Village of Whispering Pines
Recreation and Open Space
Master Plan Report

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CHAPTER 1: INTRODUCTION

The Village of Whispering Pines contracted with the consultant team of obs landscape architects, Coaly Design, Clarion Associates, and Soil & Environmental Consultants to prepare a Recreation and Open Space Master Plan for the Village. The plan strategy and process included an environmental analysis, community involvement, planning, preparation of the master plan, and adoption of the plan by the Village Council.

VISION AND PURPOSE

The Recreation and Open Space Master Plan (ROSMP) provides a vision and identifies opportunities for future recreation facilities and for open space conservation for the land within the Village of Whispering Pines and its Extra Territorial Jurisdiction (ETJ). This vision and these opportunities will create an interconnected system of open space and recreation areas for the Village and to surrounding communities. This plan will serve as a guide for developers and policy makers to implement open space conservation and recreational development. This plan will also be used to apply for grants and other sources of funding to meet the Village’s needs.

EXISTING RECREATION AND OPEN SPACE IN WHISPERING PINES

Recreation is defined as a refreshment of the mind or body through an activity or hobby that amuses or stimulates. Existing recreation opportunities in Whispering Pines include but are not limited to: golf, water recreation, walking, biking, and fishing. Open Space can be defined as an area of land or water that remains in its natural state and is free from intensive development. Open space can also be described as publicly or privately owned and include managed land uses such as agriculture, forested land, or open recreation fields including golf courses.

Current Village regulations that facilitate the use of land for recreation and open space purposes as stated in the Land Development Ordinance are as follows: Section 5.3.1 REC – Recreational District – Promotes/permits use of land for recreational purposes, prohibits commercial and residential use of the land, except structures and commercial use necessary to support recreational purposes, prohibits any other use which could interfere with the use of land for recreational purposes, and encourages the discontinuance of existing uses which would not be permitted as new uses under the provisions of this recreational district. The areas identified in the ETJ by the ROSMP as recreation opportunities could be rezoned to the Recreational District.

Section 10.4 of the Land Development Ordinance requires the developer of any subdivision to dedicate to the Village or another entity formed for the purpose of maintaining open space not less than twenty-five percent of the gross acreage of the development for open space conservation.
PROCESS AND COMMUNITY INVOLVEMENT

The project team conducted an inclusive process that involved village residents, village staff, village boards and commissions, the Recreation and Open Space Committee, and staff members of surrounding municipalities to develop the Recreation and Open Space Master Plan. Community meetings were held to engage the residents, provide valuable information sharing, and determine community preferences.

The focus of the first Community Meeting was the presentation of the site analysis information as well as providing the first opportunity for Village residents to express their initial thoughts, concerns, opportunities, and ideas about open space and recreation needs in the Village. The residents present at the first community meeting participated in a survey to provide the consultant team information regarding open space and recreation preferences. After the meeting, the survey was also made available to all residents of the Village and within the Extra Territorial Jurisdiction to ensure all residents had an opportunity to provide feedback for the consultant team. A total of 317 survey responses (24% based on households) were received from residents. Survey results from the community meeting and mailed surveys are included in the Appendix of this report.

The consultant team summarized the data received from the community meeting and surveys, and combined it with site analysis information to develop the draft Recreation and Open Space Master Plan.

The consultant team held a second community meeting to present the summary of the survey comments and the draft Recreation and Open Space Master Plan. The plan was available at Village Hall for public review and comment after the meeting.

In summary, the majority of Village residents that participated in the survey expressed a desire for trails for walking, to conserve the visual quality of the Village, for recreation areas for small children, and a belief that open space is important to conserve in the Village. Residents also expressed concerns relative to funding for implementation of the plan and safety. These desires and comments are addressed in the following chapters of this report.
CHAPTER 2: SITE ANALYSIS

This land analysis summary of the Village and surrounding geographic area is a result of literature review, map analysis, and on-site visual observation of area conditions including; land forms, soil types, climate, vegetation, surface waters, and the ecosystems inherent to the area. The Village Site Analysis Map is included in the Appendix of this report.

REGIONAL CONTEXT

Whispering Pines is located in the southern half of Moore County which lies within the Sandhills Geologic/Soils System. This system extends into South Carolina and Georgia and is wedged between the coastal plain and piedmont geographic regions. Sandhills geology is unique in the Atlantic Coastal Plain. Although studied for many years, much remains to be learned about how the area was formed.

The formation is comprised of underlying rock with coastal sediments and eolian (windblown) sand deposits at the surface. The underlying formation seems to be of Cretaceous age (about 100 million years ago—(mya,) but has no fossils and the eolian sands and underlying finer sediments range from Holocene (10,000 years ago – after Pleistocene) to Tertiary (65–2.5 mya, after the dinosaurs).

PHYSIOGRAPHY

The physiography of Moore County is divided into two categories: the northern part of the County is in the Piedmont province, in the Triassic Basin and Slate Belt geologic types; and the southern part is in the Upper Coastal Plain province. Elevations in the greater Sandhills system range from about 230 feet to 720 feet. The Coats Scarp (where the ocean line was originally located) is located to the east of Moore County (at about 275 feet elevation.) The natural land forms consist of broad flats, rolling hills, dune systems, deep drainages, sideslope wetlands, coastal wetland floodplains.

