNDING:**  
Environmentally sensitive area will remain unprotected.  
Illegal activity may increase.  
Waterway/open space park development strategy will suffer.

**EXPENDITURE SUMMARIES**

	FY 92-93 (Yr-1)	FY 93-94 (Yr-2)	FY 94-95 (Yr-3)	FY 95-96 (Yr-4)	FY 96-97 (Yr-5)	TOTAL	TOTAL FUND
Exp. Expenditure							
Outstanding Encumbrances							
Previous Expenditure	16,500	-0-	-0-	-0-	-0-	16,500	
Land *	242,500	268,000	-0-	-0-	-0-	510,500	
Structures *	20,000	50,000	-0-	-0-	-0-	70,000	
Mach/Furnish/Equip. *	12,200	13,400	-0-	-0-	-0-	25,600	
Prof. Services *	-0-	10,000	15,000	25,000	25,000	75,000	
Major Maint.	291,200	341,400	15,000	25,000	25,000	697,600	
TOTAL							

ADDENDUM 2.

ATTACHMENT TO CIP REQUEST  
FOR  
GILL'S CREEK GREENBELT

**LAND**

Approximately 110 acres (4 parcels) remain to be acquired along Gill's Creek. These parcels are within the 100-year floodplain and have minimal value. A 40-acre tract in this area recently sold for approx. \$100/acre. Therefore, the figure of \$16,500 for site acquisition in FY92-93 is based on a price of \$100/acre for the remaining parcels. For some owners, a donation of their land to the city is a distinct possibility. A contingency of 50% was added to this figure.

**STRUCTURES**

These figures are based on the projected cost of constructing the following:

	<u>FY92-93</u>	<u>FY93-94</u>	<u>FY94-95</u>
A. Nature Center Building accommodating staff, info/ museum, minor recreation, security personnel and storage. 2500sf @ \$65/sf	\$162,500		
B. Boardwalk/Pavilion System and interpretive displays through swamp. 5360ft @ \$50/ft		\$268,000	
C. Hiking Trail 16,000ft @ \$5/ft	\$80,000		

**MACHINERY/FURNITURE/EQUIPMENT**

These figures represent the projected costs of the following:

	<u>FY92-93</u>	<u>FY93-94</u>	<u>FY94-95</u>
A. Furnish Nature Center Bldg.	\$20,000		
B. Playground Equipment		\$50,000	

**PROFESSIONAL SERVICES**

These figures are based on a 5% A/E fee for the following:

	<u>FY92-93</u>	<u>FY93-94</u>	<u>FY94-95</u>
A. Nature Center Building	\$8,200		
B. Boardwalk Construction		\$13,400	
C. Hiking Trail	\$4,000		

## VIII. CONCLUSION

Columbia needs an expanded and updated park system. There is no question that this heavily wooded 200-acre wetland, completely surrounded by intense urban development, presents a unique opportunity for the city. The concept of floodplain protection alone constitutes enough justification to pursue municipal ownership of this area. But, there are many other justifications as well.

Overall, this project is a very positive effort as viewed from all angles:

1. The city's park system will expand.
2. A unique environmental area will come under public ownership and protection.
3. The city will be making a positive move on the very popular issue of protecting environmentally sensitive areas.
4. Park land will be provided for an area requesting annexation.
5. Potential wasteland will be converted from a liability into an asset. Recreation is this area's highest and best use.
6. The city will be acting upon the endorsement of such groups as State PRT Department, The Audubon Society, US Department of the Interior (Congaree Swamp National Monument), and other environmentally-concerned groups.
7. Impact to the city's tax base is virtually nil.
8. Landowners are willing to either sell or donate their property.
9. Irregularities in city boundaries will be eliminated.
10. Possibility of abuse will be minimized.

Columbia has an overbearing need to address the parks issue in a comprehensive manner. Long term community needs and expectations must be spelled out. Now is the time to act on the Gill's Creek Greenbelt idea.



John William Lawrence, Executive Director

Division of State Parks  
Charles W. Harrison, Director  
(803) 734-0159  
(803) 734-1017 FAX

February 3, 1992

Mr. Lee Miller  
Senior Design Planner  
City of Columbia  
1225 Laurel St.  
Columbia, SC 29201

Dear Mr. Miller:

Attached is a copy of the report from the survey performed on December 10, 1991 at the proposed Gill's Creek Greenbelt site. If you have any questions please contact me and I will try to help. I think that this is an excellent project and look forward to seeing the city undertake the project.

