

ATTACHMENT A

A RESOLUTION SPECIFYING NEXT STEPS RELATED TO GREENWAYS
Resolution No. 91/2003-04

WHEREAS, the Carrboro Board of Aldermen seeks to ensure that its existing and proposed policies and plans are appropriate;

NOW, THEREFORE BE IT RESOLVED by the Carrboro Board of Aldermen that the Aldermen

- 1) Clarify that the update of the greenway trail element of the Town's *Recreation and Parks Comprehensive Master Plan* will include additional creek corridors (i.e. Tom's and the branches of Bolin Creek and tributaries that are included in the *Facilitated Small Area Plan for Carrboro's Northern Study Area*) and will include the development of a set of trail standards and assign the standards to the identified trail segments.
- 2) Allocate \$10,000 either directly from the first sidewalk and greenway bond issue or seek reimbursement from that source, to provide the match for the design/development plan for Morgan Creek West greenway trail.
- 3) Specify any desired further action in relation to the Friends of Bolin Creek request:

This is the 16th day of December in the year 2003.

Excerpt of minutes from Board of Aldermen meetings on October 28 and November 11, 2003

REPORT ON GREENWAY AND OPEN SPACE POLICIES

The 2003 Action Agenda Project list includes the task "Greenway Plan Update." A report on this matter was presented to the Board of Aldermen. A resolution accepting the report was recommended for the Board's adoption.

Trish McGuire, the town's Planning Administrator, made the presentation.

David Burton, with the Friends of Bolin Creek, asked that the Friends of Bolin Creek be given an opportunity to participate in the preparation of greenway and open space policies.

Alderman Herrera requested that the staff investigate whether the Recreation and Parks Master Plan should include plans for greenways and open space.

Mr. Stewart presented a list of "Next Steps" for this project.

The following resolution was introduced by Alderman Alex Zaffron and seconded by Alderman John Herrera.

A RESOLUTION ACCEPTING THE STAFF REPORT ON GREENWAYS

Resolution No. 56/2003-04

WHEREAS, the Carrboro Board of Aldermen seeks to ensure that its existing and proposed policies and regulations are appropriate;

NOW, THEREFORE BE IT RESOLVED by the Carrboro Board of Aldermen that the Aldermen accepts this report and requested the following:

- ⊙⊙ That a timeline for "Next Steps" be brought back to the Board, to include suggestions on how to involve the public;
- ⊙⊙ That the town staff investigate whether the Orange County Legacy Office would be willing to work with the town in preparing a master plan for the Morgan Creek Greenway;
- ⊙⊙ That the timeline include a plan for working with UNC to begin acquisition of land around Bolin Creek
- ⊙⊙ That the Friends of Bolin Creek and mountain bike group be included in the master planning process.

The foregoing resolution having been submitted to a vote, received the following vote and was duly adopted this 28th day of October, 2003:

Ayes: Joal Hall Broun, Jacquelyn Gist, John Herrera, Diana McDuffee, Michael Nelson, Alex Zaffron

Noes: None

Absent or Excused: Mark Dorosin

FOLLOW-UP TO REPORT ON GREENWAY PLANNING

A report on greenway planning was provided for the Board of Aldermen on October 28, 2003. Additional information was requested and was provided. A resolution that accepts this follow-up information was recommended for the Board's adoption.

Trish McGuire, the Town's Planning Administrator, made the presentation.

Mayor Nelson suggested that the Town proceed with the greenway master plan as part of a subcommittee of the Recreation and Parks Master Plan. The Board of Aldermen should approve the charge for the subcommittee. He also suggested that the Board authorize he and one other Board member to discuss with the Friends of Bolin Creek a way to achieve the Bolin Creek Corridor Master Plan.

Alderman Gist suggested that a steering committee be established with a representative from the Recreation and Parks Commission and Board of Aldermen to discuss the process for integrating the three plans.

Alderman Broun stated that she would like to know what the former uses of properties were along Bolin creek prior to development.

Alderman McDuffee suggested that a subcommittee be formed to bring back an integrated proposal to move forward with a greenway plan.

MOTION WAS MADE BY JACQUELYN GIST AND SECONDED BY ALEX ZAFFRON TO FORM A SUBCOMMITTEE OF THREE BOARD MEMBERS AND STAFF TO BRING BACK AN INTEGRATED PROPOSAL FOR A GREENWAY PLAN. VOTE: AFFIRMATIVE SIX, ABSENT ONE (DOROSIN)

DISCUSSION OF THE PROCESS TO UPDATE THE RECREATION AND PARKS MASTER PLAN

The purpose of this agenda item was for the Board of Aldermen to review the proposed process to update the Recreation and Parks Master Plan. During the September 16, 2003 Board of Aldermen meeting, staff was requested to prepare an agenda item to discuss the RFP process and action plan for this project.

Anita Jones-McNair, the Town's Recreation and Parks Director, made the presentation.

Alderman McDuffee asked that the Orange County Soccer Task Force report be used as a reference document in updating the master plan. In addition, that active recreation programs, including Century Center uses and soccer be included in the master plan.

Mayor Nelson requested that the consultant talk with citizens in the community to gather information on what should be included in the master plan.

The following resolution was introduced by Alderman Alex Zaffron and seconded by Joal Hall Broun.

A RESOLUTION APPROVING THE PROCESS TO UPDATE THE RECREATION AND PARKS MASTER PLAN

Resolution No. 59/2003-04

WHEREAS, the Recreation and Parks Department has requested that the Mayor and Board of Aldermen approve the course of action to update the Recreation and Parks Master Plan; and

WHEREAS, the Mayor and Board of Aldermen reviewed and approved this request.

NOW, THEREFORE, THE MAYOR AND BOARD OF ALDERMEN OF THE TOWN OF CARRBORO RESOLVE:

Section 1. The Board hereby approves the course of action.