Whispering Pines lies within the Cape Fear River Basin and the greater area consists of three main drainages which are: Deep River, Little River, and Drowning Creek. The sub-watershed for the Village is the Little River watershed generally between Mill Creek to the south and Nicks Creek/Little River to the north. The Little River and its tributaries are classified by the North Carolina Department of Water Quality as Water Supply Watershed III (WS III) and High Quality Waters (HQW.) Surface waters in the immediate area flow generally from the west to the east. Impounded lakes along river system include Thagard Lake on Little River and Shadow Lake, Pine Lake, Spring Valley Lake, Fly Rod Lake, Whisper Lake, and Blue Lake along tributaries to the Little River.

Sandhills area climate is generally hot and wet with about 50 inches of annual rainfall with frequent thunderstorms in warmer seasons. The coarse and sandy soils more easily release moisture to the air, which allows for a higher sensible heat flux than loam or clay-loam soils. This allows more energy to be used for heating...
the surface rather than evaporating moisture in the soil. Also, the heat capacity for sand is much less than that of clay or loam so that, given the same amount of energy, these sandy soils increase in temperature more than the loam or clay soils, resulting in local atmospheric heating and potentially more frequent storms.

**ECOSYSTEMS**

Ecosystem diversity in the area results from the sandy soils, high rainfall, and historic wildfires (mainly initiated by lightning strikes) which are now more suppressed. Dry, nutrient poor, sandy soils with high annual rainfall results in vegetation that is adapted to these harsh conditions (e.g. Turkey Oak and Longleaf Pine.) The limited diversity in the tall canopy is paired with high diversity in the understory. The longleaf pine/wiregrass systems in the Sandhills area may be the most diverse north of the tropics and includes rare plants and animals not found anywhere else. This diverse understory includes about 150-300 species of groundcover plants per acre. This understory is also home to more breeding birds (the Village is a designated bird sanctuary) than any other southeastern forest type and to 60% of the amphibian and reptile species found in the southeast. Most of the original Sandhills ecosystem throughout the Southeast has been destroyed, with only 3 million of the original 90 million acres remaining.

The plant and animal species common in this area respond to the soil and climate type of the Sandhills ecosystem. Longleaf Pine (all stages: grass, pole, mature), Loblolly Pine, Turkey Oak, Bluejack Oak, Post Oak, Sassafras, Persimmon, Dwarf Huckleberry, Wiregrass, Michaux’s Sumac, Lupines, Sandworts, Lichens, and Pixie Moss can be found in the sandy soils. In areas with a higher content of clay soil, there are more loblolly pines and diverse hardwoods. The Red-Cockaded Woodpecker, Sharp-Shinned Hawk, Fox Squirrel, Fox, Bluebirds, Rabbit, Quail, Pine Elfin Butterfly, Rat Snake, Scarlet King Snake, Carolina Anole are common animal, aquatic, and bird species found in the area.

Wetland ecosystems are present in the Sandhills area and in the Village both in the floodplain areas and along the lower side slopes where groundwater seeps to the surface. Side slope seeps contain Ericaceous shrubs such as, Pepperbush, Red Chokeberry, Inkberry, Sweetleaf, Huckleberry, and Bayberry. Floodplain wetlands range from poorly drained soils such as Wehadkee that contain Sweet Gum, River Birch, Yellow Poplar, Beech, Water Oak, Willow Oak, Common Reed, and Winged Elm to the more consistently wet soils such as Bibb which contain Black Gum, and White Cedar, and ponded areas containing Bald Cypress and Tupelo Gum.

**LAND USE**

The land uses in the Village and the surrounding ETJ that contribute to its open space and visual character generally consist of: 1) wooded areas, both managed and unmanaged forests, much of which is in floodplain, 2) managed open space such as golf course and lakes, 3) farmland consisting of pasture and meadow for horse operations and some limited cropland. These areas should be given a priority for open space conservation. These areas provide potential opportunities for recreation, incorporate animal operations and crop production, and provide much of the extraordinary visual character and quality specific to the area.

The residential land uses of the Village also provide a visual character that is unique to the Sandhills area. Also located throughout the Village are approximately 25 small park/garden areas that are maintained by the Village Garden Club.
CHAPTER 3: SUMMARY OF OPPORTUNITIES

Recreation opportunities identified by this plan include parks, greenways, children’s play areas, and flexible open space for conservation or low impact recreation.

RECREATION / PARK OPPORTUNITIES
Recreation opportunities in Whispering Pines currently include golf, walking and biking on Village roads, boating, and other water related activities. A diversity of recreation area types are needed in the Village to accommodate the changing demographic. The community survey included results which indicated a strong need for parks for all ages to use as recreation areas, including playgrounds. Active recreation activities such as court sports and athletic fields were indicated as a lower priority for the Village at this time as these needs are addressed by Moore County. Written comments within the survey results and community meeting participants very much support and encourage playgrounds for children in the Village.

Recreation / park opportunities identified on the plan include specific properties for park and playground development on Village owned parcels of land. These parcels were identified as potential sites because of their relative small size, location, available infrastructure, and potential for facilitated development. Uses for these parcels identified could be a small playground, a nature park, or recreation activities. The small parcels within existing neighborhoods could be used for community gathering spaces or small parks.

Recreation opportunities are also identified on privately owned land in the ETJ of Whispering Pines. The conservation areas identified along Nick’s Creek and Little River are primary conservation areas. The corridors identified for greenways are in these primary conservation areas and will also provide recreational activities and water quality management.

