



System Integration Plan

Kyle Drive Property

Raleigh, North Carolina



For additional information please contact
City of Raleigh Parks and Recreation
Design/Development
parkplan@ci.raleigh.nc.us
(919) 996-4776

System Integration Plan

Kyle Drive Property

Executive Summary

The City of Raleigh Parks and Recreation Department has developed a System Integration Plan for an undeveloped property on Kyle Drive in northeast Raleigh. The intent of the System Integration Plan (SIP) is to document existing site conditions and develop a set of guidelines for interim management of the property until a Master Plan is developed. The site specific System Integration Plan is developed with input from the Parks, Recreation and Greenway Advisory Board. A draft SIP is presented to the public through notification of adjacent and nearby property owners, Citizen Advisory Councils, registered neighborhood groups, and registered park support groups. The public will be encouraged to provide comments at a formal presentation of the SIP to the Parks, Recreation and Greenway Advisory Board. The SIP will be submitted to City Council for final action.

The SIP includes background research on the property and involves site visits by a variety of contributors with expertise in different areas. A detailed natural resources inventory is included in the SIP. The Kyle Drive property includes a length of Beaverdam Creek and a portion of a 57 acre wetland listed on the United States Fish and Wildlife Service National Wetland Inventory. There are no known occurrences of protected plant or animal species on the property. The wetland and the associated upland offer significant wildlife habitat to the region. Several Eastern Box turtles (*Terrapene carolina*), a declining species, have been observed on the property. The City of Raleigh Comprehensive Plan calls for the extension of Jelynn Street through the property to Valley Stream Drive. This street extension will separate the wetland from the adjacent upland, and will be detrimental to wildlife.

Forest resources were evaluated and recommendations are provided to satisfy the City of Raleigh Tree Conservation Ordinance. The invasive plant kudzu is present in a small area of the forest near the northwest corner of the property. Kudzu is a major threat to forest resources. Standing dead trees in the wetland area and throughout the property should be preserved for wildlife unless they constitute a hazard.

Interim management recommendations proposed for the Kyle Drive property are organized into three categories: Safety, Environment, and Property Issues. Highlighted recommendations include control of invasive kudzu, an inventory of reptiles and amphibians utilizing the site, and fire ant control in the Progress Energy easement on the west side of the property.

The City of Raleigh Land Stewardship Coordinator will be responsible for initiating requests to appropriate staff to conduct the interim management tasks. The SIP is intended to be a useful tool to facilitate site management and land stewardship and is a baseline document to promote ongoing site inventory, evaluation, and management.





System Integration Plan

Kyle Drive Property

Table of Contents

Introduction	1
Comprehensive Plan Classification	2
Site Description	7
Deed Restrictions	10
Soils	11
Water Resources	13
Flora Resources	17
Tree Conservation Ordinance	19
Fauna Resources	21
Cultural Resources	23
Interim Management Recommendations	24
Safety	24
Environment	25
Property Issues	25

Appendices

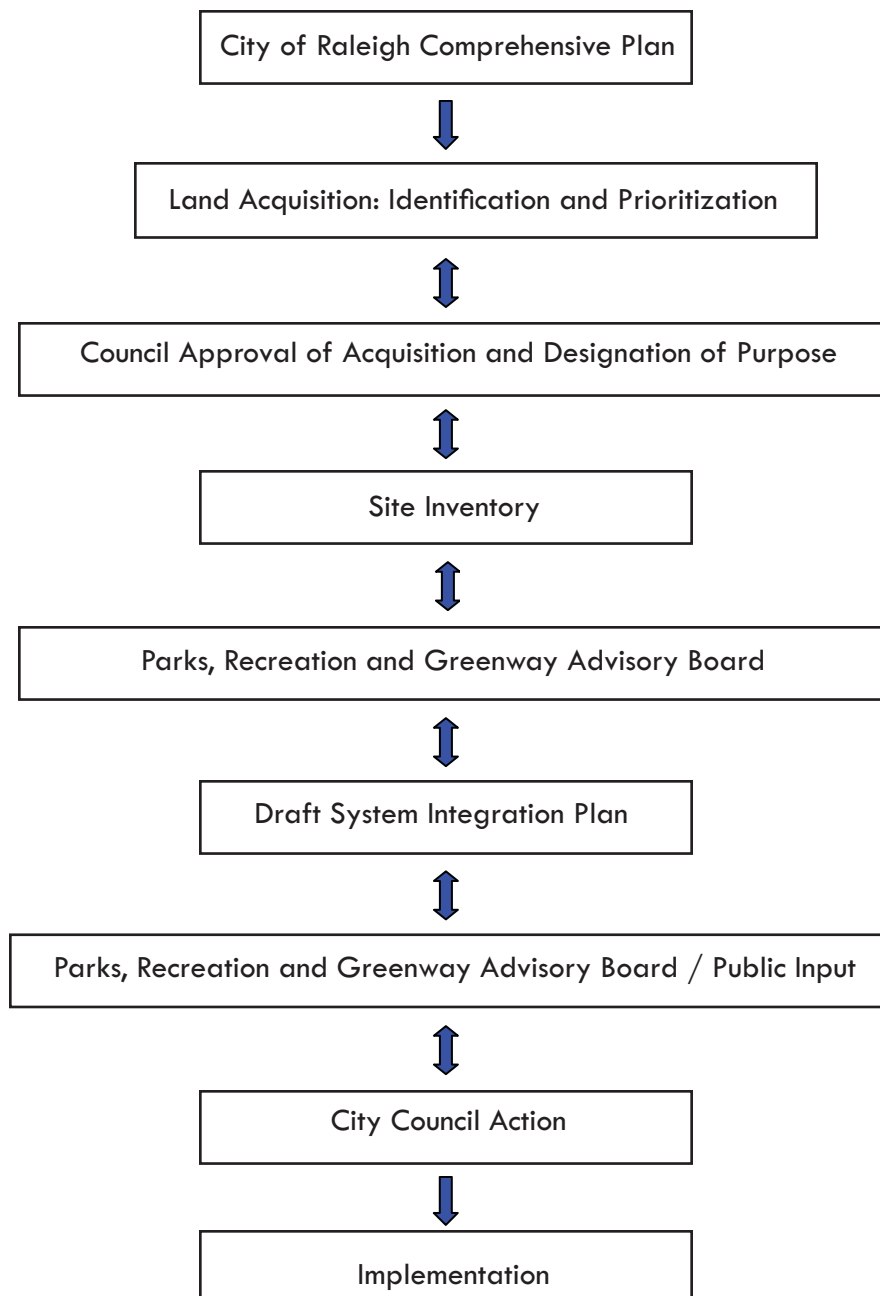
- A** City of Raleigh Council Resolution (2003)-735
- B** Contributors
- C** Phase 1 Environmental Assessment Executive Summary
- D** Flora Resources
- E** Fauna Resources

Comments and Records

Work Progression and Updates

Introduction: What is a System Integration Plan?

The System Integration Plan (SIP) is a sub-section of the overall City Park Master Planning process described in *City of Raleigh Council Resolution (2003) – 735* (Appendix A). The City of Raleigh Parks and Recreation Department undertakes a public master plan process to help determine the specific elements that are desired in a particular park. The purpose of the site specific System Integration Plan is to develop a set of guidelines for the interim management of parkland prior to the initiation of a Master Plan. The SIP will document existing site conditions and constraints, establish the park's classification consistent with the Comprehensive Plan, and if applicable, any proposed special intent for the park. The SIP is not intended to restrict the Master Plan Process. A System Integration Plan Conceptual Flow Model demonstrates the interaction between the City of Raleigh Park Plan, acquisition of a park property, the City of Raleigh Parks staff, the public, City Council, and the Parks, Recreation and Greenway Advisory Board (PRGAB) in the SIP process.



The SIP process promotes civic engagement through public notification and opportunities for public comment. The SIP process involves notification to adjacent and nearby property owners, Citizen Advisory Councils (CACs), registered neighborhood groups, and registered park support groups. The City of Raleigh maintains an SIP web page to provide updates and links to existing SIP documents. The public has the opportunity to provide comments to the site specific SIP through email or other written communication, and will also be encouraged to provide comments at a formal presentation of the SIP to the Parks, Recreation and Greenway Advisory Board. A meeting notification sign is posted at the park site 14 days prior to the formal PRGAB presentation. A “Comments and Records” section for this SIP follows the Appendices.

The SIP process involves collaboration among multiple City of Raleigh staff, as well as review by external agencies, Parks and Recreation Greenway Advisory Board and City Council. City of Raleigh Departments involved in developing a System Integration Plan include Parks and Recreation, Transportation, Public Utilities, and City Planning. City of Raleigh Parks and Recreation Divisions involved in developing the SIP include Design/Development, Facilities and Operations, Urban Forestry, and Parks Maintenance. Review and collaboration by external organizations includes agencies such as the USDA Natural Resource Conservation Service, the North Carolina Wildlife Resources Commission, and the United States Fish and Wildlife Service. A list of contributing staff and agencies is included in Appendix B.

Comprehensive Plan Classification

Parks, Recreation, and Open Space is an important element of the City of Raleigh 2030 Comprehensive Plan. “This Element addresses park planning and acquisition, greenway and trail planning and connectivity, open space conservation, capital improvement planning, and the preservation of special landscapes” (Raleigh’s 2030 Comprehensive Plan, City of Raleigh Department of City Planning). At the time of this report, the City of Raleigh has 5,670 acres of park land and 3,464 acres of greenway property. As the City continues to expand there is a need for additional parks to meet the needs of the community.