Section 2. The Board hereby authorizes the Recreation and Parks staff to proceed with updating the Recreation and Parks Master plan.

Section 3. This resolution shall become effective upon adoption.

The foregoing resolution having been submitted to a vote, received the following vote and was duly adopted this 11th day of November, 2003:

Ayes: Joal Hall Broun, Jacquelyn Gist, John Herrera, Diana McDuffee, Michael Nelson, Alex Zaffron

Noes: None

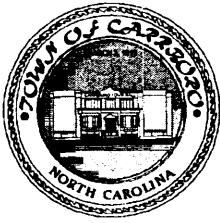
Absent or Excused: Mark Dorosin

REPORT: FRIENDS OF BOLIN CREEK REQUEST

In January 2003, representatives of the Friends of Bolin Creek made a presentation to the Board of Aldermen and requested support and assistance towards the preparation of a master plan for the Bolin Creek corridor. A report on this matter has been prepared for the Board of Aldermen. A resolution that accepts the report is recommended for the Board's adoption.

Trish McGuire, the Town's Planning Administrator, made the presentation

Dave Otto stated that the other jurisdictions are waiting for Carrboro to take action before they take action. He stated that the Friends of Bolin Creek do not feel the resource guide to the Bolin Creek corridor neither addresses the need for an open space master plan for the Bolin Creek Corridor nor provides a mechanism to create that master plan. They maintain their strong commitment to the need for an open space master plan for the Bolin Creek Corridor to provide a framework for protecting this resource for future generations in Carrboro, Chapel Hill and southern Orange County. The Friends are interested in protection of open space in the Bolin Creek Corridor in as natural a state as possible. The greenway is one component of a larger open space master plan, but is not the end goal. The Friends asked that the Board of Aldermen consider and adopt the recommendation for creation of a Bolin Creek Corridor Master Plan proposed in the draft Orange County report, "The Adams Tract and Bolin Creek Corridor: Towards a Possible Master Plan." That proposal calls for appointment of a steering plan committee, an evaluation by the county and towns as to whether existing staff could provide necessary support to the project and development of a project timeline and mission/charge. Julie Andresen asked that the Board take care in making appointments to the subcommittee.



TOWN OF CARRBORO

NORTH CAROLINA

MEMORANDUM

TO: Steven Stewart, Town Manager
Mayor and Board of Aldermen

FROM: Patricia J. McGuire, Planning Administrator

DATE: December 12, 2003

SUBJECT: Greenway Follow-up

It must be noted that the Town has, since 1980, taken extensive steps in areas which, in other jurisdictions might constitute components of a greenway plan. These steps include open space requirements, stream buffer protection, recreational facilities provisions that include incentives for connecting trails, tree protection, and several others.

Since the Town has no official "Greenway Plan," a series of policies, regulations and actions have been used to plan for, develop, and preserve "greenways."

There have been reports and associated discussions on three distinct, but also interrelated, activities in recent weeks. The separate but overlapping nature of these activities results to some degree from the broad nature of the term greenways, and that results from the fact that greenways are defined around the geographic resources that are the Town's most dominant natural areas – the creeks and drainages and associated corridors.

The reports have focused on greenway planning, a proposal to update the master recreation and parks plan, and a report on the Friends of Bolin Creek (FOBC) proposal to create a master plan for Bolin Creek. Reformatted copies (that combine the agenda abstract and staff report elements) of the reports on greenways and the FOBC proposal are attached (*Attachments 1, 2 and 3*). A copy of a report from staff of Orange County's Environment and Resource Conservation Department on the Adams Tract (*Attachment 4*) and the FOBC proposal is attached (*Attachment 5*), as is a recent letter from FOBC (*Attachment 6*).

Board members have noted that some community groups are interested in paved and some unpaved trails for the Town's greenways. Other Board members have articulated the need to determine greenway function prior to making decisions about trail surface and this is an activity that should occur in the update/new greenway plan development.

Mayor Nelson and Alderman Broun have indicated that it would be helpful for the Board of Aldermen to frame the discussion of greenways in the functional categories noted below and that from a discussion of these issues decisions related to access, maintenance, protection will follow. Explanatory comments are provided, as applicable and supporting information has been compiled. It should be noted that the categories noted are not mutually exclusive – in its entirety, one greenway corridor may be designated for several functions, although the specific activities may be segregated with distinct standards and specifications for the separate uses.

- a. **Open space to protect endangered flora or animal species.** Some materials that provide background information on this subject are provided as attachments. An excerpt of the *Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina*, with the information on the identified sites of significance in the Bolin Creek and Morgan Creek basins are attached (*Attachment 7*).

There are also additional, extensive policy statements and implementing efforts that have been developed, in part, based on the Inventory. The bulk of these have resulted from multi-jurisdictional efforts to document and plan for the management of natural resources and changes in land use. Most of the undeveloped portions of the Bolin Creek corridor lie within Carrboro's jurisdiction. The project area for the *Facilitated Small Area Plan for Carrboro's Northern Study Area* (NSA Plan) encompassed the entire Bolin Creek watershed within Carrboro's jurisdiction as did the Town's planning jurisdiction boundary established by the 1987 Joint Planning Area Land Use Plan and Agreement. The NSA Plan was developed with input from Chapel Hill and Orange County and the final plan was adopted by all three jurisdictions.

An excerpt of the NSA Plan that discussed the area's natural features is attached (*Attachment 8*). This excerpt includes a map of the Primary and Secondary Conservation Areas that were mapped for the facilitated meeting. A copy of the Natural Constraints Map, referenced in Article XIII of the *Town of Carrboro Land Use Ordinance* (Recreational Facilities and Open Space) is also attached (*Attachment 9*). Most recently, the Triangle Land Conservancy's Landscape with Wildlife reports inventory natural areas and identifies policies that might be utilized to maximize the maintenance of wildlife habitat. An excerpt of Part 1 and all of Part II of the report are provided (*Attachment 10*). An analysis similar to that in Part II has been conducted and under review by a subcommittee of the Planning Board and the Environmental Advisory Board.