The three recreation areas identified in the ETJ are locations that could accommodate a larger active recreation facility, an additional community facility, or a community gathering space for outdoor events. These areas could also serve as upland secondary conservation areas.
Recommendations

VILLAGE OWNED LAND

The following properties are existing parks on Village-owned land or land that could be developed as parks and accommodate playgrounds and other recreation facilities. The first four listed below are recommended as priority areas for the Village to pursue in the near future. These properties are identified on the Parks, Recreation and Open Space Plan, Map D, in the Appendix of this report. The acreages calculated for each property are estimates of land available for improvements.

- Thagard Park at Lakeview Drive - approximately .7 acres
- Cascade Park and former Carolina Water Property located along Niagara-Carthage Road – approximately 3.52 acres
- Pine Lake at Pine Lake Drive – lots 15, 17, and 29 – approximately 2.86 acres total
- Blue Lake land at Pine Ridge Drive – approximately 2.52 acres
- Former Fire and Rescue building land on Ray’s Bridge Road – approximately 1.1 acres of usable land
- Police/Fire/Public Works land along Hardee Lane – approximately 3.85 acres
- Arrowstone development land (Spearhead Drive) identified as a nature park – approximately 1.59 acres
- Land south of Shadow Lake accessed by Niagara-Carthage Road (Flinchum Property) – approximately 3.13 acres

NON-VILLAGE OWNED LAND

The following areas have been identified as potential locations for larger parks, community gathering spaces, recreation facilities, or upland secondary conservation lands. Most of these areas also include primary conservation areas. These lands are not currently owned by the Village. Refer to Chapter 5 of this report for strategies for acquiring land or implementing techniques that require developers to provide recreation facilities as part of site development approval or for Village land acquisition. These areas are identified on the Recreation and Open Space Plan, Map D, in the Appendix of this report.

- Area identified in the north east section of the ETJ, east of Niagara-Carthage Road and north of the Little River
  Approximately 415 acres
- Area identified south of Airport Road and north of Mill Creek
  Approximately 300 acres
- Area identified south of McCaskill Road and north of Ray’s Bridge Road (Nick’s Creek located through this area)
  Approximately 411 acres
- Royal Woods Property north of Whisper and Shadow Lake
  Approximately 76 acres

With the exception of the Royal Woods property, these areas include multiple parcels of land. These lands should be evaluated by staff and the Committee for their potential to be acquired.

These properties need additional evaluation by the ROSC in the near future. Once a property is identified for immediate development the Committee can work with staff to provide additional due diligence information about the property. A process can be developed to apply for grant funding and hire a consultant to design and develop the property.
GREENWAY TRAIL OPPORTUNITIES
Community survey results indicated that trails for walking or running, (by adults or children) are the most desired recreation facilities for Whispering Pines. Community survey results also indicated support for providing opportunities for walking/running throughout Whispering Pines.
A greenway is defined as a ‘linear park’ that can follow streams or rivers, utility easements, former rail corridors, existing roads, and provide a pedestrian connection where one currently does not exist. Greenway trails typically are improved surfaces (depending on their intended use) with materials such as asphalt, gravel, crushed stone, or mulch. Greenways are commonly used for recreation purposes by pedestrians and bicycles but can also provide transportation alternatives. Greenways can also provide environmental benefits by protecting natural vegetation and wetlands along stream corridors, improving water quality, providing wildlife corridors, and controlling floodwaters by preserving floodplains. Refer to Chapter 5 of this report on how the Village can add language to the Land Development Ordinance to implement stream corridor buffers to protect the environmental elements and provide recreational opportunities.

Recommendations
The recommended areas for greenways are along the stream corridors and tributaries of Nick’s Creek, Little River, and Mill Creek. These corridors are also identified as primary conservation areas and are located in floodplain / wetland areas.
The proposed Nick’s Creek Greenway in Whispering Pines, provides a regional connection with the existing Nick’s Creek greenway system in Southern Pines. The Nick’s Creek Greenway would connect into the Little River Greenway which would provide an east–west connection through the Village. It would also connect Thagard, Shadow, and Whisper Lakes and the residential areas along this corridor.
As properties develop along the identified corridor, developers could be responsible for trail easement dedication and/or construction. Chapter 5 suggests ways in which the ROSC can work with staff and the Village Council to implement strategies for providing incentives or requiring developers to build trails.
As mentioned above, utility easements may be utilized. The Dixie Pipeline which bisects the southeastern portion of the Village, can be utilized in locations where feasible, such as adjacent to Whisper Lake and north east of Whisper Lake to connect to the proposed Little River greenway. It is not recommended to be utilized through the existing Whispering Woods and The Carolina golf courses due to the unsafe conditions it would provide for trail users.
GREENWAY CORRIDORS
The following corridors have been identified for greenways and are indicated on the Greenways & Bikeways Plan, Map E, in the Appendix of this report.

Regional Connections
Nick’s Creek / Little River Greenway
  Provides an East–West connection in the northern section of the Village – Approximately 6.4 miles
Mill Creek Greenway
  Provides an East–West connection in the southern section of the Village

Village Connections
Little River Greenway Trail Spurs
  - Little River north along Ray’s Bridge Road to Farmlife School Road with connection into Farmlife School property – Approximately .9 miles
  - Little River north along creek to the New Matthew’s Market Company – Approximately 1.2 miles
  - Little River south along creek to Queen’s Cove Way – Approximately 1.4 miles
  - Trail spur connecting Whisper Lake and Shadow Lake with Little River trail at Niagara Carthage Road (Cascade Park) – Approximately 1.3 miles

On-Road Connections
The Nick’s Creek and Little River greenway includes on-road connections:
  - Lakeview Drive and Lakeshore Drive to traverse Thagard Lake
  - Shadow Lake and Whisper Lake by using Dewberry Drive and Tucker Road to connect to Niagara–Carthage Road
  - Queens Cove Way to connect from the greenway to Airport Road