Six key Vision Themes have been identified in the Comprehensive Plan as overall goals for the City of Raleigh: Economic Prosperity and Equity, Expanding Housing Choices, Managing Our Growth, Coordinating Land Use and Transportation, Greenprint Raleigh – Sustainable Development, and Growing Successful Neighborhoods and Communities. Each of these Vision Themes is applicable to the Parks, Recreation, and Open Space element.



Economic Prosperity and Equity

High quality parks, recreation facilities, and open spaces will provide added value and amenities to the community, which in turn will attract jobs, workers, and greater economic prosperity to the area. Evenly distributed park and recreation facilities, accessible to residents throughout the City, promotes the goal of equity.



Expanding Housing Choices

Parks, recreation and open space opportunities must be developed in tandem with new housing. Providing leisure facilities in proximity to housing reduces the need to rely on fossil fuel vehicles. The issue is particularly important for affordable housing, as many lower-income residents have reduced access to private vehicles, limiting their ability to travel to distant parks, and making pedestrian, bike, and transit access all the more critical.



Managing Our Growth

The need for new parks and recreational facilities in the coming decades will require that substantial acreage be acquired by the City for park development. Land can be acquired in advance of development, at lower cost and in appropriate locations, to develop the parks and recreational opportunities that the future residents will require.



Coordinating Land Use and Transportation

Parks are a significant land use and a source of travel demand. Therefore their location and design should be coordinated with the City's transportation infrastructure (including greenway trails) to maximize access by multiple modes and to mitigate impacts on congestion.



Greenprint Raleigh – Sustainable Development

Sustainable design and green building is increasingly becoming a part of parks and recreation facilities design. Networks of interconnected parks, greenways, and open spaces (green infrastructure) can direct urban form and guide conservation efforts. Green infrastructure ensures that preserved open spaces and greenways provide greater environmental benefits by maximizing ecosystem conservation.



Growing Successful Neighborhoods and Communities

The parks and open spaces within Raleigh serve the daily leisure needs of the community. The spaces and programs promote the social, cultural, mental, and physical well-being of the community. In a broader sense, they promote a more livable community, a higher quality of life and lend a sense of place and belonging to the community and its residents.

The City of Raleigh Comprehensive Plan established a park classification system to provide a diverse, well-balanced, well-maintained range of recreational opportunities. The five park classifications are: Neighborhood Parks, Community Parks, Metro Parks, Special Parks, and Nature Parks and Preserves.

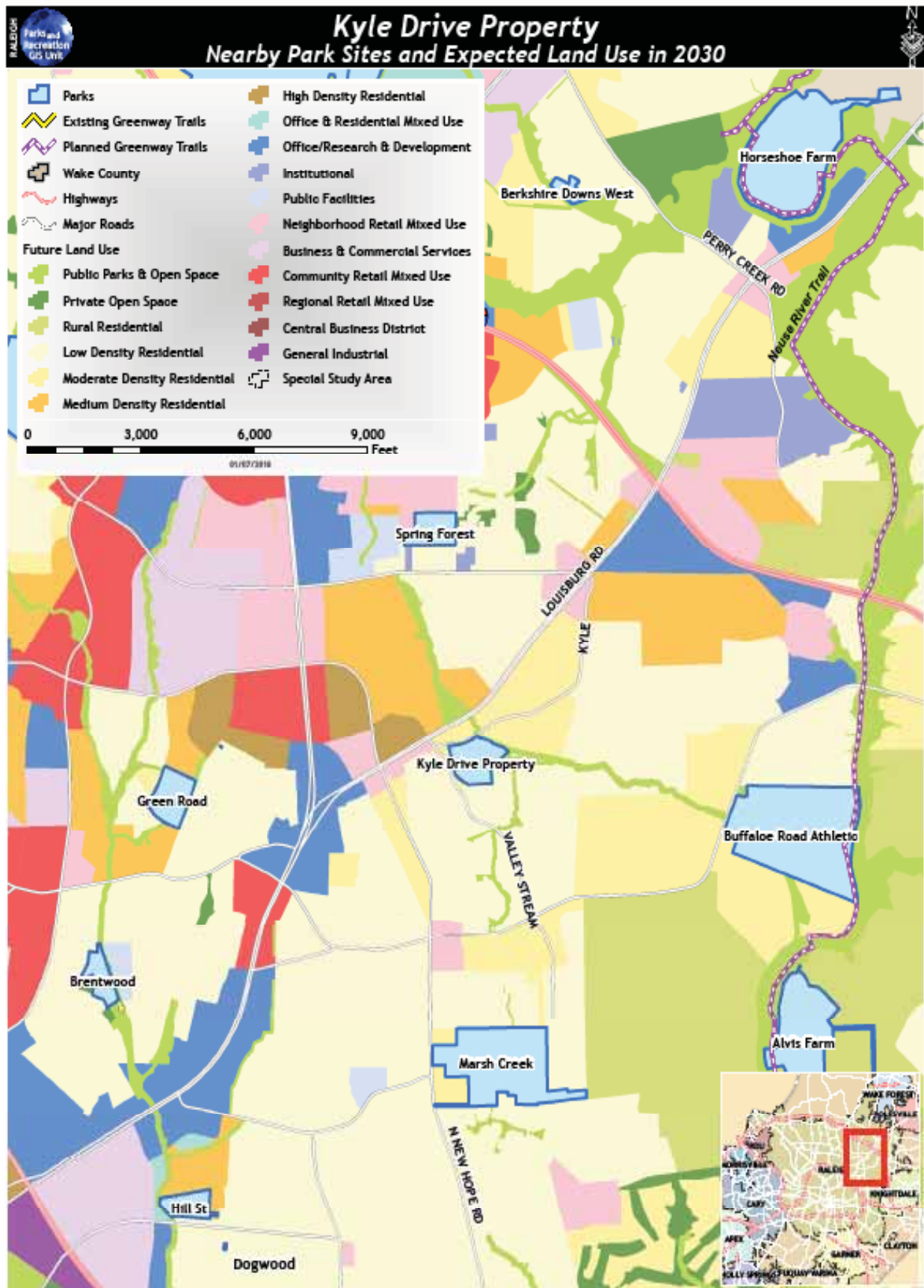
The site first known as NPS 41 (neighborhood park search) and now called the Kyle Drive property was purchased to satisfy a documented need for neighborhood parks in the Northeast Planning District. Neighborhood Parks are expected to serve the basic daily recreational needs of the surrounding neighborhoods. They most often include playgrounds, court surfaces such as basketball, tennis or volleyball, and open space or multi-use turf areas. Depending on the size, topography and other site characteristics, neighborhood parks may serve other needs as determined by the master planning process, proximity to other parks and greenway lands, and overall Parks and Recreation Department program needs. Smaller sites may be limited to very few elements; larger sites may present opportunities for elements such as walking tracks, athletic fields or neighborhood center buildings. In some cases deed restrictions or environmental requirements may dictate the options available.

In general, the number of acres of existing neighborhood parkland compared to the expected population of an area is used to try to meet a Level of Service (LOS) of 2.6 acres of parkland per 1,000 population. Other considerations, such as the size and character of existing parks in the area, barriers to access (such as major thoroughfares), availability of opportunities for future acquisition, and other elements of the City of Raleigh Comprehensive Plan are also taken into account when acquiring parkland.

A map on the following page shows City of Raleigh parks in the vicinity of the Kyle Drive property and Future Land Use projected for the year 2030. Spring Forest Road Park is a 21 acre neighborhood park located 2 miles north that provides tennis courts, a playground, a small baseball field, a small shelter with a comfort station, an informal open field, a walking path, and a small parking lot. Spring Forest Road Park is adjacent to East Millbrook Middle School and is under a shared agreement with the school. Brentwood and Hill Street are two other neighborhood parks in the vicinity that primarily serve the residents within their surrounding neighborhoods.