The Town continues to expand its database of information on the natural features of the jurisdiction. In cooperation with Chapel Hill and Orange County, digital information on topography and existing natural and man-made features, creeks, floodplains, steep slopes, and others is available. This expanded mapping was justified, in part, by the stringent development review requirements in this community, so that communication about these

requirements would be clear. Much of this information may be accessed by staff and citizens via the Town's website and may be provided in hard or digital copy.

The Town of Chapel Hill has adopted both a Comprehensive Plan (2000) and a Greenways Plan (1998) for its portion of the Bolin Creek basin. These documents and recent revisions to the regulatory mechanisms in Chapel Hill describe and implement holistic strategies to maintain and enhance the basin, where possible.

The technical charrette approach proposed in response to the FOBC request, involving advisory board members, staff, elected officials, and representatives of particular interest groups, was envisioned as a means of communicating and documenting the jurisdiction-specific strategies and policies for one of the Town's greenway corridor locations. This effort was proposed so that without seeking to develop a separate set of values, goals and implementation steps.

- b. **Mixed recreation and open space to protect flora or animal species.** See the information noted above. An excerpt of the *Report of the Master Recreation and Parks Group* (MRPG) discusses the connections between urban greenways and wildlife corridors and details the range of trail types that might be considered in that context (*Attachment 11*). Section 15-198 of the Land Use Ordinance details the Town's open space requirements, which were developed to preserve open lands, environmentally sensitive areas, wildlife habitat, significant cultural resources, and provide areas for passive recreation (*Attachment 12*).
- c. **Transportation, including bicycle, pedestrian; Consideration of trail types.** See also the MRPG report noted above for its discussion of trail types in relation to use. An excerpt of the Town's *Recreation and Parks Comprehensive Master Plan* that describes the Morgan Creek and Bolin Creek greenways and discusses the types of trail improvements that might be provided is attached (*Attachment 13*). Details and descriptions of trail types and functions from greenway plans in Durham and Chapel Hill are included in *Attachment 1*.

To a large degree and as was noted in earlier reports on this topic, the Town has utilized an array of policies, regulations and strategies to formulate and implement greenway planning.

Physical implementation the Town's greenway trail planning efforts to date have occurred as part of the development approval process (e.g. Lake Hogan Farms and Winmore) or funds have been sought from transportation sources. The Morgan Creek Greenway West trail project was identified for funding in 2003 through the Durham Chapel Hill Carrboro Metropolitan Planning Organization as easements had been obtained along the creek in relation to development approval over the past 20 years. With a budget of \$ 50,000, the design/development planning process has been envisioned as one that would utilize a

greenway planning consultant, would involve citizen, advisory board and staff participation, and would result in a detailed plan for trail usage.

This is principally a technical, design exercise. The resulting plan would include details and locations of trail surface(s), determined based on factors such as level and type of expected use, construction and maintenance costs, funding sources. The plan would also include details on points of access and connectivity. This process is seen as distinct from both the update of the greenway component of the Town's *Recreation and Parks Comprehensive Master Plan* and any activities that might occur in association with the proposal for a Bolin Creek Open Space Corridor Master Plan.

Attachments:

1. Reformatted October 28, 2003 Staff Report
2. Reformatted November 11, 2003 Staff Report
3. November 11, 2003 Staff report on the request from the Friends of Bolin Creek
4. November 11, 2003 Statement of the Friends of Bolin Creek
5. ERCD Report on the Adams Tract and the Possible Master Plan for Bolin Creek
6. November 25, 2003 letter from Friends of Bolin Creek
7. Excerpt of the Inventory of the Natural Areas and Wildlife Habitats of Orange County, North Carolina
8. Excerpt of the Facilitated Small Area Plan for Carrboro's Northern Area
9. Natural Constraints Map, referenced in Article XIII of the Town of Carrboro Land Use Ordinance
10. A Landscape with Wildlife for Orange County, Part I (excerpt) and Part 11
11. Section 15-198 of the Town of Carrboro Land Use Ordinance
12. Excerpt of the Recreation and Parks Master Plan
13. Excerpt of the Report of Master Recreation and Parks Group



TOWN OF CARRBORO

NORTH CAROLINA

STAFF REPORT

PLANNING DEPARTMENT

**To: Steven Stewart, Town Manager
Mayor and Board of Aldermen**

From: Patricia J. McGuire, Planning Administrator

Date: October 23, 2003 (Reformatted December 10, 2003)

Subject: Greenways

October 28, 2003 Agenda Elements have been included here.

PURPOSE

The 2003 Action Agenda Project list includes the task "Greenway Plan Update." A report on this matter has been prepared for the Board of Aldermen. A resolution that accepts the report is recommended for the Board's adoption.

INFORMATION

The first reference to an open space network for the Town of Carrboro and other jurisdictions in the Triangle region dates to 1969 when the Research Triangle Regional Planning Commission presented the results of a multi-year planning effort. The plan included a Development Guide that focused, to a large degree, on the provision of open space to "facilitate the building of an excellent future." The guide outlined a network of permanent open spaces that extended and diffused throughout the region and that were afforded status similar to networks for transportation and utilities, yet the network would include both connected and isolated components. The guide focused on two primary spines for "contiguous open space network" and those spines were the Neuse and the Cape Fear Rivers, but also relied heavily on the expectation that other areas would be needed to provide the "vital ingredient of continuity between the major areas."

