

# Chapter 4: Implementation Program

Because of the expense, private property issues, and comprehensive nature of this effort a phasing program is required for successful implementation. The Rolesville Open Space and Greenway System can be broken down into three primary phases of future development in order to be executed in a manageable manner.

## Phasing

### Phase 1

Phase 1 focuses on the existing infrastructure and on-line planned projects. First, establish stream buffer zones on the six stream corridors: Harris, Sanford, Tom's, Buffalo, Cedar Fork, and Perry Creeks. This buffer zone will protect the water quality, provide protected wildlife corridors, and begin the establishment of greenway corridors. Second, the implementation of scenic road corridor designations for Rogers Road, Chalk Road, Quarry Road, Jonesville Road, Burlington Mills Road, and Main Street. The establishment of these corridors provides a buffer for the scenic view sheds of Rolesville. Included is the establishment of bike routes on Rogers, Chalk, Quarry, and Jonesville by signage and/or bike lanes. Third, purchase parcels for the first satellite park, Main Street Park, and develop this facility. This park and facility is an important piece in the Rolesville Greenway Open Space Plan due to its location at the head of Sanford Creek. Fourth, begin establishment of the Main Street Trail thru development of pedestrian and bicycle facilities and a beautification program.

### Phase 2

Phase 2 is much broader and involves a number of tasks. The expansion of Rolesville Park into a central park is the focal point of this phase. The central park will become an important community amenity for the citizens of Rolesville in the future and an active recreation park. The inclusion of Parker Pond will provide a natural educational learning center for the elementary school as well as a terminus for the Harris Creek Greenway Trail.

Harris Creek provides Rolesville with the best and easiest option for establishing a greenway. The Harris Creek Greenway Trail will begin at Parker Pond in the central park and have the possibility of connecting into the Raleigh greenway system. In addition, a Nature Trail Loop from Parker Pond, along Harris Creek Greenway Trail, looping back to the

central park will be added. This trail will afford elementary school classes the opportunity to take educational nature walks and provide the Rolesville community a shorter trail experience. The Granatic Rock Greenway Trail will begin at the central park and be part of the planned development along the western branch of Harris Creek. This trail will run south eventually connecting with the Harris Creek Trail. All three of these trails will have connections to any trails planned within the new development. The benefits the Harris Creek Greenway Trail, Granatic Rock Greenway Trail, and the Nature Trail provide are storm water management, buffering for water quality and wildlife, educational opportunities involving the elementary school, and buffering from neighborhoods and pending development.

As a final location is decided on for the 401 bypass corridor conversations should begin with NCDOT on providing five greenway trail underpasses along the corridor and development of the Bypass Greenway Trail on the edge of the right of way. The Bypass Greenway Trail provides the opportunity to easily connect five of the seven main greenway trails to be implemented. This affords the opportunity to provide the only east-west connection and would be a high profile amenity for Rolesville and its surrounding southern neighborhoods.

### Phase 3

Phase 3 involves development of the Sanford Creek Greenway Trail and establishment of the satellite parks. The Sanford Creek Greenway Trail will provide an alternative transportation connection to Wake Forest and ultimately the Neuse River via Smith Creek. This will require cooperation and on going coordination with the Town of Wake Forest. In addition this corridor affords the opportunity to protect some of the most pristine land in Rolesville. The Sanford Creek Greenway Trail would begin at the proposed park on Main Street, cross Rogers Road at the old mill and continue to Smith Creek.

Phase 3 establishes the remaining seven satellite parks and develops their facilities and establishes one Natural Area. Five of the satellite parks will be passive recreation areas designed for wildlife watching and picnic activities, while two will have active recreation. The two parks on Harris Creek and the one on Tom’s Creek will include large wetland areas which will provide wildlife protection, wildlife viewing, water quality and storm water management. The park on Sanford Creek at Rogers Road will be designed around the historical significance of the old mill and spillway. The Granatic Rock Natural Area will preserve one of the largest examples of this natural phenomenon. The park to be developed along Perry Creek will provide a neighborhood park for northeast Rolesville. The seventh and eighth satellite parks will be active recreation parks. One will be developed in a partnership with Wake Forest off Jones Dairy Road and the other will be located off Burlington Mills Road. All of the satellite parks would serve as destination points on the greenway system and provide opportunities to preserve the surrounding beauty, enhance the quality of

life, and establish community gathering places.