Sincerely,

Stan Hutto  
Chief Biologist  
Division of State Parks

This report is the result of a one-day survey conducted Dec. 10, 1991 on properties being considered for the development of a greenbelt/park by the City of Columbia. The survey was conducted by biologists Irvin Pitts and Stan Hutto of the South Carolina Department of Parks, Recreation and Tourism with the aid of Mr. Lee Miller and other employees of the City of Columbia. Though this survey is short and many facts are still to be determined, we believe this is a good overview of the flora and fauna of the area and many of the critical problems present are addressed.

## Hampton Property

Properties owned by the Hampton Land Company and Hampton Leas Recreation contain some nice upland areas which are suitable for trails. These areas are relatively undisturbed and many trees in this area appear to be 50 to 75 years old. The canopy is dominated by laurel oak, scarlet oak and hickory with a moderate to thick understory of red bay, sourwood, horse sugar and pinxter flower. The herbaceous flora consists of numerous patches of heart-leaf ginger and crane-fly orchid. Most interesting in this area is the presence of young to mature southern magnolia. This species is most commonly found in maritime forests and along rivers in the lower Coastal Plain. Outside of this range it is often found planted around houses and buildings throughout the state. This naturalized stand of southern magnolia is probably due to the distribution of seeds eaten by birds and other animals. Also found in this upland area were several plants of mountain laurel. Mountain laurel is commonly found in the Mountains and Upper Piedmont of the state, but is infrequently found in the Coastal Plain and Lower Piedmont. When it is encountered in these regions, it is often found along slopes and riverbanks very much like this area.

The low lying areas on these properties are in good shape. The canopy consists of laurel oak, yellow poplar, sweetgum and scattered loblolly and pond pines. The thick understory contains red bay, horse sugar and fetter bush with several scattered patches of leucothoe. Because these low lying areas are often underwater, they do not lend themselves to trails.

## City of Columbia Property

A portion of the uplands on the City of Columbia's tract located just off of Gills Creek Parkway has been disturbed and may be used more effectively as a site for any structures that may accompany the proposed greenway/park. Undisturbed areas of upland have a canopy of white oak, scarlet oak, hickory and sweetgum. The open understory consists of dogwood and young canopy species. The low lying areas of this tract have been altered by an invasion of privet. Privet is an exotic species of shrub introduced from Asia. It can and does grow in most areas of the state, but becomes invasive in low, wet, shaded areas such as the Gill's Creek floodplain. The privet is very thick in places and has choked out all of the native understory and herbaceous species in many of those areas. If left uncontrolled this plant will eventually change the entire character of this stretch of the Gill's Creek floodplain. Any development of the Gill's Creek Greenway should include a plan to control the privet. A minimum effort should include the containment of the privet to its present location and the removal of plants found growing in non-colonized areas.

## Liberty Life Property

The Liberty Life Property is much like the Hampton Land Company and the Hampton Leas Recreation tracts. This tract has a fair amount of upland. The canopy is dominated by oak and hickory with a moderate to light understory including sparkleberry, wax myrtle, red bay and young canopy species. A stand of young pawpaw was located in the transition zone between the upland and the floodplain (pawpaw foliage is the sole food source of the zebra swallowtail butterfly caterpillar.) There is also a stand of mature loblolly pine in the upland area which adds to habitat and species diversity in the proposed greenway. This area is suitable for trails and also has access to a channel in the floodplain.

## Finlay Property

The Finlay tract contains good upland ridges. The Canopy contains loblolly pine, white oak, laurel oak and hickory. The shrub layer includes redbay, horse sugar, dogwood and young canopy species. Herbaceous plants and vines include heartleaf ginger, crane fly orchid, greenbriar, yellow jessamine and muscadine. A nice patch of unidentified sedges and serviceberry bushes were found in the transition area between the upland and the floodplain along a small stream. This area also allows access to a channel.

Another portion of the Finlay tract contains a pond. Land behind the pond's dam is an area that should be acquired for the greenbelt. In this area is a low wet depression. A species of slider or pond turtle was seen sunning on a log in the depression. This area could add greatly to the total plant and animal diversity of the greenbelt.

## West Bank of Gill's Creek

All properties on the west bank of Gill's Creek are basically the same habitat and consequently contain the same flora. The dominate canopy species include blackgum and sweetgum. almost all of the areas surveyed on the west bank of the creek have been affected by the presence of privet which has eliminated much of the native shrub layer. Although the privet dominates more area on the west bank, it is not as thick as the stand of privet on the City of Columbia's tract located on the east bank of the creek. Also, most property along the west bank of Gill's Creek lies below the flood line with little or no upland areas. These tracts have flooded numerous times through the years. Any trail or walk way located on this side of the creek will need to consider the probability of yearly flooding.