Carrboro is one of the smaller towns located within the Research Triangle region, yet it is marking its third decade of progressive land use planning. The Town has consistently enacted land use policies and regulations to ensure that new residential development incorporate natural areas for passive recreation and preservation. Open space requirements incorporated into the Town's Land Use Ordinance in 1980 targeted certain

natural areas for preservation, emphasizing the potential for contiguous tracts to ultimately create open space corridors. Throughout the 1980s, Town staff worked with developers to designate areas, generally along stream corridors, as open space that was offered to the Town for dedication in the course of Conditional Use Permit review.

With the development of a Master Parks and Recreation Plan in 1994, the major stream corridors associated with Bolin and Morgan Creeks were identified as the basis for a Town greenway system. In the 1995 revisions to the Land use Ordinance open space provisions that established the 40 percent requirement, these contiguous corridors were further designated for open space preservation. The Facilitated Small Area Plan for Carrboro, adopted in February 1999, expanded the area of interest for Town greenways to include the upper reaches of Bolin Creeks and its tributaries. Amendments in 1999 enhanced corridor preservation through the mandate that primary conservation areas, including floodplains, stream buffers and steep slopes, if present must be included in the 40 percent open space set-aside. A discussion of these activities and the status of greenway planning in the Town is detailed in the attached staff report (*Attachment B*).

FISCAL IMPACT

Acceptance of the report carries with it no known fiscal impacts.

ADMINISTRATION'S RECOMMENDATION

The Administration recommends that the Board of Aldermen adopt the resolution accepting the report (*Attachment A*).

October 23, 2003 Staff Report begins here.

Introduction.

Edward McMahon, of The Conservation Fund in the foreword to *Greenways: A Guide to Physical Planning and Development* (1993) describes greenways in the following way [emphasis added]:

Less expensive, more expansive and flexible than traditional parks, greenways provide a trail system for the everyday outdoor activities that Americans are pursuing close to home...They can also provide pathways for people commuting to and from work by providing an alternative to the automobile...Greenways can also serve as movement corridors for wildlife and can be established on private land, with an understanding that they are limited to protecting a scenic vista or historic site...*are really links in a chain of opportunities that begin in our own backyards.*

In many instances, greenways are a network of corridors that connect areas of open space. Each segment of the network serving at least one of several possible functions, including

- 1) Riparian buffer/water quality protection,

- 2) Wildlife/ecological corridor,
- 3) Linear park, with or without formal recreational facilities,
- 4) Alternative transportation route.

A map showing the boundaries of Carrboro's jurisdiction, of the major creek basins and of public and private open space and parks is attached (**Attachment 1**). This map illustrates that there are numerous opportunities for greenway corridors that can achieve the functions noted above.

What is the regional context and the history of the Town's greenway planning?

The table below summarizes events and activities that provide the regional and local context for greenway planning in Carrboro.

Date	Action
1969	<i>Development Guide</i> . Research Triangle Regional Planning Commission. This Triangle-wide planning effort sought to identify development trends and opportunities for early action to develop appropriate public water and sewer services and a regional open space network.
1970	<i>Land Use Study. Brief description of Bolin Creek basin</i> . Emphasis on Morgan Creek due to water and sewer facilities located in that watershed.
1970	<i>Community Facilities and Land Development Plan</i> . "Stream valleys have great value as protection areas between residential areas... Carrboro should adopt a policy of stream valley open space preservation and acquisition." The report did not include any proposals for corridor preservation along Bolin Creek.
1980	<i>Neighborhood Parks and Greenways System Plan (NPGSP)</i> . Greenway along Bolin Creek is proposed from Estes Drive to Seawell School Road, with acquisition options provided (in association with development applications) in a corresponding land use ordinance provision. Two purposes for developing a greenway are noted: 1) preserving natural ecological processes, and 2) providing low cost recreation areas. Due to community concerns noted in a public hearing on May 10, 1983, the Board of Aldermen removed the Greenways Plan from the NPGSP.
1980-1989	Bolin Forest, Phases I-IV approved for development along Bolin Creek. Stream buffers established and public pedestrian easements dedicated along creek in association with Phases III and IV.
1983-1987	Fox Meadow subdivision approved for development along Bolin Creek. Dedication of public open space/greenway along Bolin Creek to Orange County.
1984	Spring Valley approved for development along Bolin Creek. A pedestrian easement was dedicated for public use within approximately 1.3 acres of private open space along the project's Bolin Creek frontage.
1985	Cobblestone subdivision approved for development along tributary of Bolin Creek. Private open space established along tributary.
1985	Wilson Park I, II condominiums approved along tributary of Bolin Creek. Fair Oaks, Sudbury and Waverly Forest also approved along tributaries of Bolin Creeks.
1987	Highlands I-IV approved for development along tributary of Bolin Creek
1987	Buffer requirements for streams located outside of the University Lake watershed enacted.
1987	<i>Joint Planning Area Land Use Plan</i> establishes Town planning jurisdictions and Rural Buffer. Bolin Creek basin defines Carrboro's additional planning jurisdiction not already included in extra-territorial jurisdiction established in 1950s.
1985-1991	Sewer line extended north to serve the Highlands and Camden subdivisions.
1988	Quarterpath Trace subdivision approved along a tributary of Bolin Creek.
1989	<i>Inventory of the Natural Areas and Wildlife Habitats of Orange County, North</i>