It should be mentioned here the importance of establishing the stream buffer zone for all five stream corridors. Harris Creek and Sanford Creek provide the near future opportunities for Rolesville to establish greenways, however, Tom's Creek, Buffalo Creek, and Cedar Fork could present opportunities sooner than expected depending on funding opportunities, development, and connectivity.

In establishing these buffers the Neuse River rules need to be followed as a minimum in all cases. This requires that new development maintain an existing 50 foot vegetated buffer on both sides of all intermittent and perennial streams, lakes and ponds in the Neuse River Basin. This required buffer consists of two zones: a 30 foot undisturbed zone adjacent to each side of the water body, and a vegetated zone that extends from the outer edge of the 30 foot zone for a distance of at least 20 feet.

Some local governments have expanded the buffer requirements to a 100 foot buffer on all perennial and intermittent streams on the latest version of the USGS 7.5 minute topographic quadrangle. We recommend that the Town of Rolesville go beyond the minimum requirement of 50 foot buffers and continue its progressive planning for the future by adopting an ordinance that requires 100 foot buffers on all intermittent and perennial streams, lakes and ponds.

Two important issues for the Town to consider while designing greenway facilities are the surface types of trails and the width of trails. These two variables will greatly affect the cost of installing and maintaining this system. When determining the width of greenways the Town should consider the safety of the user groups for which the trail will be built. We recommend a minimum trail width of 10' for any facility intended for bicycle use. This allows enough room for cyclists traveling in opposite directions to pass each other comfortably. An 8' minimum width is recommended for walking/jogging/hiking trails.

There are several different surface types that could be used to build the Rolesville Greenway System. The following descriptions briefly explain some of the trail surface types that can be considered for this greenway system (see design guidelines for specifications).

### Asphalt Trail

The most popular surface to use in flood-prone landscapes is asphalt. It is a durable, flexible pavement surface that is cost effective to build, relatively easy to maintain if built correctly and provides a surface that can be used in all seasons.

The key to developing asphalt trails is to make certain that the sub-grade and sub base are properly built. The asphalt surface is a reflection of how

## Neuse River Buffer Rule

## Greenway Trail Types

well the sub base and sub-grade have been constructed. Asphalt trails can also be cost effectively built by using recycled materials.

### Concrete Trail

Concrete trails are an excellent choice in urban landscapes and, again, in flood-prone areas. Concrete trails are generally more expensive to build than asphalt trails, however, they are easier to shape and mold to a particular site. Concrete can be colored, imprinted, shaped, hand formed and poured-in-place. It is a very durable surface and generally has a longer life expectancy than other surfaces.

### Natural Surface Trail

Natural surface trails can consist of many different surface materials including gravel, soil cement, wood mulch, or dirt. While they are easily and inexpensively installed, they are not recommended for floodplain environments as they will require more maintenance than asphalt and do not last nearly as long. Natural surface trails often have a wood, brick, or similar edging to help define trail edges and contain surface material.

### Boardwalk Trail

Boardwalk trails, while expensive, are often necessary to traverse poorly-drained and wetland areas. They are typically built of pressure treated lumber but can also be constructed of recycled plastic lumber. Boardwalks can be built in a variety of styles depending on the intended user groups. A boardwalk intended for bicyclists and pedestrians should be at least 10' wide (preferably 14' wide) with 42" high safety railings. Boardwalks, intended for pedestrians only and placed low to the ground, do not need to be as wide (8'-10') and can be built without railings, therefore greatly reducing construction cost.