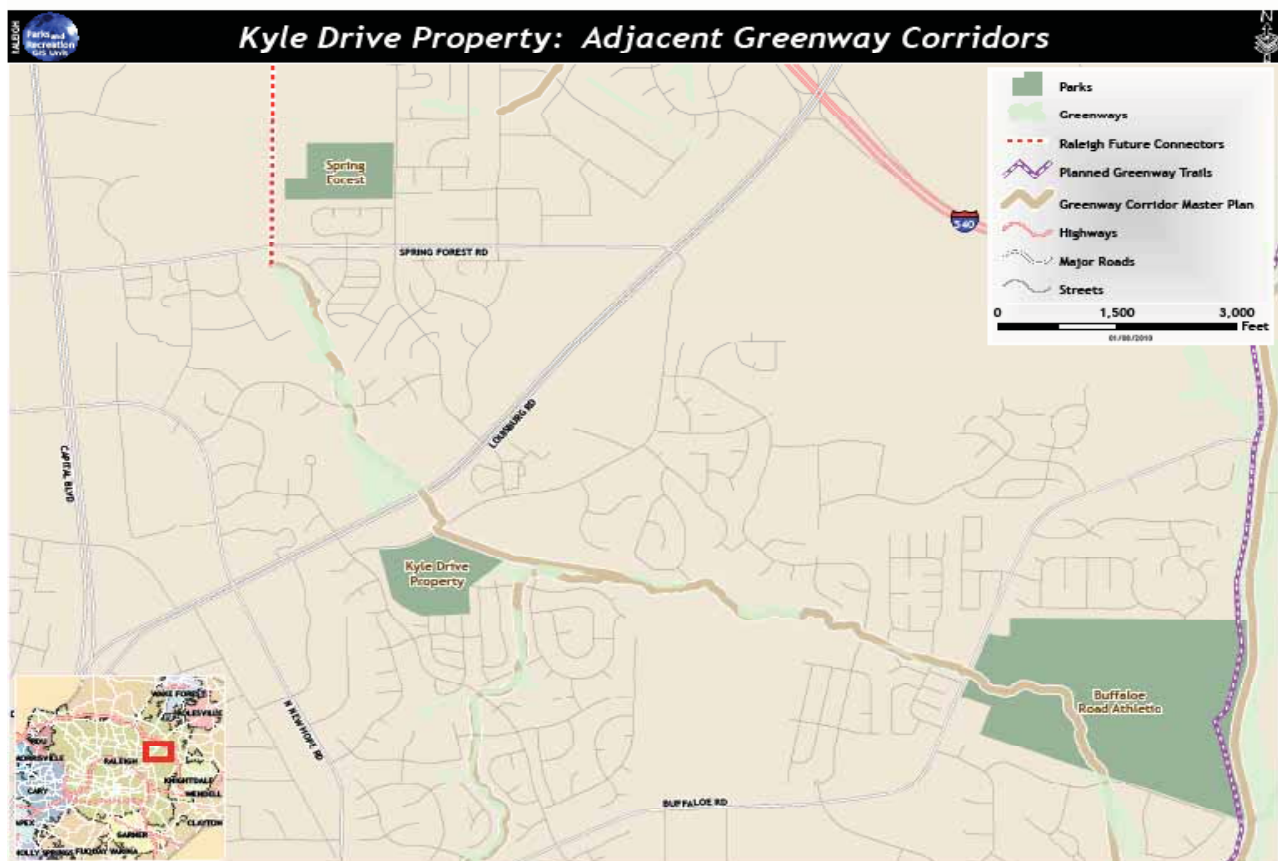
Three Community Parks are in the general vicinity: Green Road, Marsh Creek, and Alvis Farm. Green Road Park and Community Center is located approximately 2 miles west of the Kyle Drive property and includes a gymnasium, ball fields, tennis courts, and provides a wide range of programs for the public. Marsh Creek Park is less than 2 miles south and contains a baseball field, multi-purpose field, shelter and restrooms, an inline hockey rink, a skate park, and maintenance facilities for City Parks staff. A Marsh Creek Community Center and playground are under construction at the time of this report. Another nearly 92 acre undeveloped park site called Alvis Farm is located approximately 3.5 miles southwest of the Kyle Drive property. A System Integration Plan for Alvis Farm was completed in 2007.

Buffaloe Road Athletic Park is a Metro Park located just over 2 miles east of the Kyle Drive property. This facility provides ball fields, a playground, trails, open space, and will include an aquatic center.



SIP: Kyle Drive Property

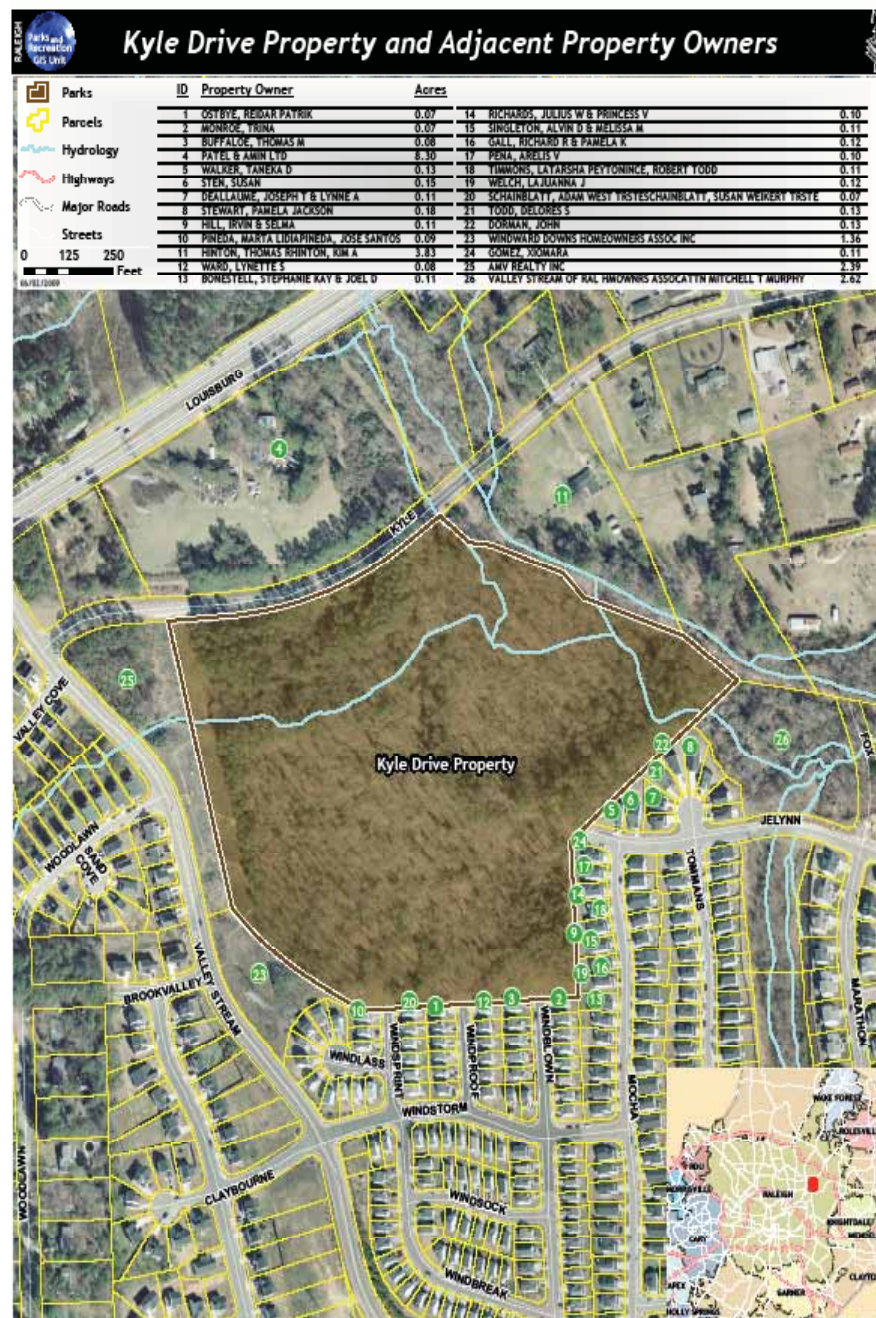
Natural resource-oriented recreation opportunities occur in proximity to the Kyle Drive property. Buffalo Road Athletic Park provides recreation trails within a substantial natural area conserved as stream and river corridor and buffers, a 15.5 acre wetland with a boardwalk trail, access to the city's greenway system, and in the future will provide access to the Neuse River. Horseshoe Farm Park offers a wide spectrum of outdoor recreation opportunities. Examples of activities proposed to take place upon completion of existing and future phases of Horseshoe Farm Park include Neuse River Greenway access, primitive passive woodland and birding trails, and various native meadows. Future developments may include river canoe access, an environmental education center, and an earthen amphitheatre for programming. Development of new park land typically includes conservation land in the form of buffers and officially designated Tree Conservation Areas. The City of Raleigh Greenway system is a network of recreational trails and public open spaces that provide opportunities for a range of activities including biking, running, hiking, fishing, picnicking, bird watching, and nature study. Hundreds of acres of conservation land are located in the general vicinity of the Kyle Drive property in the form of the major greenway corridor up and down the Neuse River. The Beaverdam Creek greenway corridor passes along the northeast portion of the Kyle Drive property. This corridor stretches from Spring Forest Road to the Neuse River. There are currently no plans for a trail along this corridor.



As of the date of this SIP report, no additional park land acquisition has been completed in the general vicinity of the Kyle Drive property. Neighborhood Parks are intended to provide recreation opportunities for residents within (but not limited to) a ½ mile radius. At the time of this report, there is no *special intent* proposed for the site. The Kyle Drive property will serve as the Neighborhood Park resource for residents of the Kyle Drive area east of Louisburg Road.

Site Description:

The 27.25 acre site originally known as NPS 41 and now renamed the Kyle Drive property is a vacant parcel located at **4700 Kyle Drive** near the intersection of Louisburg Road (U.S. Highway 401) and Valley Stream Drive. This future park site is outside of the City limits but is within the City's planning jurisdiction (Raleigh Extraterritorial Jurisdiction, or ETJ). This property is located in the Northeast Planning District, and the Citizen Advisory Council (CAC) District is Northeast. The site is zoned as Residential-10 (R-10) and Conservation Management District (CM). A CM zoning district restricts land use to the following: restricted agriculture uses (tree and vine crops), fish hatcheries, public parks, recreational uses related to residential development, private recreational camps not operated for profit, cemeteries, watersheds, wells, water reservoirs, or water control structures.



SIP: Kyle Drive Property

The vicinity of the Kyle Drive property has been developed in recent years with high density residential neighborhoods composed of small lots. The area is not currently well developed for pedestrian use. Kyle Drive is scheduled to be developed with a 5 foot sidewalk along the future park site. Adjacent land on the large lot immediately north of Kyle Drive is currently forested. The future park site is bordered to the west by Valley Stream Drive. Adjacent land use to the east and south is high density residential, and to the east and north is low density residential. Jelynn Street to the east of the future park site is identified in the City's Comprehensive Plan as a collector street and has been built to a 36 foot street on 55 feet of right of way. The Comprehensive Plan calls for the extension of Jelynn Street through the Kyle Drive property to connect with Valley Stream Drive. In the high density residential area to the south of the park, three streets (Windsprint, Windproof, and Windblown) are currently dead end streets, and will need to be terminated within the future park site (see photo below). The City will be required to dedicate Right of Way (ROW) and slope easement and contribute funds for future road improvements when park development begins.