Date	Action
	<i>Carolina.</i> Narrow, upland stream valley, along the Bolin Creek stream corridor, from Estes Drive to Homestead Road, is included in the inventory as it represents on the "few remaining wooded stream corridors in the vicinity of Chapel Hill and Carrboro." Recommendations for management or protections state: "This site might be best protected by assigning it a status of a "natural area" within the greenway system." Inclusion of approximately 150 acres in this category is noted, as the minimum needed to protect the area's natural and aesthetic qualities. The report recommends that the Morgan Creek stream corridor be designated as part of a network of wildlife corridors.
1989	<i>Year 2000 Task Force Report.</i> "The town should encourage and contribute to the development of greenways or parklands along streams and easements dedicated to public use. These areas should be preserved as much as possible in their natural state."
1990	Meadow Run subdivision approved along a tributary of Bolin Creek (on-site).
1990s	Water quality monitoring of Bolin Creek initiated in a joint effort with the Town of Chapel Hill.
1991	Wexford subdivision approved along a tributary of Bolin Creek.
1992	Cates Farm subdivision approved along a tributary of Bolin Creek. Greenway/open space along tributary of Bolin Creek dedicated to the Town.
1993	Arcadia subdivision approved along a tributary of Bolin Creek. No public greenway dedication.
1994	Lake Hogan Farms subdivision approved along Bolin Creek. Extensive stream buffers and greenways established for public dedication along creek and lake. William's Woods at Cates Farm and Tupelo Ridge approved along tributaries of Bolin Creek, without dedication.
1994	<i>Recreation and Parks Comprehensive Master Plan.</i> Proposal for the "Bolin Creek Greenway," a seven-mile, off-street trail to extend from Estes Drive, up Bolin Creek around Hogan Lake and connecting with a proposed park on Union Grove Church Road. Acquisition of property along greenway corridors was identified as a priority for development throughout the 20-year planning horizon of the document. The Morgan Creek greenway is envisioned to be approximately three miles of off-street greenway from Smith Level Road to University Lake, with connections along a Morgan Creek tributary to the proposed South Community Park. The greenway is also to connect to Chapel Hill's planned greenway along Morgan Creek and eventually connect University Lake with the North Carolina Botanical Garden.
1995	Sunset Creek subdivision approved along a tributary of Bolin Creek.
1996	Tupelo Ridge II and Highlands North subdivisions approved along tributaries of Bolin Creek (on-site wells and septic).
1997	The Cedars at Bolin Forest subdivision approved along a tributary of Bolin Forest.
1997	<i>A Landscape with Wildlife for Orange County.</i> Recommends preservation of prime forest areas and wildlife corridor connections between these areas. 500-foot buffers are recommended around prime forest areas located in the northwest corner of Carrboro's planning jurisdiction.
1998	<i>Chapel Hill Greenways: Comprehensive Master Plan.</i> Effort to formalize greenway planning activities that begun with the 1985 Greenways Task Force Report, the comprehensive master plan evaluates existing conditions identifies needs and specifies an action plan to create a system of greenways in Chapel Hill. The plan recommends the construction of an improved woodland trail from the east side of Estes Drive, where the creek enters Chapel Hill's jurisdiction, to Village Drive off Umstead Road.
1999	<i>Facilitated Small Area Plan for Carrboro's Northern Study Area.</i> Bolin Creek floodplain is included among the northern study area's unique, natural areas. Aside from descriptive information related to park sites/greenways that are planned along the creek, the plan includes references to Bolin Creek within a number of its goals, including: identifying strategies for acquisition/dedication to protect the creek, and including as a long-term goal, the connection of Homestead Road at Lake Hogan Farms to the Bolin Creek greenway via drainage channel or stream bed.
1999	<i>Report of the Master Recreation and Parks Works Group.</i> As stated in the Executive Summary, the report was prepared by a group of citizens and staff from throughout the

Date	Action
	County to "follow up on two reports: a 1996 Assembly of Governments report "Recreation and Parks Issues in Orange County, NC", and a May 1997 report entitled "Coordination of Parks and Recreation Services for Carrboro, Chapel Hill and Orange County", developed by the area Managers." The report assessed needs, which, in Carrboro, included "begin acquiring property along Morgan Creek and Bolin Creek Greenway corridors and start developing facilities where possible. Accept all previous offers of dedication and easements." A map was prepared in association with the report recommendations that depicted existing and proposed greenways and rural wildlife corridors. The Town's proposed Bolin Creek greenway, as shown in the NSA plan, was shown as connecting with Duke Forest's Eubanks Road tract, a designated "rural wildlife corridor."
1999	<i>Orange County Lands Legacy</i> Includes criteria that are to be used for distribution of bond funds for public acquisition of open space, greenways, and riparian corridors. One of the acquisition criteria is "Promotes continuity of wildlife corridors, greenways and linear parks."
1999	<i>Rating Land in Orange County by its Wildlife Value – A Landscape with Wildlife: Part II.</i> Report presents a methodology for evaluating land as habitat for native wildlife in Orange County. Based on 1988 aerial photography, forested areas were assigned intrinsic (features of the tract only) and contextual (relationship of surrounding uses to the tract) ratings for wildlife value. The highest total ratings for forested areas within Carrboro's jurisdiction were assigned to areas in the Morgan Creek watershed upstream, and surrounding University Lake. Some forested areas along Bolin Creek were also included in the ratings.
2000	<i>Carrboro Vision2020.</i> Policy recommendations are as follows: 1) The town should encourage and support the development of greenways and parklands dedicated to public use along streams and easements. There should be a network of connected greenways throughout the town. These greenways should serve as nature trails, biking and walking trails, wildlife corridors. All should protect our natural environment. 2) The town should practice and encourage ecologically sound and sustainable maintenance of open space, including parks and greenways
2000	<i>Cape Fear Basinwide Water Quality Plan.</i> Identified condition of all creeks and waterways in Cape Fear basin, including Morgan and Bolin Creeks. Creek segments in Carrboro found to be supporting their expected uses. Report noted that NPDES requirements would come into effect in early 2003.
2001	<i>Acceptance of Offers of Dedication for Public Access.</i> In accordance with the possible bond for parks and greenways, 38 offers of dedication that had been made to the town for public access since 1981 were identified. The Board accepted these offers of dedication.
2002	<i>Town of Chapel Hill Parks and Recreation Master Plan.</i> Chapel Hill's first formal master plan for parks and recreation. Previously community facility reports contained within the Town's Comprehensive Plan provided this information
2003	Pacifica development approved. Public access easements designated along existing driveway and sewer easements to branch of Bolin Creek.
2003	Winmore development approved. Public greenway trail to be constructed and 27 acres of open space along Bolin Creek and tributary corridors designated for public dedication.
2003	Funds for Greenways Planning for Morgan Creek and Bolin Creek included in Durham Chapel Hill Carrboro Metropolitan Planning Organization list (DCHC MPO) for Surface Transportation- direct allocation in FY 04 and 06, with funds allocated for construction in FY 06 and 08, respectively.