TRAIL HEAD LOCATIONS
Opportunities for trail head locations exist along the proposed greenway corridors. Trail heads provide a place for trail users to access the greenways. Trail heads may include amenities such as a place to park, a kiosk with trail maps and information, picnic shelters, and bike racks. Trail heads could be located on property in these areas:
  - Ray’s Bridge Road and Lakeview Drive at Thagard Lake
  - Niagara–Carthage Road and Lakeshore Drive at the existing Cascade Park
  - Niagara–Carthage Road at Mill Creek crossing

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BICYCLE OPPORTUNITIES

There are opportunities for bicycle accommodations along existing major roads throughout the Village. Survey results indicated bicycle accommodations would be supported along roads such as Airport Road (SR 1843), Ray's Bridge Road (SR 1841), Hardee Lane, and Niagara–Carthage Road (SR 1802.) Niagara Carthage Road is a currently a designated North Carolina Bike Route through Moore County. The “Tour Moore” Bike Route highlights the 100-mile signed route around the perimeter of the county as well as four 25-mile loop tours and connectors between towns. Niagara–Carthage Road is included in one of the loops and could serve as a starting point for Village residents who wish to complete the designated bike routes.

The Recreation and Open Space Committee can work with Village planning staff to prioritize bicycle improvements. This plan should be coordinated with NC DOT for future road improvement projects. The adoption of this master plan will aid Whispering Pines in pursuing NC DOT’s assistance (such as TIP—Transportation Improvement Program funding) with implementation.

The following roads have been identified for bicycle opportunities. Refer to Map E, Greenways & Bikeways in the Appendix of this report.

Recommendations

The above mentioned roads are state maintained roads, with the exception of Hardee Lane. Working with NC DOT, possible improvements for bicycle accommodations could include:

- bike lane striping
- sharrows (share the road arrows painted on the road)—roads at or less than 35mph
- paved shoulders
- off-road multi-use paths where appropriate
- additional NC DOT bike way signage or “share the road” signage

The proposed bicycle opportunities also provide a regional connection with Southern Pines existing bicycle lanes at the Harris Teeter at Airport Road and NC 22. The Southern Pines bicycle plan indicates a bike lane accommodation along NC 22 south from Whispering Pines to Southern Pines. Greenways can also provide bicycle opportunities for recreation or transportation purposes and can aid in the regional connections.
OPEN SPACE CONSERVATION OPPORTUNITIES

The community survey overwhelmingly indicated that the natural areas (open, wooded, wetlands) of Whispering Pines are the preferred type of open space. The natural setting is the quality that the majority of residents surveyed like best about Whispering Pines. These natural land forms and natural landscape elements are important to identify and conserve. Areas recommended for open space conservation are indicated on the Parks, Recreation, and Open Space Plan, Map D, in the Appendix of this report.

Recommendations

PRIMARY OPEN SPACE CONSERVATION OPPORTUNITIES

The Open Space conservation opportunities are categorized into primary and secondary conservation areas. The primary conservation areas are sensitive ecosystems that give the region and the Village their unique natural features. As mentioned in the land analysis section of this report, the Village contains a variety of natural environments based on climate, soil type, and vegetation. Primary conservation areas are identified on the maps as stream corridors and wetland areas and protect these sensitive areas need to be conserved in perpetuity. These include:

- Nick's Creek corridor
- Little River corridor
- Mill Creek corridor

SECONDARY OPEN SPACE CONSERVATION OPPORTUNITIES

Gateway Corridors

Gateway corridors are identified along the main roads approaching the Village. These "viewsheds" are what give Whispering Pines it's unique visual quality. Maintaining the visual quality that currently exists in the Village was identified as important in the surveys. Lands associated with the roads listed below exhibit the visual quality recommended for conservation.

- Niagara Carthage Road from Vass Carthage Road to Thagard Lake
- Niagara Carthage Road from southern ETJ boundary to Airport Road
- Airport Road east of Niagara Carthage Road
- Airport Road at NC 22 east to Hardee Lane
- Hardee Lane north to Arrowstone Development
- Ray's Bridge Road at NC 22 east to Village boundary
- Ray's Bridge Road at Farmlife School Road south to Thagard Lake
- McCaskill Road from Farmlife School Road to NC 22

Low Impact Recreation Areas

Low impact recreation areas such as nature preserves, community gathering spaces, and trails/greenways can also be classified as secondary conservation areas. As described in the Recreation/Park Opportunities section of this document, areas identified within the ETJ and listed below could also be considered as secondary conservation areas.

- Area identified in the north east section of the ETJ, east of Niagara-Carthage Road and north of the Little River
- Area identified south of Airport Road and north of Mill Creek
- Area identified south of McCaskill Road and north of Ray's Bridge Road
CHAPTER 4: PRIORITIES

PRIORITY PROJECTS FOR CONSIDERATION AND ACTION

In determining priorities for implementation, several factors have to be considered. In addition to expressed community need, these include property ownership, location, development constraints, cost of implementation, access, and existing infrastructure, etc. The following are recommendations for park/playground, greenways, bicycle accommodations, and open space implementation.