There are utility easements on both the west and east side of the Kyle Drive property. The park site is best accessed from either of these utility easements. A Progress Energy transmission line corridor runs the length of the site's western boundary (photo below). This easement is maintained by Progress Energy with herbicide application applied every three years to maintain low growing vegetation. Fire ants are abundant in this area. Imported fire ants constitute a hazard to both people and wildlife. Imported fire ants are found throughout much of eastern North Carolina and spread to new areas through transport of fire ant infested nursery stock and sod. Areas with fire ants are currently under quarantine by the U.S. Department of Agriculture and the North Carolina Department of Agriculture and Consumer Services. Quarantine is directed at nursery operators.

A City of Raleigh Sanitary Sewer Easement comprises the eastern boundary of the site. This easement is maintained by the Public Utilities Department through annual mowing with a rotary cutter or brush hog.



SIP: Kyle Drive Property

The Kyle Drive property is located in a flood hazard area known as Zone AE and Zone X. These Zones are defined by the Federal Emergency Management Agency (FEMA) in a Flood Insurance Rate Map (FIRM). Zone AE is within the 100 year floodplain. Zone X is outside the limits of a 100 year floodplain. The site is a combination of wooded upland, wetland, and utility easements. Several perennial and intermittent creeks run through the property.

Existing Facilities and Site Conditions: A *Phase 1 Environmental Site Assessment* was completed in 2008 for the Kyle Drive property during the site acquisition process (then called Gholizadeh Tract corresponding to the seller name); the Executive Summary of the report is included in Appendix C. The *Phase 1* report concludes no significant evidence of environmental contamination, environmental impairment, or Recognized Environmental Conditions (REC) in association with the property. This site was reviewed before final site acquisition by City of Raleigh staff (Sally Thigpen, City of Raleigh Urban Forester, Sherry Graham, Tree Planting Coordinator, Melissa Salter, Land Stewardship Coordinator, Jill Braly, Planner 1) to determine if there were any significant site issues. The property assessment dated July 15, 2008 reported no site issues that should impact the acquisition process.

Site investigations for the purpose of developing a System Integration Plan for the Kyle Drive property were conducted during May, July, and October of 2009. The dominant feature on the site is the wetland on the eastern portion of the property. The site appears to have been logged fairly recently. There are cut stumps, old slash piles, and vehicular access paths in the western portion of the property. There is a camping site with a campfire pit and associated trash and beer cans in the southern portion of the site, however this area does not appear to have been used for some time. There is a small deer stand near the eastern boundary adjacent to the wetland (see photo below). There are several rock piles on the site, one rock pile located in the west central area and two rock piles located on the southern property boundary. Encroachment in the high density residential area to the south is minor. There are signs of minor ATV use on the site, particularly in the Progress Energy transmission line corridor on the western boundary. No structures or structural remains have been observed on the property during site investigations. The property boundary signage along the perimeter of the parcel is adequate.

Deed Restrictions

There are no deed restrictions associated with this property.



Inventory of Natural Resources: Soils, Water Resources, Flora and Fauna

The majority of the property is currently forested, with a wetland on the northeast portion of the property. There are no known North Carolina Natural Heritage Program Element Occurrences on or within a one mile radius of the Kyle Drive property.

Soils of the Kyle Drive Property

The following soil data was created by the USGS and the North Carolina Center for Geographic Information and Analysis. The Kyle Drive property is underlain by the Appling-Louisburg-Wedowee soil association. This soil association is described in the *Wake County Soil Survey* as gently sloping to steep, deep and moderately deep, well-drained and somewhat excessively drained soils that have a subsoil of very friable coarse sandy loam to firm clay; derived mostly from granite, gneiss, and schist. This soil association is described as being droughty in many places. The *Wake County Soil Survey* describes the major soils of this association to have moderate to severe limitations to use as absorption fields for septic tanks, no special limitations if they are used to support foundation footings for large buildings, and a main limitation of bedrock near the surface for road construction. The Louisburg soils of Wake County are strongly acid and are low in natural fertility and content of organic matter (Cawthorn 1970). There are five soil mapping units within the property. Approximately 38% of the Kyle Drive property is underlain by the hydric soil WoA.

PgF **Pacolet-Gullied land complex, 4 to 25 percent slopes**

This component is on uplands, hillslopes on ridges. The parent material consists of saprolite derived from granite and gneiss and/or schist. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. This soil is not flooded. Organic matter content in the surface horizon is about 1 percent.

WoA **Wehadkee and Bibb Soils 0 to 2 percent slopes, frequently flooded**

This soil is poorly drained and found on flood plains and in depressions. Stream channels are poorly defined in these areas. Where these soils are on floodplains they are wet and subject to frequent flooding of long duration. The water table is at the surface for at least 6 months. The surface layer is grayish brown sandy loam to silt loam 3 to 12 inches thick. The subsurface is mottled loam to sandy loam and the combined thickness of the surface layer and subsoil is more than 36 inches. Surface runoff is slow to ponded.

WkE **Wake soils 10 to 25 percent slopes**

These soils are on side slopes bordering drainage ways in the uplands. Their surface layer is loamy sand or gravelly loamy sand 2 to 10 inches thick. It is underlain with loamy sand 0 to 10 inches thick. Infiltration is good. Surface runoff is very rapid. Because of bedrock near the surface and slopes, these soils should be kept in forest.

LoD **Louisburg loamy sand 10 to 15 percent slopes**

This soil is on side slopes bordering drainage ways in the uplands. The surface layer is loamy sand 4 to 6 inches thick. The subsoil is very friable sandy loam that is 4 to 24 inches thick. Some areas have from 20 to 50 percent of the surface layer consisting of pebbles and cobblestones. Infiltration is good and surface runoff is very rapid. This soil is highly susceptible to further erosion.

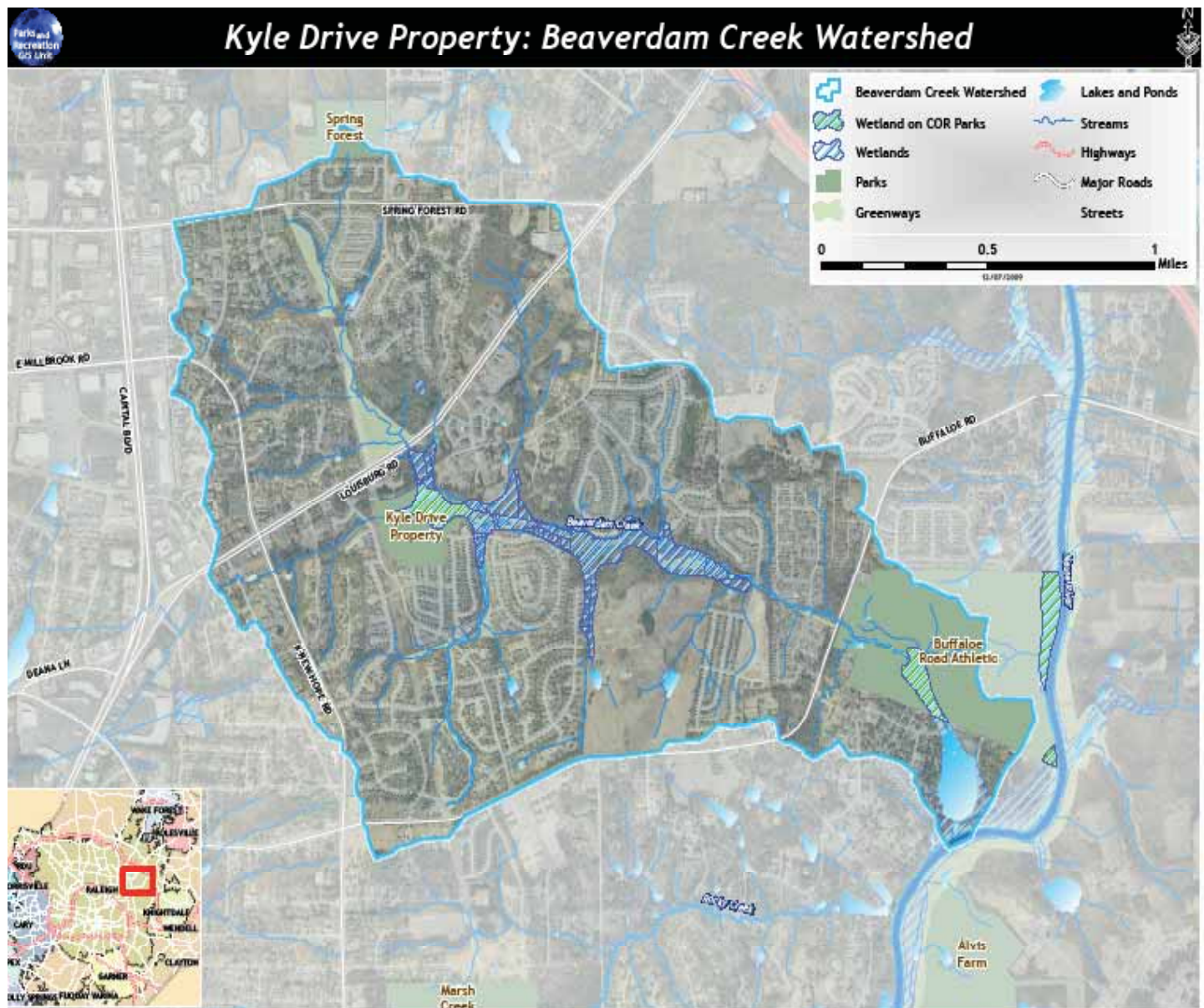
LwC **Louisburg-Wedowee complex 6 to 10 percent slopes**

In a typical mapped area, about 60 percent of the acreage is Louisburg soil, 38 percent is Wedowee, and 2 percent is Durham, Vance, and other soils. Included with these soils were some areas in which 20 to 50 percent of the surface layer consists of pebbles and cobblestones.