Has the Town defined a greenway?

Of the policy and planning actions that have occurred to date, the *Facilitated Small Area Plan for Carrboro's Northern Study Area* (NSA plan) provides the most explicit

descriptions of what greenways in Carrboro are expected to provide. It should be noted that the NSA plan greenway comments specifically relate only to the Bolin Creek basin. The NSA plan comments are excerpted as an attachment to this report (**Attachment 2**).

The policy statements included in the NSA plan principally emphasize the recreational aspects of greenways, although the transportation measures that call for coordinated planning, a multi-modal system, and exploring opportunities for landowner compacts for trail use are consistent with greenway purposes.

To date, the Town has not adopted a formal greenway plan, but greenway corridor locations have been designated in both the 1994 Recreation and Parks Master Plan and in the 1999 NSA Plan. Maps from these documents showing the corridor locations are attached (**Attachment 3**).

What other policies and regulations affect efforts to develop greenways in Carrboro?

As noted in the timeline included above, the Vision2020 policies clearly direct Town action towards the development of greenways, particularly along streams and easements. A number of regulatory mechanisms of the Land Use Ordinance emphasize the natural area management/conservation aspects of greenways and others recognize the recreational and wildlife corridor opportunities. The following table presents a summary of these regulatory mechanisms.

LUO Section	Description
Section 15-50	Concept planning steers developers away from sensitive areas and promotes appropriate open space protection/natural areas preservation from the inception of a development's design. Caveat: currently only applies to major subdivisions -- not unified residential projects or non-residential projects.
Section 15-182.3	Density reduction factors help create "appropriate density levels" on many properties in relation to the amount and types of sensitive lands present.
Section 15-186 and 187	Cluster and AIS generally allow for greater preservation of open space and natural areas preservation.
Section 15-198	Open space provisions, in their entirety, work to preserve properties that are developed for residential purposes, especially 15-198(e), which requires preservation of primary conservation areas that include stream corridors, steep slopes and wooded areas. Caveat: currently only apply to residential projects.
Section 15-254, 265, 266, 267, 268, and 269	Floodplain construction restrictions, stream buffers, impervious surface limitations, etc, all limit the use of sensitive lands and result in the preservation of these areas, many of which are linear corridors and highly suitable to support the multiple functions desired of greenways.
Section 15-263	Stormwater treatment requirements work to encourage developers to put as little impervious surface on a site as is feasible
Section 15-316	Retention of large trees, protection of trees during construction, requirements to replace trees that do not survive.

How are desired purposes for a greenway selected?

Development needs, including corridor width, trail construction, signage, other infrastructure (e.g. restrooms and water fountains) are linked to the community purpose that has been established for any greenway. Typically these choices occur in conjunction with an assessment of the conditions of the entirety of the proposed greenway location. The greenway planning process is illustrated in a chart from *Greenways: A Guide to Planning, Design and Development* (1993) that is attached (**Attachment 4**). A report on environmental issues associated with the multiple functions of greenways prepared by former Environmental Planner, Phil Prete, is attached. The trail design sections found within the Durham (2001) and Chapel Hill (1998) greenways plans illustrate the range of approaches that may be used in determining trail options. The report and plan excerpts are attached (**Attachment 5**). Please note that there are examples of projects where the construction costs for concrete trails have been lower than for asphalt.

Findings

For a number of years the Town has utilized a coordinating policy and implementing regulatory approach to deciding on how to proceed with most of its activities. This approach allows a full range of policies and regulations, adopted by the Town, by neighboring jurisdictions, and by other organizations or governmental agencies, such as the Orange Water and Sewer Authority, the University of North Carolina, the Division of Water Quality, the Clean Water Management Trust Fund, to be given full consideration. The documents noted in this report, *Carrboro Vision2020*, the NSA Plan, the *Land Use Ordinance*, the *Recreation and Parks Master Plan* provide all but the design and development plans for much of the greenway corridors that have been designated to date.

Other approaches are available, such as comprehensive or strategic planning, as are opportunities to expand the greenway system through information gathering or community participation (e.g. updating the *Recreation and Parks Master Plan*), and to designate links to other networks (e.g. sidewalks and bikeways). Though the policy-regulatory approach has characterized greenway planning to date, efforts to acquire land, easements and funds have been fairly successful. The ongoing process of land development has yielded dedications of the bulk of the land needed for corridor development along the main channel of Morgan Creek from Smith Level Road to University Lake, and all of Tom's Creek between NC Highway 54 and Jones Ferry Road. Dedications have been made along Bolin Creek as well. The attached map illustrates these locations (**Attachment 6**).

It is evident that the bulk of these acquisitions have emphasized providing public access for recreational and transportation purposes. The Town's expanded open space requirements have largely increased the natural areas set aside along streams and creeks and likely result in corridor widths that are consistent with other greenway functions. It should be noted that public access along Bolin Creek near the Bolin Forest and Spring Valley subdivisions is very narrow and is masked by the other map features.

Funds are available (\$40,000) to the Town in the current Federal fiscal year, via the DCHC MPO's adopted funding plan for planning the Morgan Creek West greenway

(Attachment 7). This project follows on Chapel Hill's recent planning for the eastern portion of the Morgan Creek East greenway, construction of which is to occur this year as well. The Morgan Creek West Greenway planning project will require a match from the Town of approximately \$ 8,000.