Park / Playground Recommendation

Cascade Park (Thagard Park at S. Lakeshore Drive)
- Create an adult-centered area at Cascade (Thagard) Park to provide an upgrade to this existing recreation site. Examples of activities could include an area for games such as bocce ball, horseshoes, and chess/checkerboard table tops. These additional site amenities would require site work to grade an area to accommodate the activities. Timetable: 2–4 months

Cascade Park and the Former Carolina Water Property at Lakeshore Drive and Niagara–Carthage Road
- The former Carolina Water Property could be upgraded to include a scenic area for bird watching, a rest stop for cyclists, and an improved viewshed from Niagara–Carthage Road. The use of this land would require the demolition of the existing building on site. This property is adjacent to Cascade Park and connected by a trail and would enhance the use of both properties. Timetable – 6–9 months

Pine Lake Playground
- Utilizing adjoining Village-owned Pine Lake lots 15 and 17 create an organized children’s play area with direct access for Whispering Winds and Pine Lake residents. It is recommended to establish an official connection path between these two neighborhoods. The play area would include minimal equipment, a bench, table, fencing, and mulch to create a safe and welcoming playground. No off-site parking is available, therefore access is limited to pedestrians or bicycles to ensure minimal disturbance to the adjacent neighbors. Timetable – 6–9 months.

Blue Lake at Pine Ridge Drive
- Create a playground/recreation area on the Village-owned land along Pine Ridge Drive at Blue Lake. The area could include play equipment, parking, lake access, signage, fencing for safety, and mulch. This area provides a destination for both the Arrowstone and Newbury Ridge communities to access a playground. The site would require grading and parking infrastructure to accommodate the vehicles using it as a destination park. Timetable – 12–18 months.
Greenway Recommendation

Whisper Grove subdivision

Staff and Recreation and Open Space Committee to work with developer to locate a greenway and bridge within the subdivision.

Continuation of Nick’s Creek Greenway

The continuation of the existing Nick’s Creek Greenway would offer a regional connection and transportation alternatives as well as provide additional recreation opportunities for the Village. The trail corridor identified is located in primary conservation areas which are areas not suitable for development due to the natural features of the land in these low lying areas. The implementation of this greenway corridor would require the following:

- Acquire land at intersection of NC 22 by negotiating purchase, lease, easement, etc, to connect to existing trail and trail head.
- Acquire an easement along lands under the Volunteer Agriculture Program along the Little River (primary conservation land)
- Connect to existing trail at Whisper / Shadow Lake from Cascade Park at Thagard Lake
- Request or require developers to grant easements along this corridor or construct the greenway as properties develop

Estimates of probable costs for a paved, asphalt, 10’ wide, greenway is $1 million/mile. The use of alternate paving materials for the greenway surface, a more narrow cross section, etc, could bring the cost as low as $100,000/mile. Time needed to design, permit, bid, and construct the greenway could range from 9 – 18 months, depending on the design process, permitting, site acreage, physical, and environmental factors.

Bicycle Accommodations

Hardee Lane – Village-Owned Road

Airport Road – State Road

Hardee Lane and Airport Road offer an opportunity for bicycle accommodations. Hardee Lane provides a connection with Airport Road and Niagara–Carthage Road (State roads) and provides a Village connection to the Harris Teeter and regional bikeways.

- Airport Road – Contact NC DOT’s Moore County district office to apply for an encroachment permit to implement a signage or bike lane.
- Hardee Lane – Village staff to contact David Willet in the Traffic Services Department of the NC DOT to obtain a template for a sharrow or bike lane. Hardee Lane improvements would be directed by the Village.

Niagara–Carthage Road (SR 1802)

Niagara–Carthage Road currently offers an opportunity for regional bicycle connections through its designation as a NC Bike Route. Opportunities for improving bicycle use, safety, visibility and connections are listed below.

- Contact NC DOT’s Moore County district office to assess and improve the signage for the North Carolina Bike Route designation. The Village would apply for an encroachment permit through DOT’s district office
- Potential to add bike lanes to the section of Niagara–Carthage from Vass Carthage Road to Camp Easter Road
- Contact NC DOT’s Moore County district office to inquire about future improvements to Niagara–Carthage Road which could include NC DOT’s Complete Streets guidelines

Staff should file this Master Plan and Report with NCDOT and begin a dialog to determine what the Village can implement immediately, such as sharrows, and encourage DOT to prioritize Village projects. Timetable – 2-4 months.

Regional DOT contacts:
Marty Tillman, District Engineer (910) 944-7621
David Willet, Traffic Services Department (bikeway signage) (910) 947-3930
Open Space Conservation

Primary Conservation Areas

*Nick’s Creek and Little River stream corridors*

Preserving lands in the stream corridors identified on the master plan will protect water quality and natural ecosystems. Village staff, the Committee, and Council could work with a consultant to add a section to the Village’s Land Development Ordinance to require conservation of these corridors.

Secondary Conservation Areas - Gateway Corridors

*Hardee Lane north to Arrowstone development*

*Niagara–Carthage Road (SR 1802) from Vass Carthage Road (SR 1803) to Thagard Lake*

Preserving lands along Hardee Lane and Niagara–Carthage Road with viewshed protection easements will protect visual quality along this identified gateway. Village staff, the Committee, and Council could work with a consultant to add a section to the Village’s Land Development Ordinance to require developments along designated gateway corridors to conserve the viewshed. Timetable ~2~6 months.
CHAPTER 5: IMPLEMENTATION

OVERVIEW
The Village of Whispering Pines contains a rich inventory of natural areas and open space that enhances quality of life and benefits residents and visitors. This component of life in Whispering Pines is highly valued, as demonstrated by public opinion and feedback generated during preparation of this Master Plan. The opportunities for expansion of this valued amenity to further provide opportunities for existing residents, and also to expand availability to serve a growing population through a coordinated network of natural and improved areas, are described above. This section focuses on how to achieve those outcomes. Implementation of these ideas will involve acquisition/dedication of land, preservation of key open space areas, and selective construction of trails and recreation facilities.