Water Resources of the Kyle Drive Property

The City of Raleigh's Kyle Drive property is located in the Beaverdam Creek watershed of the Neuse River Basin. Surface water resources on the property consist of two perennial stream channels that flow into a wetland on the eastern portion of the site. The streams and wetland are subject to state and federal jurisdictional regulation under Section 404 of the Clean Water Act and North Carolina's Neuse River Riparian Buffer Rules.



SIP: Kyle Drive Property

The perennial stream entering the property from the west is an unnamed tributary ranked as a third order stream. The stream channel is minimally braided and defined as it enters the property and becomes very braided and undefined where it joins the wetland on the central portion of the property. Beaverdam Creek is a large perennial stream that flows northward under Jelynn Street then northwesterly to the Kyle Drive property. There is a report of beaver living upstream on Beaverdam Creek.

The wetland on the Kyle Drive property is a portion of a 57 acre wetland that stretches east of the property and is associated with Beaverdam Creek (see map below). This wetland is listed on the *United States Fish and Wildlife Service National Wetland Inventory*. The portion of the wetland on the Kyle Drive property is (approximately) 8.13 acres. The City of Raleigh Greenway system holds additional portions of this large wetland through either fee simple ownership or easement.





The wetland is classified according to the Cowardin wetland classification as PFO1A: palustrine, forested, broad-leaved deciduous, temporarily flooded. The wetland appears to have been dominated by trees in the past, however the hydrology at least on the Kyle Drive property portion of the wetland appears to have changed over time, evidenced by abundant snags in standing water (see photo above). Currently, the site appears to be continually inundated with shallow water. In the wetland's current condition, the site characteristics follow the *Non-Tidal Freshwater Marsh* wetland classification developed for the North Carolina Wetland Assessment Method (NC WAM). Non-tidal freshwater marshes are found throughout North Carolina in floodplains and along linear conveyances. In this case the wetland is associated with Beaverdam Creek.

In the area of standing dead trees where the water is deepest, herbaceous vegetation is dominated by Lizard's Tail (*Saururus cernuus*). Tag Alder (*Alnus serrulata*), Climbing Boneset (*Mikania scandens*), and Smartweeds (*Persicaria* spp.) are dominant where the water is shallower. There is a large stand of Giant Cane (*Arundinacea gigantea*) in the eastern portion of the wetland. The wetland is dominated in some locations by the invasive plants Japanese Stilt Grass (*Microstegium vimineum*), Marsh Dayflower (*Murdannia keisak*), and Chinese Privet (*Ligustrum sinense*). These invasive plants do not appear to impact the stormwater holding and water filtering functions of the wetland, but do impact the wildlife value of the wetland because they decrease the vigor and diversity of native wetland plants that support a diversity of wildlife. There are emergent soft-stemmed aquatic plants present on the site, including Arrow arum (*Peltandra virginica*), Arrowhead (*Sagittaria latifolia*), Broad-leaved Cattail (*Typha latifolia*), and Sedges (*Carex* spp.). There are signs of past beaver activity in the wetland area near Jelynn Street, and a report of beaver living just upstream of the Kyle Drive property on Beaverdam Creek. There are fish present in the wetland.

SIP: Kyle Drive Property

As stated earlier in this report, according to the January 2010 City of Raleigh Comprehensive Plan, Jelynn Street is planned to extend through the Kyle Drive property to Valley Stream Drive. Isolating the wetland from the adjoining upland by installing a street through the Kyle Drive property will be detrimental to wildlife at this site, particularly with the existing intense development surrounding the property. The streams and wetland are significant features on this site, and should be protected and enhanced for wildlife habitat, water quality, and programming and educational opportunities during future park development. Disturbance to these areas during site development should be minimized and a permanent buffer should be maintained.

The Neuse River Riparian Buffer Rules require a minimum 50-foot wide riparian buffer directly adjacent to surface waters in the Neuse River Basin. A 50 foot buffer of both streams and the wetland would protect 5.8 acres in addition to the wetland, for a total protected area of 13.9 acres on the site. The City allows some minimal use within a buffer, however no land-disturbing activity is allowed within 80 feet of the water edge if the average slope is between 15 and 20 percent, and within 95 feet if the slope exceeds 20 percent. The portion of the Kyle Drive property south of the wetland does contain some steeper slopes that will need to be evaluated during site



The following description of groundwater characteristics on the parcel is from the *Phase 1 Environmental Site Assessment*: “The location of the subject property appears to be situated within an area dominated by metamorphic rocks of the Raleigh Belt. The rocks at this general location would consist primarily of injected gneisses such as biotite gneiss and schist. The hydrogeological system in the area of the subject property includes both the surficial sediments and underlying bedrock. Groundwater in sediments is present in pores between individual sediment grains. In bedrock, groundwater is present predominantly in horizontal and subhorizontal unloading fractures, and in near, vertical stress fractures. Groundwater depths are variable and generally approach ground surface near streams and rivers. Based on the historical groundwater flow characteristics in this area, groundwater flow typically mirrors surface topography. Accordingly, groundwater flow in the vicinity of the subject property would be expected to be generally from the south to the north.”

Flora Resources of the Kyle Drive Property

Site investigations of flora resources were conducted by City of Raleigh staff during the months of May, July, and October in order to capture various flowering periods to correctly identify plant species. Flora identification will be ongoing will be onbe will be be ongoing at this site. Additional plants that are identified during annual site inspections and work days will be added to the plant inventory. Species naming follows “*Flora of the Carolinas, Virginia, and Georgia, and Surrounding Areas*” by Alan S. Weakley, 2008.

The Kyle Drive property is comprised of a combination of Piedmont Dry-Mesic Pine Forest, Piedmont Swamp Forest, and Non Tidal Freshwater Marsh. The diversity of plant community and habitat types on this site include streams, riparian area, wetland, dry and mesic forest, and the herbaceous easement areas that are artificially maintained to control woody vegetation, thus providing open grassland areas.

The wetland area and riparian zones totaling almost 14 acres are a combination of Piedmont Swamp Forest and Non Tidal Freshwater Marsh. Piedmont Swamp Forests are generally on Wehadkee soils, in this case approximately 38% of the Kyle Drive property is classified as Wehadkee soil. Piedmont Swamp Forests may be flooded for relatively long periods of time (Schafale and Weakley, 1990). As stated previously, the wetland area contained more trees in the past, however as the hydrology of the site changed the prolonged flooding killed the trees and much of the wetland has transitioned into a Non Tidal Freshwater Marsh, dominated by herbaceous vegetation. The periphery of the wetland does still support woody vegetation, including Red Maple (*Acer rubrum*), Sweet Bay (*Magnolia virginiana*), Common Winterberry (*Ilex verticillata*), and Tag Alder (*Alnus serrulata*). A detailed plant list for the entire site is included in Appendix D.

Wetland vegetation on this site is currently dominated by invasive Japanese Stilt Grass (*Microstegium vimineum*), invasive Marsh Dayflower (*Murdannia keisak*), and Chinese Privet (*Ligustrum sinense*). Diversity of native wetland flora is low. Native wetland species do include Arrow arum (*Peltandra virginica*), Arrowhead (*Sagittaria latifolia*), Lizard’s Tail (*Saururus cernuus*), and Climbing Boneset (*Mikania scandens*). There is an area of dense Giant Cane (*Arundinacea gigantea*) and Greenbriar (*Smilax* sp.) in the wetland area nearest Jelynn Street.

The managed utility easement on the western portion of the Kyle Drive property is maintained by mowing and herbicide application to control woody vegetation. Herbaceous species in this area include Spotted Beebalm (*Monarda punctata*), Mountain Mint (*Pycnanthemum* sp.), Ironweed (*Vernonia noveboracensis*), and Butterflyweed (*Asclepias tuberosa*).

The upland forested portion of the Kyle Drive property is primarily Piedmont Dry-Mesic Pine Forest. There is a small area of invasive kudzu (*Pueraria Montana* var. *lobata*) near the northeastern corner of the Progress Energy utility easement (photo below). This invasive plant can quickly take over, growing a foot per day. As many as thirty vines can grow from one root crown. If kudzu remains on this site it will likely kill trees and other vegetation by smothering, girdling, and uprooting. The dominant trees in the kudzu area are mature pines.



Rare and Protected Plant Species: Michaux Sumac (*Rhus michauxii*) is a federally protected plant known to occur in Wake County and listed as “Endangered” by the U.S. Fish and Wildlife Service (USFWS) *Endangered Species Act of 1973*. The Endangered Species Act requires that any action likely to adversely affect a federally protected species is subject to review by USFWS. City of Raleigh staff has conducted a thorough site survey for Michaux Sumac. No specimens of this endangered plant were found.

The USFWS lists four federal plant species of concern (FSC) in Wake County: Bog Spicebush (*Lindera subcoriacea*), Sweet Pinesap (*Monotropis odorata*), Grassleaf Arrowhead (*Sagittaria weatherbiana*), and Virginia least trillium (*Trillium pusillum* var. *virginianum*). None of these plant species are likely to have suitable conditions available on the Kyle Drive property, and no specimens of these plants were observed on the site during site investigations.

The North Carolina Natural Heritage Program (NCHNP) database of rare species and unique habitats (2008) was reviewed. No element occurrences are found on the parcel.

Tree Conservation Ordinance: The City of Raleigh Tree Conservation Ordinance (TC-7-04) is designed to protect trees during pre-development of a site by defining allowable tree removal activity. During site development, the Kyle road property will be required to establish Tree Conservation Areas (TCAs).