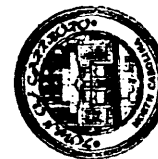
Attachments

Town of Carrboro and Creek Basin Boundaries

- Existing/Future Parks and Private Open Spaces
- Streets
- Carrboro Planning Boundary
- Carrboro Town Limits
- Chapel Hill Planning Boundary
- Chapel Hill Town Limits
- Lakes and Ponds
- Streams
- Basin
- BOLIN CREEK
- BOOKER CREEK
- MORGAN CREEK
- Text Road Names (Major)

Note: Data on parks and open space
verified in Carrboro's jurisdiction only.

ATTACHMENT 1 - 9



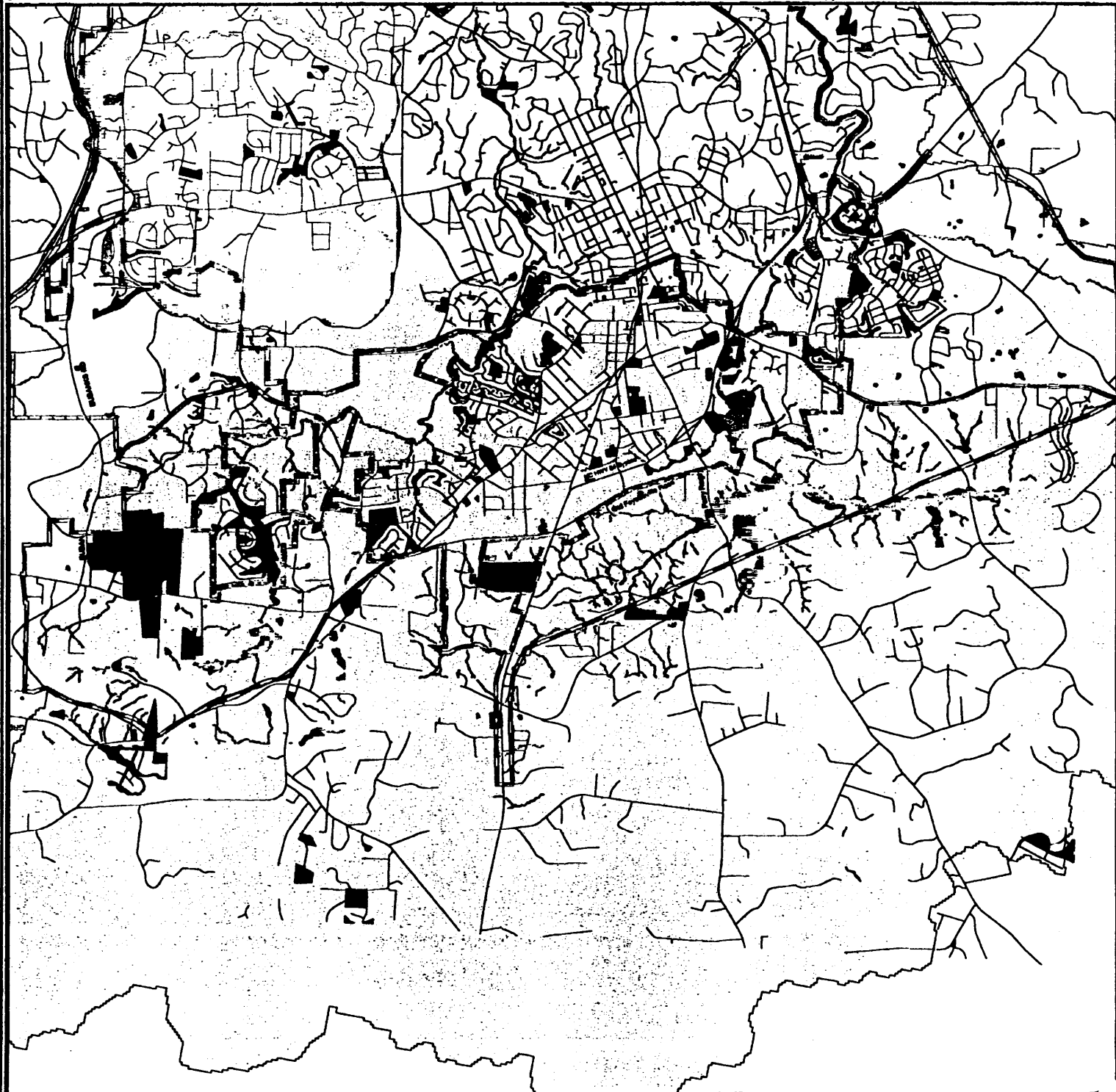
TOWN OF CARRBORO
361 W. Main St.
Carrboro, NC 27510

24 October 2009
Pete McClean, Planning Department
200-7774

THIS MAP IS NOT A CERTIFIED SURVEY AND IS FOR REFERENCE ONLY.
The user must be aware of data conditions and ultimately bear the responsibility for the information and any possible errors, omissions, or inaccuracies. Carrboro, NC and other conditions apply.

1100 0 5100 Feet

NC State Plane Coordinate System (NAD83)



subdivisions through design standards for building design and for neighborhood layout.

- **APPROPRIATE DENSITIES:** Cap densities for market-rate housing at 3 dwelling units per acre that bonus densities of 4 to 5 dwelling units per acre could be offered while still allowing for a minimum of 40 percent of the developable land being designated as open space (connected with the Town-wide greenway network).

4.3 Support community land trust efforts for the provision of affordable housing.

In line with the recommendations of Carrboro's Community Land Trust Study, the formation of a local community land trust should be actively supported by the Town. In addition to approaching potential local non-profit housing agencies, Carrboro should support the dedication of, or simply designate, a portion of the area's affordable housing budget to the support of such a land trust.