LAND ACQUISITION
Acquiring and setting aside land for permanent open space, trails, and recreation purposes is a continuing focus. The approaches to expanding the inventory of land for these purposes within Whispering Pines include public acquisition and maintenance of land (by the Village or other governmental entities), and dedication/conservation of privately-owned land for these purposes.

Public Purchase / Acquisition: The most direct approach to permanently conserving open space, and to acquiring land for development of trails, greenways, and recreational facilities, is to purchase strategically located parcels. Acquisition of land by the Village of Whispering Pines, Moore County, and the State of North Carolina should be considered for strategic parcels that are identified, with attention to policies and programs available within each unit of government. For the Village of Whispering Pines itself, funding sources are not limited to only tax-generated revenues that can be accumulated into a land acquisition fund. Many communities supplement such a fund with resources obtained from development activity, from payments made in-lieu of providing on-site recreation required by zoning. (Discussed below.) The Whispering Pines Land Development Ordinance (LDO) contains such a payment-in-lieu provision.

Voluntary Conservation and Dedication: Another approach to reserving land for these purposes is to encourage voluntary dedication of land or easements. A conservation easement is a voluntary legal agreement that can benefit both a landowner and the public because it can protect land while leaving it in private ownership. Conservation easements can be crafted to limit uses of a property...
to those consistent with the landowner’s and the easement holder’s conservation objectives. The benefits of a conservation easement for a landowner can include protecting features of property that landowner wishes to preserve, and potentially receiving tax relief that can help keep land in private ownership. Federal income tax deductions can be of significant benefit, with such easements qualifying as charitable contributions. North Carolina also has a system of tax credits for the donation of conservation easements that meet State requirements. The public benefit of a conservation easement includes protecting and conserving natural resources and open space at minimal public cost. Locally the Sustainable Sandhills organization has been a leader in encouraging and helping achieve land conservation easements.

**Regulatory Requirements for Dedication:** The Whispering Pines Land Development Ordinance contains requirements for open space set-asides as part of new residential development proposals. The current requirement applies to residential subdivisions, and mandates that an amount of land be dedicated to the Village or another entity, in an amount that is not less than 25% of the total acreage of the subdivision. That 25% figure can be adjusted based on the nature of the land being dedicated (e.g., less required if the land includes improved recreation areas, more acreage required if lakes, ponds, or wetlands are included in the dedication). There are criteria in the LDO calling for minimum amounts of buildable area to be included in dedicated open space areas, and criteria for the type of land acceptable for dedication. There is also a provision allowing for a fee to be paid to the Village in lieu of land dedication (with provisions that such funds be used for the purposes of acquiring and/or developing recreation, greenway, and open space areas). Land Development Ordinance language could be expanded and adjusted to make it clear that dedication of easements to permanently preserve open space and natural areas can be used to satisfy zoning requirements for land dedication.

In addition to requirements, there is opportunity in the creation of regulatory incentives. Bonuses in maximum permitted floor areas and/or density and/or reduction in minimum lot sizes are all candidates for consideration in exchange for higher levels of open space and recreational amenities as components of new development proposals.

Increasingly, communities in North Carolina and beyond are treating open space as more than recreation land for subdivision residents, and instead treat open space in their regulations as an essential element of any development, whether residential or nonresidential. Accordingly, many development regulations require all new development to set aside a specific percentage of the development site as private common open space or public open space that ensures a minimum level of green area that can be used to protect environmentally sensitive lands, or to provide active or passive recreational opportunities, and/or to add visual interest and address community appearance objectives.

Another regulatory approach to preserving key environmentally sensitive land would be to increase buffer requirements along streams to a standard minimum. Buffer requirements vary by community, and can be as wide as 100 feet from the bank of a stream or lake.
It would be appropriate for the Village to consider amendments to its Land Development Ordinance to extend this open space requirement to all development proposals, and to enhance buffer requirements along waterways and gateway corridors. Included in the Appendix of this report, are samples from other NC municipalities to serve as examples, and a template showing how such requirements might be constructed. Included in the examples from other North Carolina jurisdictions are ordinance provisions from Mooresville, Apex, and Chapel Hill.

The place to consider placing such new requirements, in Whispering Pines’ regulatory context, would be to amend Chapter 10 of the Land Development Ordinance (“Open Space & Environmental Regulations”). More specifically, Section 10.4.1 could be expanded to address construction of trails, Section 10.4.3 could be adjusted to clarify how construction of trails can be coordinated with or substituted for simple dedication of land.

Of particular note is the distinction made in the attached excerpt from the Chapel Hill Land Use Management Ordinance between recreation land (set-asides of land) and recreation space (construction of facilities). This approach to addressing construction of trails could be incorporated into the Whispering Pines LDO.

FACILITY CONSTRUCTION

As is the case with land acquisition/dedication, trail and recreation facilities can be constructed and maintained by the Village of Whispering Pines or through private efforts.

*Public Development of New Facilities:* Arranging for funding for public construction of trails, greenways, parks, and recreation facilities is a difficult prospect, particularly in the current economic climate of fiscal challenges. Given the projected need and community aspiration for more facilities and particularly a more robust trail system, additional publicly-funded construction would be desirable. Such considerations, however, need to be tempered with current fiscal constraints. There is need and desirability in preparing a capital improvements plan for future public construction of these facilities, funded in part by local revenues, in part by grant funds that can be sought, in part by contributions, and in part by payments-in-lieu made as part of new development projects.