The following tree removals and disturbance are not allowed without a Tree Conservation Permit:

- Champion trees
- Trees in Resource Management Districts
- Trees in natural protective yards
- Timber harvests
- Trees related to installation of a use, structure, driveway, or facility improvement
- Trees related to a subdivision or a site plan
- More than 15 trees on parcels greater than or equal to 2 acres in size
- Healthy trees greater than or equal to ten inches dbh within the following protected buffer areas: 50 feet of a thoroughfare, 32 feet of a vacant property line, 65 feet of any other property line including non-thoroughfare roadways

A portion of the Kyle Drive property is zoned CM, or Conservation Management. This is a type of Resource Management District, so all tree removal in this zone will require a Tree Conservation Permit.

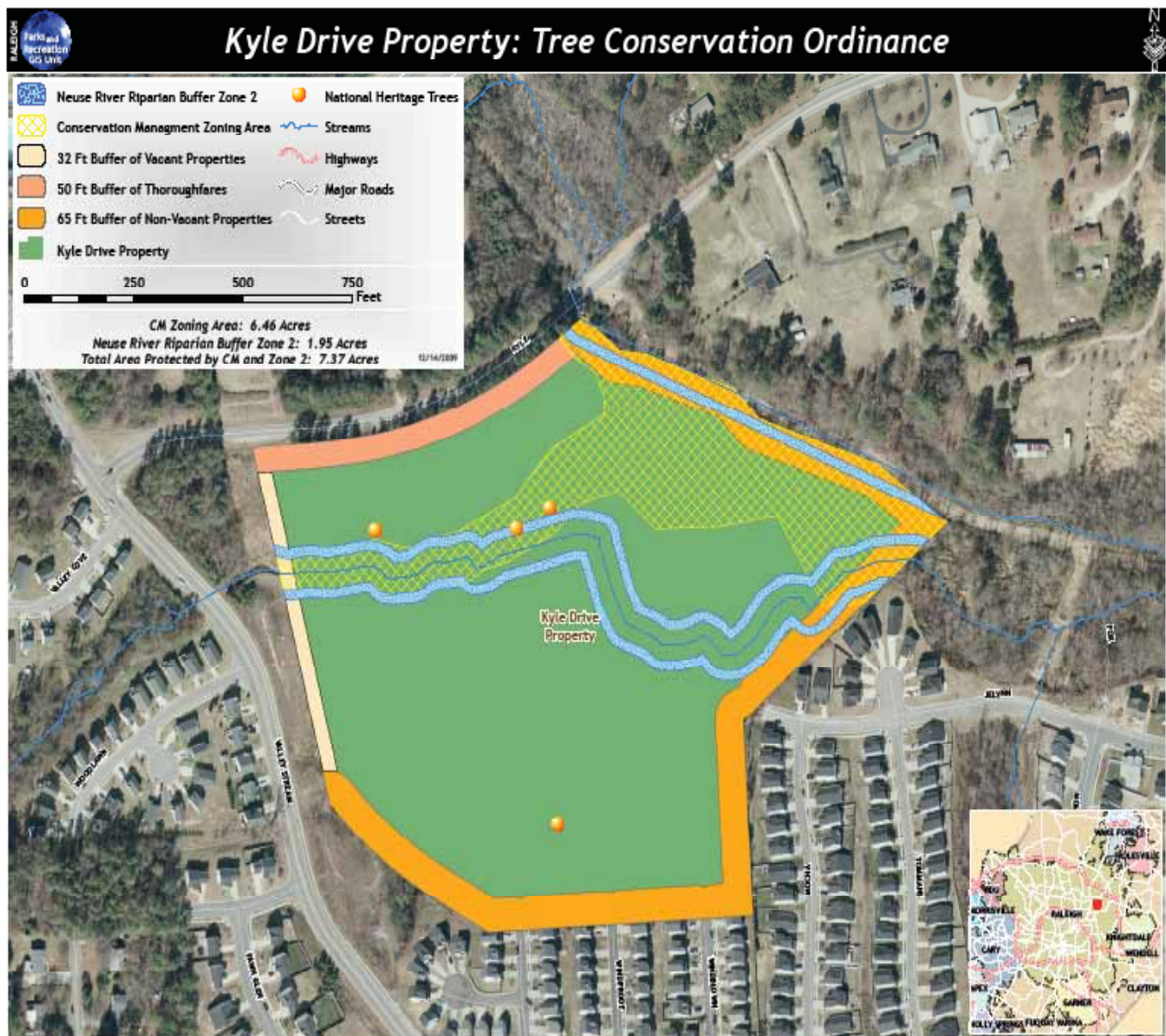
Control and removal of non-native invasive tree species to promote the vigor and diversity of native trees is appropriate under “Urban Forestry” practices within the context of the Tree Conservation Ordinance.

During site development tree preservation will be required through the establishment and protection of Tree Conservation Areas (TCAs) (Section 10-2082.14). At present, four types of Primary TCAs must be identified and established wherever they occur on a site: tree protection areas required in Resource Management Districts and conditional-use zoning or re-zoning tree protection areas, Champion Trees, Neuse River Riparian Buffer Zone 2, and slopes greater than or equal to 45% adjacent to or within floodways.

SIP: Kyle Drive Property

At the time of this report, TCA requirements for the Kyle Drive property (zoned R-10 and CM) will be 10% of 27.25 acres, or approximately 2.73 acres. TCAs are not dedicated until the site development phase and will need to be reevaluated at that time. The Neuse River Riparian Buffer Zone 2 would contribute 1.95 acres to the required TCA, and the Conservation Management Zone would contribute 6.46 acres, for a total of 7.37 acres or approximately 27% of the Kyle Drive property.

Four Heritage Trees were observed on the Kyle Drive property during natural resources inventory of the site and have been mapped. Heritage trees are defined in Chapter 556 Senate Bill 238 as canopy trees with a DBH (Diameter at Breast Height) of 36 inches or greater, or an understory tree with a DBH of 10 inches or greater.



Fauna Resources of the Kyle Drive Property

The wetland and the adjacent upland of the Kyle Drive property are important wildlife areas. The Kyle Drive property is located within a sub-watershed that contains fish or mussels listed with the state of North Carolina as Priority Species in the Wildlife Action Plan. Priority Species are species that are declining, threatened, endangered, and/or have limited data, indicating a need for survey, monitoring, and research attention in order to improve overall understanding of them. Staff from the *North Carolina Wildlife Resources Commission* assisted the City of Raleigh in developing a listing of Priority Species that may *potentially* occur on the property, included on the following page.

Wildlife sightings and signs observed during site investigations are recorded in Appendix E. Water fowl have been observed in the standing water of the wetland, woodpeckers have been observed utilizing the standing dead trees in the wetland area, and white tailed deer are often observed on the property. Raccoon tracks are abundant in the stream and wetland areas. Snakes have been observed on this site. Several Eastern Box Turtles (*Terrapene carolina*) have been observed in the upland area near the wetland. Box turtles are long lived (25-30 years, and even up to 50 years), slow to mature (turtles reach maturity between 7 and 10 years), and have few offspring per year. Over the span of their lifetime, only 2-3 of their offspring will make it to adulthood. These qualities make the turtles sensitive to development and capture for the pet trade, and box turtles are in decline. Habitat loss and fragmentation create a need for box turtles to cross roads and venture into areas used by humans. Habitat fragmentation is defined as the process by which natural habitats are separated from similar habitats by land that is used by humans (Dodd, K.C. *North American Box Turtles: A Natural History*. University of Oklahoma Press 2001). As stated previously, the City of Raleigh Comprehensive Plan calls for the extension of Jelynn Street through the Kyle Drive property to Valley Stream Drive. Separating the wetland area from the adjacent upland on this site will be detrimental to a variety of wildlife.

Rare and Protected Wildlife: Three wildlife species known to occur in Wake County are listed as endangered or threatened through the *Endangered Species Act of 1973*: bald eagle (*Haliaeetus leucocephalus*), red-cockaded woodpecker (*Picoides borealis*), and dwarf wedgemussel (*Alasmidonta heterodon*). The Endangered Species Act requires that any action likely to adversely affect a federally protected species is subject to review by USFWS.

The bald eagle is listed as federally *threatened* and has a *threatened* state status in North Carolina. No bald eagles or bald eagle nests were observed during field investigations of the parcel. The NCNHP has no records of known populations of bald eagle on the parcel. Development of this park site is not expected to adversely affect the bald eagle.

The red-cockaded woodpecker is listed as federally *endangered* and has an *endangered* state status in North Carolina. The red-cockaded woodpecker is found in open, old-growth pine stands greater than sixty years old. No red-cockaded woodpeckers or their cavity trees were observed during field investigations of the parcel. The NCNHP has no records of known populations of this bird within a one mile radius of the parcel. Development of this park site is not likely to adversely affect the red-cockaded woodpecker.

The dwarf wedgemussel is listed as federally *endangered* and has an *endangered* state status in North Carolina. The dwarf wedgemussel is known to occur in the Neuse River basin, inhabiting large rivers to small streams. In the southern portion of its range it is often found buried under logs or root mats in shallow water (USFWS 1993). It is unknown whether dwarf wedgemussel may occur on the Kyle Drive property, and additional investigation is needed. The NCNHP has no records of known populations of the dwarf wedgemussel on the Kyle Drive property.

The USFWS lists twelve federal species of concern (FSC) in Wake County. A table is included listing the habitat requirements of the twelve species, and whether suitable habitat for them is available on the Kyle Drive property. The information provided in this table has been reviewed by *North Carolina Wildlife Resources Commission* staff.