## **Flowers Property**

The highest section of the Flower's tract, which is located immediately adjacent to Tall Pines Circle, contains a dense stand of kudzu. However, the kudzu should not present a problem because the high water table of the floodplain should limit any growth further into the area.

## **Hoefer Property**

The Hoefer tract contains little or no high ground. The whole of this property is floodplain habitat. A section has been cleared and a small pond constructed. Water for this pond is pumped from a channel in the floodplain into the pond when the water level drops. Non-native species have been planted in and around the pond. These include giant reed, althea (rose of Sharon), mimosa, periwinkle, parrot's feather and an asian species of bamboo. All these plants have invasive characteristics and should be removed as the project proceeds. Parrot's feather should be paid close attention as it is an aquatic plant which thrives in slow moving water like several of the channels in Gill's Creek.

## **Bowers Property**

The portions of the Bowers tract which were surveyed are much like the Hoefer tract. The low lying areas have a canopy of tupelo, sweetgum, yellow poplar and red maple. The shrub layer consists of a moderate to thick growth of privet. Some scattered violets still remain in open areas. Few, if any, native shrubs remain in this section of the floodplain. An abundance of crayfish burrows located throughout this portion of the floodplain indicate good water quality. Along the sides of California Blvd., a small stand of China berry and popcorn trees were found. The presence of popcorn trees in or near the floodplain poses a greater threat to integrity of the floodplain than does the

privet because popcorn trees like privet become invasive in low wet situations. Before beginning privet control in this area, these few popcorn trees should be extirpated to prevent this species from encroaching as the privet is removed. Also noted in this area was a portion of the storm water drainage system for the area. This system should be located and noted during the development of the greenbelt. No upland areas were encountered during the limited survey of this area. However, the northern section of this tract was not surveyed and could contain good upland habitat.

## Animal Life

Animals found in the area were those that were expected. Signs of raccoon, opossum and gray squirrel were seen. One possible deer track was found on city of Columbia property. The habitat is also suitable for red fox and gray fox.

Bird life consisted of the usual assortment of winter birds including cardinals, white-throated sparrows and downy woodpeckers. The edge effect of the floodplain benefits many songbirds. White-eye and red-eyed vireos probably nest in this area during the spring and summer months. Many wading birds including egrets and herons use these waters. The erection of nesting platforms may encourage the establishment of a nesting colony in the greenbelt. The introduction of wood duck nesting boxes would also benefit this species which uses the area. Active colonies of the federally endangered red-cockaded woodpecker occur on Fort Jackson. There is a mature stand of loblolly pine on the Liberty Life property which if properly managed could become a recruitment site for a new colony. The woods in the greenbelt benefit many animals. Today, many people are taking interest in many forms of passive recreation like birding. This greenbelt park could provide an exceptional experience for such individuals.

## Trails

Trails are almost always a desirable way to allow the public access to the resource. The east bank of Gill's Creek contains nice upland habitat which is excellent for the construction of trails. However, land on the west creek bank contains few upland areas. The side of the creek is also noted for flooding over the years. If trails were constructed in this area the maintenance cost may be extensive. An alternate plan might include the construction of boardwalks along this side of the creek with several small stream crossings. The initial cost of these structures, although much higher, will save money on reconstruction of trails after flooding. Note that it is not pleasant to have trails that are used for hiking and horseback riding, as trails used by horses are not usually in good enough shape for hiking.

## General Comments

The proposed greenbelt corridor contains a good diversity of habitats which includes mature pine woods, mixed mesic hardwoods, floodplain, ponds and seeps. These habitats support a diverse assemblage of plants and animals. This corridor also connects the extensive floodplain of the Congaree River to large wooded upland areas on Fort Jackson. Protecting such a corridor especially in this highly developed part of Columbia is an excellent way to benefit the remaining wildlife population by insuring a means of genetic exchange between somewhat isolated animal populations. It is also a place to allow the citizens of Columbia to go and experience nature at a true natural area within Columbia's City Limits.

If the project is pursued, some form of a species control or eradication plan should be included in the overall management plan of the park. The most serious exotic species at this time is privet. However, popcorn tree, giant reed, asian bamboo, parrots feather and althea should not be ignored. As the privet is removed, some or all of these species could rapidly increase and still out compete the native vegetation. Kudzu is another possible concern if seed is spread to other upland areas in the

greenbelt. The kudzu that is present can best be controlled by first cutting it out of the trees while it is dormant during the winter. In late spring to early summer while it is actively growing and not under severe stress from drought, it may be treated with a contact herbicide such as Round-up. Note, it may require the use of the herbicide Rodeo instead of Round-up since this is a wetland area. As control is gained over these exotic species, the large areas with native vegetation will act as seed sources for the recolonization of reclaimed areas. Any exotic species found in areas with the native flora intact should immediately be eliminated.