*Regulatory Requirements for Construction of Facilities:* It is possible that some needed trails and facilities can be provided as components of new residential development. It is important, when drafting requirements for provision of such facilities, to consider the connection between the recreational needs and demands created by the new development and the extent and nature of the requirement. One possibility would be to include construction of recreational facilities, equipment, or trails as requirements of new multi-family development applications. This should be considered for inclusion in the Land Development Ordinance.
FUNDING SOURCES

Turning to the question of funding sources for public acquisition and/or construction of open space and recreational land and facilities, options are limited but available. There is need for long-range listing of needs and possibilities, along with identification of priorities for public expenditures. Several possibilities available for consideration by the Village of Whispering Pines include:

- Locally generated general revenues or bond referenda
- Payments-in-lieu generated by development activity
- Donations from individuals and organizations (e.g., fund-raising for a greenway segment)
- Playful Cities, USA / KABOOM! grants
  KaBOOM! - a national non-profit dedicated to saving play. KaBOOM! provides communities with online tools to self-organize and take action to support play on both a local and national level. www.playfulcityusa.org.
- Partnerships with First Health Moore Regional Hospital
- Partnerships with Sandhills Area Land Trust
- Grant funds

Regarding possibilities for pursuing grant opportunities, the following information summarizes the characteristics and availability of several potential sources:

NC Parks and Recreation Trust Fund: PARTF is the primary source of funding to build and renovate facilities in the state parks as well as to buy land for new and existing parks.
  • The PARTF program provides dollar-for-dollar grants to local governments.
  • Recipients use the grants to acquire land and/or to develop parks and recreational projects that serve the general public.
  • A local government can request a maximum of $500,000 with each application.
  • 2012–2013 grant applications will be available in early fall of 2012.
  • For more information: http://www.ncparks.gov/About/grants/partf_main.php

NC Department of Transportation Enhancement Fund: Transportation Enhancement Projects must meet the following two federal requirements: (1) Have a relationship to surface transportation and (2) be one of twelve qualifying activities.
  • Allocation decisions regarding Federal enhancement funding are currently on hold pending Congressional action on surface transportation program reauthorization
  • For more information: http://www.ncdot.gov/programs/enhancement/

N.C. Trails Program: The North Carolina Division of Parks and Recreation and its State Trails Program offer two grant programs: (1) Adopt-a-Trail Grant Program and (2) Recreational Trails Program. The grants cover trail construction and maintenance projects, trail side facilities and land acquisition projects.
  • Applications for the 2012–2013 North Carolina Adopt-a-Trail Grant (AAT) are now available and are due May 31, 2012.
  • For more information: http://www.ncparks.gov/About/trails_grants.php

Urban and Community Forestry Grants: The Urban & Community Forestry Grant Program assists local governments and non-profit groups with projects which will lead to a more effective and efficient management of urban and community forests.
  • Grants are awarded on an annual basis through the USDA Forest Service and are administered by the NC Forest Service, Urban & Community
Forestry Program. The program awards matching funds to encourage citizen involvement in creating and sustaining urban and community forestry programs.

- Grant cycle opens January 1 of each year, and grant applications/proposals due by March 31 at 5:00pm
- Grant requests should range between $1,000 and $15,000.
- The Urban & Community Forestry Grant Program funds must be matched equally (dollar for dollar) with non-federal funds.
- For more information: http://ncforestservice.gov/Urban/urban_grant_overview.htm

Forest Legacy Program: The Forest Legacy Program protects private forest lands from being converted to nonforest uses by helping landowners establish conservation easements on their land. Participation in Forest Legacy is limited to private forest landowners. To qualify, landowners are required to prepare a multiple resource management plan as part of the conservation easement acquisition. The federal government may fund up to 75% of project costs, with at least 25% coming from private, State or local sources. In addition to gains associated with the sale or donation of property rights, many landowners also benefit from reduced taxes associated with limits placed on land use.

- For more information: http://www.fs.fed.us/spf/coop/programs/loa/flp.shtml

Land and Water Conservation Fund: The LWCF Program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities (as well as funding for shared federal land acquisition and conservation strategies).

- In most years, States receive individual allocations grant funds based on a national formula. Then States initiate a statewide competition for the amount available. Applications are received by a State up to its specified deadline date. Then they are scored and ranked according to the project selection criteria. “Winning” applications are then forwarded to the National Park Service for formal approval and obligation of federal grant monies.
- Because each State has its own priorities and selection criteria and because individual States make the decisions, in effect, about which projects will receive LWCF grants, the first step for potential applicants is to contact the cooperating State office to find out about local application deadlines, state priorities and selection criteria, and what kinds of documentation are required to justify a grant award. Interested applicants should call or write the appropriate state agency to request application information.

The contact for the state of North Carolina:
Director North Carolina State Parks
Dept. of Environmental and Natural Resources
1615 Mail Service Center Drive
Raleigh, NC 27699-1615
Tel: 919-715-8710
LWCF Program website: www.nps.gov/ncrc/programs/lwcf/plan_prjts.html

Clean Water Management Trust Fund:
Established by the General Assembly in 1996, CWMTF receives a direct appropriation from the General Assembly in order to issue grants to local governments, state agencies and conservation non-profits to help finance projects that specifically address water pollution problems. CWMTF will fund projects that will enhance or restore degraded waters, protect unpolluted waters, and/or contribute toward a network of riparian buffers and greenways for environmental, educational, and recreational benefits. Applications for CWMTF grant funding are due on February 1st of each year.
PARTNERSHIPS
Whispering Pines can leverage its work to promote these open space, trails, and recreation objectives by partnering with other governmental bodies and private organizations. A good example is the current effort underway by the NC Department of Transportation to prepare a Moore County Comprehensive Transportation Plan. This plan can and should include attention to travel corridors and trails. Other examples include local, regional and national land conservation organizations. Examples include the regional Sandhills Area Land Trust, and the national/international Nature Conservancy organization. Partnering with organizations such as this can help bring resources to Whispering Pines to help achieve the objectives highlighted in this plan.