	<u>Habitat Requirements</u>	<u>Habitat available on Kyle Drive Property?</u>
Bachman's sparrow <i>Aimophila aestivalis</i>	Prefer longleaf pine woodlands with grassy areas, particularly those that have been burned recently; 'Special Concern' in North Carolina	No
Carolina darter <i>Etheostoma collis lepidinion</i>	Small to moderate sized streams with low current velocity, preferring substrates of mud, sand and sometimes bedrock; tolerant of fine sediments covering the substrate; 'Special Concern' in North Carolina	possible but unlikely
Carolina madtom <i>Noturus furiosus</i>	Occupies relatively larger streams that flow into the Neuse and Tar rivers; commonly seen in mussel shells, under logs and rocks, in piles of leaves and sticks; 'Threatened' in North Carolina	No
Roanoke bass <i>Ambloplites cavifrons</i>	Creeks to medium rivers with rock, gravel, sand and silt substrates	unlikely
Southeastern myotis <i>Myotis austroriparius</i>	Roost in caves or abandoned buildings with standing water and forage over open water; Can also roost in hollow trees	possible but unlikely
Southern hognose snake <i>Heterodon simus</i>	Open xeric areas with well-drained sandy soils, and river floodplains	unlikely
Atlantic pigtoe <i>Fusconaia masoni</i>	Inhabits mostly medium to large streams with moderate gradients, clean fast water, and sand or gravel bed under riffles	unlikely
Diana fritillary <i>Speyeria diana</i>	Breed in deciduous or mixed woods; feed in grasslands and shrub lands	possible but unlikely
Green floater <i>Lasmigona subviridis</i>	Small to medium freshwater streams with slow current gravel and sand substrates, in water depths of one to four feet, in the Neuse River Basin	possible but unlikely
Yellow lance <i>Elliptio lanceolata</i>	Freshwater streams and rivers with clean coarse to medium sized sandy substrates, rocks, and in mud in slack water areas of Neuse River Basin	possible but unlikely

Cultural Resources and Historical Site Use

A cultural resources background study of the Kyle Drive property was completed by the City of Raleigh Land Stewardship Coordinator utilizing the following data sources:

1. Historic maps at the North Carolina Department of Archives and History. The 1871 and 1878 Wake County Maps by Fendol Bevers show no evident occupancy on the property.
2. Deed records from the parcel.
3. U. S. Department of Agriculture (USDA) Natural Resources Conservation Service in Raleigh North Carolina aerial photographs:
 - a. Photo BOP-3F-160, Grid M-7, flown March 29, 1949 - USDA Natural Resources Conservation
 - b. Photo BOP-7FF-182, Grid M-7, flown March 15, 1965 - USDA Natural Resources Conservation
 - c. Photo BOP-3MM-40, Grid M-7, flown February 23, 1971 - USDA Natural Resources Conservation
 - d. Photo USDA 40 37183, Grid178-42, flown April 26, 1981 - USDA Natural Resources Conservation
 - e. Photo NAPP 6137-227, GridG-8, flown February 23, 1993 - USDA Natural Resources Conservation
4. Phase 1 Environmental Site Assessment for Gholizadeh Tract, 4700 Kyle Drive, Raleigh, North Carolina, September 2, 2008 by GeoLogix, Inc.

Aerial photos of the property from 1949 to 1993 were reviewed. Some areas of the site appear to have been continually forested throughout this time period. The Progress Energy utility corridor was installed after 1954, and is visible on the 1965 aerial photo. The wetland area of the site appears to be wooded until at least the 1971 photo. There was a cleared area near Kyle Drive in the 1949 and 1954 photo that may have also had a small structure. This area was reverting to forest by the time of the 1971 photo. Adjacent land to the east and south was not yet developed in the 1993 photo.

Interim Management of the Kyle Drive Property

Interim management of the Kyle Drive property will be ongoing until future park development and the initiation of a Master Plan for this site. The System Integration Plan is not intended to restrict the Master Plan process. Updates to interim management on the site will be posted on the City of Raleigh website under "System Integration Plan".

The Kyle Drive property is monitored on a regular basis by Parks staff. Site issues are addressed as needed. Parks staff patrols the park boundaries and continues to conduct site investigations for the purposes of natural resources inventory. Illegal dumping is monitored and cleaned up on a regular basis. Tree maintenance and other grounds maintenance is done as needed. Road Right of Way is mowed and cleaned up regularly. Herbicide application is applied approximately twice per year to control curbside vegetation.

On undeveloped park sites with a completed SIP, the City of Raleigh Land Stewardship Coordinator shall conduct a site review on an annual basis to review existing site conditions, review the status of recommended interim management activities, and determine whether interim management recommendations should be modified.

Interim Management Recommendations

The following interim management recommendations are proposed for the Kyle Drive property. The management tasks should be completed on the site as resources and staff are available. The City of Raleigh Land Stewardship Coordinator should prioritize the interim management recommendations and identify specific staff to complete the tasks. The Land Stewardship Coordinator will be responsible for initiating a request to appropriate staff to conduct the specific action recommended for the site. Work progression and updates will be recorded in the final section of this report.

Interim management recommendations are organized into three categories: *Safety, Environment, Property Issues*:

Safety

- The Kyle Drive property is an undeveloped park site and therefore is not managed on a frequent basis for public safety. The property has not yet been fully evaluated for safety, and could contain unknown conditions such as unstable trees, barbed wire, or other hazards. Public access to the site should be discouraged until a full site hazard evaluation and remediation is completed. Signage stating NO TRESPASSING should be placed at logical and apparent entrances to the site. Related educational information should be developed to aid in communication to neighbors and other groups that might be encountered on or interested in this site.
- Remove deer stand near eastern property boundary.
- Post No Hunting signs on the site.
- Post signs stating "NO ATV use"; Develop City of Raleigh ATV guidelines through public relations/marketing.
- Determine species of fire ant in Progress Energy easement. If the fire ants are determined to be imported fire ant species, the City should investigate potential fire ant control through cooperation with Progress Energy.
- Review location of hazardous trees particularly along established trails or other often frequented areas. Remove hazard trees as needed. Downed wood could be left on site for wildlife habitat. Standing dead trees that do not constitute a hazard should remain on site for wildlife habitat.

Environment

- Kudzu control should be initiated as soon as possible. The area should first be evaluated for desirable native vegetation in proximity to the existing kudzu. Desirable vegetation should be preserved if practical, or replanted after kudzu removal to increase the effectiveness of the control. For successful long term control the kudzu root system must be destroyed. The root crowns should be examined in winter or early spring to determine the age of the stand. If the root crowns are over two (2) inches in diameter a higher herbicide rate will be required. Higher herbicide rates and more treatments may also be needed on clay soils. The soil data from the USGS and the North Carolina Center for Geographic Information and Analysis label the soil in this area as Gullied Land. A detailed soil test should be done in the kudzu area to determine if clay soils are present. Kudzu should be treated according to label with chemicals approved by the City of Raleigh. Repeated chemical treatments may be needed.
- Inventory and assess invasives and determine suitable control methods. The invasive non-native species should be managed when staff and resources are available to do so. Priority species for removal is kudzu.
- Continue inventory and mapping of natural resources including flora and fauna. It will be particularly important to inventory reptiles and amphibians present on this site that may be impacted by extending Jelynn Street through to Valley Stream Drive as called for in the City of Raleigh Comprehensive Plan. Flora inventory and inventory of wildlife should continue as staff or volunteers with inventory skills are on site for annual inspections or work days.
- Conduct wetland delineation.
- Review areas with erosion and implement Best Management Practices (BMPs) where and when appropriate.
- Forest management may be needed on the site, for example to address storm damage or serious disease or insect infestations.

Property Issues

- Signage at the site should include a Parks and Recreation phone number, and possibly website information, to report non-emergency site issues.
- Facilitate removal of old silt fence from eastern property boundary.
- Remove fire pit and clean up debris from camping area on the southern portion of the site.
- Continue to monitor for dumping and remove debris as needed.
- Establish communication with neighborhood adjacent to the site.

Completed and Ongoing Interim Management responsibilities

- Inventory of natural and cultural resources initiated
- The name of the site has been changed from NPS 41 to the Kyle Drive property
- Property boundaries markers have been installed around the perimeter of the site

Appendix A

City of Raleigh

Council Resolution (2003) - 735



Resolution (2003) – 735

A RESOLUTION TO REVISE THE PROCESS FOR APPROVAL OF MASTER PLANS FOR PARK AND RELATED PROJECTS

PURPOSE: To develop a total program for a park which will best meet the needs of the community for which it is intended to serve. To insure that this purpose is met, there needs to be citizen input as well as professional planning and design. The entire process is designed to optimize public participation.

The purpose of a Master Plan for an individual piece of property is to determine the scope and character of its transformation for recreational purposes and for conserving significant environmental features. It has a relationship to the larger comprehensive recreation plan in that it fulfills some portion of the broader recreation objectives.

This resolution was developed to clarify and improve the Master Planning Process. It will serve as a helpful guideline for both the professionals and citizens involved in park planning. It is intended to replace Resolution (1988) – 195 and all other Master Planning guidelines, procedures and policies. Flow charts have been provided as visual aids. Descriptions of the park acquisition and development process have been added after the discussion of the Master Planning Process. A new element has been added to guide planning prior to the development of the Master Plan, and titled the “System Integration Plan (SIP).”

The Park Master Planning Process

I. Master Plan

A Master Plan is a conceptual design document that generally describes and guides the future management and development of a park property. Its preparation is intended to be a public process to ensure that the needs of the public are met while preserving the ecological function and environmental quality of the site. Generally, all parks should have an adopted, relatively recent (less than 15 years old) Master Plan when intended for park development.

II. Request to Initiate Master Plan

Recommendation to consider a Master Plan study (new, revised or amended) may come from a variety of sources, including: City Council, citizen request or petition, City Administration, or the PRGAB (Parks, Recreation and Greenways Advisory Board). The City Council may choose to set thresholds which (See Decision 2, Section 3) automatically trigger a public master plan process but the City Council retains the right to require a master plan for any and all park properties, including greenways and nodes on the greenways.