GOAL 5: A VARIETY OF TRANSPORTATION ROUTES, WHICH ALLOW FOR PUBLIC, PRIVATE, BICYCLE, AND PEDESTRIAN MODES OF TRANSPORTATION.

MEASURES:

5.1 Implement the Connector Roads Plan Concept.

See Appendix B for plan details.

EUBANKS ROAD: Re-examine policy to extend Eubanks Road as a vehicular thoroughfare in the location shown on official documents, which might be more appropriate as a rustic trail. Do not locate the extension of Eubanks Road as proposed by the Draft Small Area Plan but preserve the idea of connectivity in the general vicinity without undue disturbance to existing residents or areas of high resource value.

ROAD WIDENING: Adopt policy to encourage shifting rights-of-way to save distinctive features of the landscape (such as a line of shade trees) where ever feasible.

STREET CONNECTIONS BETWEEN LAKE HOGAN FARM & THE HIGH SCHOOL: Such street connections should not be through existing subdivisions because an alternative route is feasible, linking Lake Hogan Farm with Homestead Road across several largely undeveloped properties on a northwestern/southeastern axis. Bike route connections using existing neighborhood streets are recommended in this area. The Town should proactively contact the owners of properties needed for the above mentioned alternative street connection to explore the possibility of pre-planning such a route, possibly utilizing the approach known as the "landowner compact" (See 9.4)

5.2 Implement the Carrboro Bikeways Plan.

5.3 Follow required sidewalk policy in the Land Use Ordinance.

5.4 *Coordinate transportation planning for the Study Area with Chapel Hill and other relevant agencies.*

With the concurrent development of Chapel Hill's Northwest Area, the University's Horace Williams tract, and Carrboro's Study Area, one can expect significant changes in traffic levels and patterns in the area within the next 15 years. To ensure that transportation planning in the area takes "the big picture" into account, Carrboro should strongly encourage the coordination of transportation planning in the area with other involved parties. Carrboro should also continue to actively participate in regional transportation planning efforts. If commuter rail service is planned for the area at some point in the future, the service should be closely coordinated by involved parties.

5.5 *Promote coordination between developers for the planning of bicycle, pedestrian, transit, and automobile transportation routes.*

Incentives should be provided to developers for linking these transportation routes. Emphasis should be placed on making these routes publicly accessible. Currently developers are awarded points for the provision of facilities such as tennis courts and swimming pools in their developments. The points awarded for the provision of bicycle and pedestrian pathways should be increased, with even higher points awarded to pathways that connect to other networks. The findings of the American Lives Survey indicate that consumers highly rank natural open space, as well as walking and bicycle paths, in their preferences for development amenities. (Source: "American Lives Survey Analysis", prepared by Diane Schrauth, January 16, 1995.)

5.6 *Incorporate transportation concepts which support mixed-use development.*

Provision for the traditional mode of transportation by automobile should be balanced with provision for other modes, such as bus, pedestrian, and bicycle travel. Automobile access should not preclude the uses of other modes of transportation. This can be controlled by locating automobile access in the rear of buildings, revising roadway design standards, and limiting the provision of parking spaces while providing for convenient bicycle, pedestrian, and transit access to buildings. Mixed-use style development should ensure that distances between residences and commercial, office, and civic centers will not require the use of automobiles in all instances.

GOAL 6: *ADEQUATE PROVISION OF PUBLICLY ACCESSIBLE PARKS AND RECREATION FACILITIES.*

MEASURES:

6.1 *Follow the recommendations of the Recreation and Parks Comprehensive Master Plan.*

- 6.2** *Provide or increase incentives for developers to dedicate land or facilities for public park and recreational use.*

Incentives such as density bonuses, awarding points, and tax incentives that would encourage the dedication of land and/or facilities for public use should be explored.

- 6.3** ***REQUIRE CONSERVATION LAND TO INTER-CONNECT:** Establish design standards for the open space in new subdivisions, so they will eventually coalesce to create an interconnected network of protected lands as greenway corridors.*
- 6.4** ***COMPLETING THE LOOP:** Extend the proposed greenway trail link westwards from the North Community Park generally along the line currently shown in the Draft Plan as a Eubanks Road extension and then southerly to connect ultimately with a tributary of Bolin Creek. This trail and others closer to population centers in Carrboro should be considered for accessibility by the physically handicapped.*
- 6.5** ***CONNECT HOMESTEAD ROAD AT LAKE HOGAN FARMS WITH THE BOLIN CREEK GREENWAY:** Implement this connection along a drainage channel or stream bed running through several existing subdivisions, as a long term goal.*
- 6.6** ***SUBSIDIARY GREENWAY TRAILS:** Require developers of new subdivisions to lay out and construct neighborhood trails through their new developments in such a way that they will connect with and extend the Town's more formal greenway network.*
- 6.7** ***HORACE WILLIAMS TRACT:** The Town should aim for more than a small 10-acre park on this large tract by proactively encouraging the owner to think more creatively and to plan to accommodate all the permitted density to be situated east of the creek, where the land is actually much more suitable for development. A defacto density bonus could be offered by agreeing to calculate the density to be transferred from west of the creek to the eastern area on the basis of gross acreage on the western bank, rather than on net developable land.*
- 6.8** ***EXPERIMENTAL TRAILS:** New trails should be designated as "experimental" with a defined period for evaluation and abandonment, in situations where abutters register concern about litter, vandalism, privacy loss, etc..*

GOAL 7: CONTINUATION OF CARRBORO'S SMALL-TOWN CHARACTER AND PRESERVATION OF ITS EXISTING NEIGHBORHOODS.

MEASURES:

- 7.1** *Require new development to mitigate impacts from traffic, noise, lighting, and other sources on existing neighborhoods, to the extent practicable.*