Local partnerships can also be productive. Working with civic organizations and community groups can both take advantage of volunteer opportunities and also help build pride and ownership in the Village's amenities. In the Appendix of this report is an example of a “Adopt a Trail” initiative undertaken by the Town of Wake Forest.

Another example comes from Greenville, NC, called the “Friends of Greenville Greenways.” This is a community initiative, aided by volunteer efforts, designed to encourage new businesses to preserve open spaces and provide additional recreational and fitness options within the city.

SUMMARY OF IMPLEMENTATION OPTIONS
The current and future Recreation and Open Space Committee and Village Council must work with staff to continue to prioritize options and pursue monies for implementation as the Village grows. As developments occur or are planned in the Village, priorities may change or shift depending on the type of development.

In the immediate future, staff and the Committee (along with a consultant in some cases) must work towards the implementation of this master plan by:
- setting priorities regarding which projects in Chapter 4 of this report are most compelling and/or time-sensitive and/or most feasible
- list and provide detail (including costs) for desired land acquisition and facility construction based on the priorities set
- explore and identify all reasonable funding sources (including those highlighted above), once the property and use has been identified

On-going implementation strategies:
- Pursue a program of encouraging/promoting easements, dedications, acquisitions, or purchase of land to conserve the natural land of the Village
- Pursue grants listed above to help fund land acquisition and development of greenways and parks
- Consider amendments to the Whispering Pines Land Development Ordinance to provide for recreation areas, open space conservation and increased stream buffers for water quality
- contact DOT to aid in the implementation of the bikeway recommendations
- Hire consultants on a project basis to design, permit, bid, and construct greenway and park projects
Hydrology

Whispering Pines is in the Little River watershed generally between Mill Creek to the south and Nicks Creek/Little River to the north. Water flow is from the west to the east. Impoundment lakes along river system include Thagards Lake on Little River and Shadow Lake, Pine Lake, Spring Valley Lake, Pigeon Lake, and Whisper Lake, along tributaries to the Little River.

Climate / Soils

The Sandhills area is hot climate with about 50 inches of annual rainfall on sandy soils with frequent wildfires. The soil type is very coarse and sandy and will more easily release moisture to the area, which allows for higher soil moisture content than loam or clay-based soils. This allows more energy to be used for heating the surface rather than evaporating moisture in the soil.

Ecosystems

Ecosystem diversity results from sandy soils, high rainfall, and wildfires mainly initiated by lightning strikes. Dry, nutrient-poor sand soils with high annual rainfall results in vegetation that is adapted to these harsh conditions (e.g., Turkey Oak and Longleaf Pine). The limited diversity to the tall canopy and high diversity in the understory - longleaf pine/wiregrass systems may be the most diverse north of the tropics and includes rare plants and animals not found anywhere else.

Wetlands

Wetlands within the water holding pools contain diverse vegetation such as Periwinkle (Chelone), Red Oak (Quercus rubra), and Bald Cypress (Taxodium). Southern Pines and Timberland (Pinus) include White Oak (Quercus alba), Red Oak (Q. rubra), and Willow Oak (Q. nigra). Black Oak (Q. velutina) and Red Oak (Q. rubra) are also present. Black Water, Brownlee Creek, and the Little River have wetlands that contain Black Gum, River Birch, Yellow Poplar, Beech, Water Oak, Willow Oak, Common Reed, and Willow Oak. The wetlands also contain Snakeroot, and White Cedar.
LEGEND

- ETJ
- VILLAGE BOUNDARY

EXISTING OPEN SPACE
- GOLF COURSES
- LAKES
- VOLUNTARY AGRICULTURAL DISTRICT

EXISTING LAND USE
- AIRPORT
- RETAIL
- VILLAGE OWNED PROPERTY
- GAS LINE & EASEMENT

PROPOSED OPEN SPACE / RECREATION
- OPPORTUNITY FOR OPEN SPACE / CONSERVATION LAND (WETLANDS, STREAM CORRIDORS, ETCH)
- OPPORTUNITY FOR VILLAGE NATURE PARK (VILLAGE OWNED PROPERTY)
- OPPORTUNITY FOR VILLAGE RECREATION AREA / PARK / OPEN SPACE
- OPPORTUNITY FOR PARK (VILLAGE OWNED PROPERTY)

PROPOSED BIKE / PEDESTRIAN ROUTES
- NC DOT BIKE ROUTE (NIAGARA-CARTHAGE ROAD AND AIRPORT ROAD EAST)
- OPPORTUNITY FOR VILLAGE GREENWAY
- ROUTES ASSOCIATED WITH EXISTING CONNECTOR ROADS
- EXISTING SOUTHERN PINES GREENWAY
- EXISTING / PROPOSED SOUTHERN PINES BIKE ROUTE

WHISPERING PINES RECREATION AND OPEN SPACE MASTER PLAN
COMPREHENSIVE MAP
Whispering Pines, North Carolina