## Summary Action Plan

The following Action Plan for the Rolesville Open Space and Greenways Plan describes the Plan's overall implementation strategy, identifies twelve objectives to accomplish that strategy and recommends 33 actions to accomplish those objectives.

Implementation of this plan requires the cooperative effort of a variety of public and private organizations, and involves implementation by landowners and citizens, as well. It is the intent that this plan be fully implemented over the next 10-20 years. However, some of the long range actions, principally those involving water quality, are complex and may take time to implement. Therefore, an important part of this plan's implementation will be identifying which actions should be initiated immediately and which should be pursued at a later date. The following outline fulfills this need by providing a priority for implementation for each action.

It is important to note, however, that many actions can be pursued simultaneously. The list is intended to provide general direction only, and long-

range actions should be implemented immediately if conditions are favorable.

## Short Range Actions

(Initiated within the first five years of plan implementation)

- I) Objective: Establish a greenway corridor and stream buffer zone for all major streams
  - A) Initiate new land acquisitions for greenway preservation and trail development
  - B) Initiate new conservation easements on selected properties
  - C) Initiate acquisition/protection of vacant properties within the greenway boundary
  - D) Increase public education and technical assistance to property owners
  - E) Encourage protection of streamside trees and vegetation
- II) Objective: Establish scenic road corridor designations
  - A) Initiate bike route designation for all scenic road corridors
  - B) Establish bike route signs and /or bike lanes on corridors
- III) Acquire Main Street park properties (first satellite park)
  - A) Develop attractive pocket park on the Main Street parcel.
  - B) Develop second parcel for active recreation
  - C) Develop Recreational Community Center
- IV) Objective: Establish central park
  - A) Initiate acquisition of adjacent land
  - B) Implement Nature Trail Loop
- V) Objective: Develop multi-purpose recreational trails
  - A) Implement greenway trails along Harris Creek and Sanford Creek
  - B) Acquire property for regional trailheads and a water quality demonstration project
- VI) Objective: Improve water quality
  - A) Implement buffers along stream corridors
  - B) Acquire and/or protect parcels in water recharge areas, FEMA flood zones, and hydric soil areas
- VII) Objective: Restore natural areas
  - A) Implement restoration and demonstration projects
  - B) Protect stream banks and complete stream bank stabilization projects using environmentally friendly bioengineering techniques along creeks in areas which have the greatest erosion

- VIII) Objective: Reduce flood damages
  - A) Remove or relocate repetitively damaged structures from the floodway
  - B) Limit construction in the floodway by increasing buffers along streams

## Long Range Actions

(Initiated and/or completed within 10 years of plan adoption)

- I) Objective: Develop a multi-purpose recreational trail
  - A) Implement greenway trails along Tom's Creek, Buffalo Creek, and Cedar Fork Creek
  - B) Acquire property for regional trailheads
  - C) Encourage coordination with developers on trail improvement opportunities
  - D) Implement multiple use trailheads
  - E) Implement signage program
  - F) Install vegetative screening to shield selected land uses
- II) Objective: Establish seven satellite parks and one Natural Area
  - A) Spillway/Old Mill Park on Sanford Creek
  - B) Wetland Park on Tom's Creek
  - C) Two wetland parks on Harris Creek
  - D) Neighborhood Park on Perry Creek
  - E) Park Partnership with Wake Forest
  - F) Granatic Rock Natural Area
  - G) Recreation park off Burlington Mill road
  - H) Initiate acquisition of land
- III) Objective: Improve water quality
  - A) Increase water quality public education and technical assistance program
  - B) Work to minimize impervious surfaces and to improve infiltration
  - C) Acquire, restore and/or construct wetlands
  - D) Promote use of native vegetation
  - E) Use wetland detention basin designs or retrofit existing basins
  - F) Enforce erosion and sediment controls

- IV) Objective: Restore natural areas
  - A) Actively manage riparian zones and natural areas to control non-native species
  
- V) Objective: Reduce flood damages
  - A) Provide technical assistance to property owners to minimize impervious surfaces
  - B) Conduct annual stream maintenance to maintain stream channel conveyance