In this short report we have tried to put forth the good points as well as the problems that need to be addressed when considering such a project. The Gill's Creek Greenbelt is a project worth pursuing. It will require work. The problem with privet and the other exotic species are problems that occur in urban areas and other areas where man has been. Such problems are not necessarily bad points. Volunteers such as scouts, garden clubs and civic organizations can be organized to attack the problem. While working, they can be educated about such problems and learn from situations such as these. Community interest and involvement could be the key to making such projects work.

Stan Hutto  
Chief Biologist  
South Carolina Department of  
Parks, Recreation and Tourism

## TREES

<i>Acer rubrum</i>	Red Maple
<i>Acer negundo</i>	Box elder
<i>Albizia julibrissin</i>	Mimosa
<i>Amelanchier sp.</i>	Service berry
<i>Carya glabra</i>	Pignut hickory
<i>Celtis sp.</i>	Hackberry
<i>Cornus florida</i>	Flowering dogwood
<i>Ilex opaca</i>	American holly
<i>Juniperus virginiana</i>	Red cedar
<i>Liquidambar styraciflua</i>	Sweetgum
<i>Liriodendron tulipifera</i>	Yellow poplar
<i>Magnolia grandiflora</i>	Southern magnolia
<i>Magnolia virginiana</i>	Sweetbay magnolia
<i>Melia azedarach</i>	Chinaberry
<i>Nyssa sp.</i>	Blackgum
<i>Oxydendron arboreum</i>	Sourwood
<i>Persea borbonia</i>	Redbay
<i>Pinus serotina</i>	Pond pine
<i>Pinus echinata</i>	Shortleaf pine
<i>Pinus taeda</i>	Loblolly pine
<i>Pinus virginiana</i>	Virginia pine
<i>Platanus occidentalis</i>	Sycamore
<i>Prunus serotina</i>	Black cherry
<i>Quercus falcata</i>	Southern red oak
<i>Quercus marilandica</i>	Blackjack oak
<i>Quercus alba</i>	White oak
<i>Quercus stellata</i>	Post oak
<i>Quercus virginiana</i>	Live oak

*Quercus (nigra X laurifolia)*

Hybrid oak

*Quercus nigra*

Water oak

*Quercus laurifolia*

Laurel oak

*Quercus coccinea*

Scarlet oak

*Robinia pseudo-acacia*

Black locust

*Salix sp.*

Willow

*Sapinum sebiferum*

Popcorn tree

*Symplocus tinctoria*

Horsesugar

## SHRUBS

<i>Alnus serrulata</i>	Tag alder
<i>Asimina parviflora</i>	Pawpaw
<i>Baccharis sp.</i>	Groundsel
<i>Clethra alnifolia</i>	Sweet pepper bush
<i>Cyrilla racemiflora</i>	Titi
<i>Eleagnus pungens</i>	Russian olive
<i>Euonymus americanus</i>	Strawberry bush
<i>Hibiscus syriacus</i>	Althea
<i>Hypericum hypericoides</i>	St. Johns wort
<i>Ilex glabra</i>	Inkberry
<i>Kalmia latifolia</i>	Mountain laurel
<i>Leucothoe axillaris</i>	Doghobble
<i>Ligustrum sp.</i>	Privet
<i>Lyonia lucida</i>	Fetterbush
<i>Myrica cerifera</i>	Wax myrtle
<i>Prunus caroliniana</i>	Carolina cherry laurel
<i>Rhododendron nudiflorum</i>	Pinxter flower
<i>Rhus copallina</i>	Winged sumac
<i>Sambucus canadensis</i>	Elderberry
<i>Vaccinium arboreum</i>	Sparkleberry
<i>Vaccinium tenellum</i>	Lowbush blueberry
<i>Vaccinium elliottii</i>	Elliott's blueberry
<i>Viburnum sp.</i>	Viburnum

## VINES

*Bignonia capreolata*

*Cuscuta* sp.

*Decumaria barbata*

*Gelsemium sempervirens*

*Hedera helix*

*Ipomea* sp.

*Lonicera japonica*

*Mikania scandens*

*Pueraria lobata*

*Rhus radicans*

*Smilax laurifolia*

*Smilax bona-nox*

*Smilax glauca*

*Vinca minor*

*Vitis rotundifolia*

*Wisteria* sp.

Cross vine

Dodder

Climbing hydrangea

Yellow jessamine

English ivy

Morning glory

Japanese honeysuckle

Hemp vine

Kudzu

Poison ivy

Greenbriar

Greenbriar

Greenbriar

Periwinkle

Muscadine

Wisteria

## HERBS

*Andropogon scoparius*

*Arundinaria gigantea*

*Arundo donax*

*Asplenium platyneuron*

*Aster sp.*

*Aureolaria sp.*

*Boehmeria cylindrica*

*Canna X generalis*

*Carex sp.*

*Chasmanthium laxum*

*Chimaphila maculata*

*Crotalaria spectabilis*

*Cynodon dactylon*

*Cyperus sp.*

*Daubentonia sp.*

*Desmodium sp.*

*Dichondra carolinensis*

*Digitaria sp.*

*Diodia sp.*

*Duchesnea indica*

*Echinochloa crusgalli*

*Elephantopus sp.*

*Erianthus gigantea*

*Eupatorium capillifolium*

*Galium sp.*

*Geranium sp.*

*Hexastylis arifolia*

*Juncus sp.*

Bluestem

Switch cane

Giant reed

Ebony spleenwort

Aster

False foxglove

False nettle

Canna lily

Carex

Chasmanthium

Spotted wintergreen

Rattlebox

Bermuda grass

Umbrella sedge

Bladder pod

Beggar lice

Dichondra

Crab grass

Diodia

Indian strawberry

Barnyard grass

Elephant's foot

Beard grass

Dog fennel

Bedstraw

Wild geranium

Heart-leaf ginger

Rush

*Lamium amplexicaule*

*Lechea* sp.

*Lemna* sp.

*Lepidium* sp.

*Lespedeza* sp.

*Ludwigia* sp.

*Mentha spicata*

*Mitchella repens*

*Myriophyllum brasiliense*

*Nuphar Luteum*

*Osmunda cinnamomea*

*Panicum* sp.

*Paspalum urvillei*

*Phorodendron serotinum*

*Phyllostachys aurea*

*Phytolacca americana*

*Plantago* sp.

*Potentilla canadensis*

*Pteridium aquilinum*

*Rhexia* sp.

*Rhynchospora* sp.

*Rosa* sp.

*Rubus* sp.

*Rubus* sp.

*Rumex* sp.

*Saururus cernuus*

*Scirpus cyperinus*

*Scutellaria* sp.

*Sida* sp.

*Solidago* sp.

*Sonchus* sp.

Henbit

Pin-weed

Duckweed

Pepper grass

Lespedeza

Ludwigia

Spearmint

Partridge berry

Parrot feather

Spadderdock

Cinnamon fern

Panic grass

Bahia grass

Missletoe

Bamboo

Poke

Plantain

Cinqfoil

Bracken fern

Meadow beauty

Beak rush

Rose

Dewberry

Blackberry

Sorrel

Lizard tail

Wool rush

Skull cap

Indian hempweed

Goldenrod

Sow thistle

*Tillandsia usneoides*

*Tipularia discolor*

*Typha latifolia*

*Verbena brasiliensis*

*Viola papilionacea*

*Woodwardia areolata*

Spanish moss

Crane fly orchid

Cattail

Iron weed

Violet

Netted chain fern

Birds Observed at the Gill Creek Area,  
Richland County, S.C. on December 10, 1991

Red-tailed Hawk	<i>Buteo jamaicensis</i>
Turkey Vulture	<i>Cathartes aura</i>
Mourning Dove	<i>Zenaida macroura</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Pileated Woodpecker	<i>Dryocopus pileatus</i>
Blue Jay	<i>Cyanocitta cristata</i>
Carolina Chickadee	<i>Parus carolinensis</i>
Tufted Titmouse	<i>Parus bicolor</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>
Ruby-crowned Kinglet	<i>Regulus calendula</i>
Hermit Thrush	<i>Catharus guttatus</i>
American Robin	<i>Turdus migratorius</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Yellow-rumped Warbler	<i>Dendroica coronata</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Rufous-sided Towhee	<i>Pipilo erythrophthalmus</i>
Chipping Sparrow	<i>Spizella passerina</i>
Song Sparrow	<i>Melospiza melodia</i>
White-throated Sparrow	<i>Zonotrichia leucophrys</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Common Grackle	<i>Quiscalus quiscula</i>
House Finch	<i>Carpodacus mexicanus</i>
American Goldfinch	<i>Carduelis tristis</i>