III. City Council Authorization

City Council shall approve the initiation of a complete Master Plan, revision or an amendment to a plan, and refer the project to the PRGAB and administration for implementation. Administration shall provide a report to Council and the PRGAB addressing available funding, project schedule, special circumstances, system integration plan, and any other background information.

IV. Select Chair/Vice Chair

Council shall initiate the formal master plan process with the designation of a Chairperson and Vice Chairperson for the Master Plan Committee, who shall also be members of the PRGAB. PRGAB shall nominate for appointment to the Master Plan Committee, however, final appointment of the Master Plan Committee shall be made by the City Council.

Chairperson/Vice Chairperson responsibilities will be to:

- Call all meetings and select the dates, times, and locations
- Preside over the meetings and invite public comment at all appropriate stages throughout the process
- Formulate meeting procedures that encourage open-discussion, well-informed decision making, and working towards an agreement. The chair will call for a majority vote as needed to finalize decisions.
- Report to the PRGAB on the progress of the Committee, notify the PRGAB of meeting times, and present the final recommendations of the committee to the PRGAB and the City Council

I. Staff Assignment

A core group of Parks and Recreation staff will be identified by administration for participation on the Master Plan Team. (The Master Plan Team consists of staff, design consultants, and the citizen Master Plan Committee). The core group will consist of a minimum of three staff members including the Project Manager, Parks Division Representative, and Recreation Division Representative or appropriate substitute members as the Department may determine. The committee may request other appropriate staff, such as the City Naturalist, Urban Forester, or representatives from other City departments as needed for appropriate reports. Staff will be responsible for preparing agendas for meetings, recording meeting minutes, providing background information, and insuring adequate professional input throughout the process.

II. Project Notification

A. Notification

- A notification sign (or more if the site fronts on multiple streets) will be posted at the site 30 days before the initial public meeting.
- Meeting and project information/background shall be made available at least two weeks prior to the first meeting to the City Council, PRGAB, owners of adjoining properties, registered neighborhood groups, including CACs, and registered park support groups * within a 2 mile radius for any park master plan. Other interested groups as suggested by the Public Affairs or Community Services departments, such as the Historic Districts Commission, the Appearance Commission, the Planning Commission, the Human Resources and Human Relations Advisory Commission, and Mayor's Advisory Committee for Person's with Disabilities, shall also be notified. Meeting and project information will be posted at community centers and at other sites suggested by the Public Affairs Department. PRGAB, City Council, Master Plan Team (and Committee) Members (once identified), or administration all may recommend concerned individuals or groups who may have an interest in the park to receive notifications and mailings.
- Project and press releases shall be posted on Parks and Recreation website(s) at least one week prior to any meetings, with appropriate linkages to other websites as suggested by the Public Affairs Department.

* A procedure for establishing registered park support groups should be developed by staff and submitted to Council for approval.

B. Public Meeting

A public meeting will be held to inform area residents and interested parties of the beginning of the Master Planning Process and to receive initial input, including local knowledge of natural or historic features and community desires. At this meeting, potential Master Plan Committee members may be identified from among the participants. The public meeting will be in an accessible location as close to the park site as practical.

- Notification of the Initial Public Meeting shall be posted 30 days prior to the meeting date, and mailings sent at least 14 days prior to the meeting date. The meeting date will be posted on the Parks and Recreation Department website 30 days prior to the meeting.
- The Public Meeting notice will be publicized as required by City Council, the open meeting law¹ and will be more extensively publicized where deemed appropriate by the chair, Vice Chair, or staff, utilizing appropriate consultation from the Public Affairs Department.

¹ North Carolina State statute Chapter 143, Article 33C specifies that each official meeting of a public body shall be open to the public, and any person is entitled to attend such a meeting. Every public body shall keep minutes of all official meetings. If a public body has established a schedule of regular meetings a current copy of that schedule is to be kept on file with the city clerk. Changes to the regular schedule shall be filed with the city clerk at least seven calendar days before the day of the first meeting held pursuant to the revised schedule. For any other meeting the public body shall cause written notice of the meeting stating its purpose to be posted on the principal bulletin board (Public Affairs Department) of the public body and to mail or deliver to each media service which has requested notice (Public Affairs Department handles these notices). The public body shall also cause notice to be mailed or delivered to

any person who has filed a written request with the clerk. This notice shall be posted and mailed or delivered at least 48 hours before the time of the meeting. These statutes are subject to change. The City staff should annually review these requirements with the City Attorney's office.

III. Consultant Selection

The City's Standard Procedure 100-5 and related Management Policy 100-36 will be followed by the Parks and Recreation Department professional staff and the City Manager for drafting a Request for Proposals (RFP) and selection of the project consultant except as directed by this policy. Final selection shall be subject to final approval by the City Council following normal procedures.

For a Master Plan Amendment, which is required when a new specific use is proposed in a park that does not significantly alter the uses established by the adopted Master Plan for the park, skip items VIII through XI and proceed to XII Public Review of Draft Master Plan or Draft Master Plan Amendments.

IV. Master Planning Committee Selection

- The PRGAB, after appropriate consultation with staff, shall recommend the membership and composition of the Master Plan Committee to the City Council for final appointment. The Master Plan Committee should be representative of persons with interests in the park and appropriate uses. The selection should take into account demographics of the area including age, race, gender, educational background and professional/personal experience, and other relevant qualifications related to the characteristics of the park involved.
- A minimum of twelve (12) members and a maximum of fifteen (15) members, including the Chair and Vice Chairperson, will be chosen.
- Potential members may be solicited at the Initial Public Notification Meeting, through flyer mailings, nominations from CACs and City appointed bodies, recommendations from City Council, or by posting on the City's Parks and Recreation webpage.
- Candidates should be informed of the expected time commitment and need to attend substantially all committee meetings. Candidates unable to make the commitment of time and study should not be selected.
- Nominees for the Master Plan Committee shall be forwarded to City Council by the PRGAB for final appointment.

V. Education

The Master Plan Committee shall receive background information useful to the master planning process, including:

- A Review of the expectations for full participation, including attendance at meetings and individual study to understand the process and the project.
- A description of meeting procedures by the Chair.
- The current Council approved Master Planning Policies as well as the City Conflict of Interest policies.
- Comprehensive Park, Greenway and open Space Plan and other relevant portions of the City Comprehensive Plan.
- If there is a System Integration Plan, it will be provided.
- The staff will provide an executive summary (and make the complete copy available for review by committee members) of the site inventory with additional staff comment relevant to special features identified in the inventory, and make preliminary suggestions about objectives for the park to be considered by the Committee. Detailed information should be provided on any special environmental features identified through any available sources such as the Wake County Natural Areas Inventory, the NC Natural Heritage Program Database, or the Wake County Capital Trees Program.
- Staff will arrange an appropriate tour of other facilities with relevant programming and a site visit to the target park facility.
- Formal or informal citizen survey from the park planning area if available, and a summary of the public comments that have been received.
- Information on existing or anticipated funding.
- A description of the Parks and Recreation Department organization and operations as it applies to the project, and a description of the consultant and staff roles.

All Master Plan Committee Meetings will be open to the public. It will be the staff's responsibility to insure that the meeting dates are published in accordance with the State of North Carolina's Open Meetings Law.

I. Master Plan Program Development

The Master Plan Committee shall develop a program statement for the Master Plan that describes the overall vision for the park, including uses, sensitivity to natural elements, identity, history and other characteristics as appropriate. The Master Plan Program should be consistent with the System Integration Plan and the Parks, Recreation and Greenways Comprehensive Plan Elements. The Program Statement should include reference to the ecological significance and functions of the site and its relationship to the larger citywide and countywide facilities and their functions, particularly with respect to watershed protection and riparian buffers.

II. Draft Master Plan

Based on the Program Statement, the design professionals will develop alternative site related diagrams representing a range of Master Plan Alternatives. The committee will select the concept that best accomplishes the Program Statement goals.

The draft Master Plan shall include the conceptual plan rendering, the Program Statement, other background information as appropriate, a written description of the intent of the Master Plan concept proposed, including the established elements of other previously adopted Master Plans, as well as recommendations for environmental stewardship of the park site and development of the park project.

The Master Plan Committee shall identify Priorities for phased development of the project, with consideration given to information on existing and anticipated funding. This information shall be approved by the Master Plan Committee and made available for public review and comment as provided in the following section.

III. Public Review of Draft Master Plan or Draft Master Plan Amendments

The Draft Master Plan or Draft Master Plan Amendments will be made available for public review and comment. The complete "draft" and the System Integration Plan will be displayed on the Parks and Recreation Department website, at the nearest community center to the park location, the administrative offices for the Parks and Recreation Department at Jaycee Park, or other suitable locations suggested by the Public Affairs Department. There will be comment cards available at those locations. This display should be available at least fourteen (14) days prior to the public meeting.

The public meeting will be held by the Master Plan Committee to receive comment on the Draft Master Plan prior to recommendation to the PRGAB. Public notification of this meeting shall be consistent with notification requirements in section V, "Project Notification." The PRGAB should be encouraged to attend this public meeting. Public comments shall be received for a period of at least two weeks after the public meeting. All comments received shall be summarized in a document and provided to the Master Plan Committee and Consultant, the PRGAB, and the City Council.

Concurrently, City administration interdepartmental review of the Draft Master Plan will take place. Comments provided through this review will be summarized in written form and provided to the Master Plan Committee, the Consultant, and the PRGAB, as well as the City Council.

IV. Recommended Master Plan

The Master Plan Committee shall review comments received and address them in the final proposed Master Plan or Amendment to be forwarded to the PRGAB for consideration. The proposed Master Plan or Amendment shall include the final conceptual plan rendering, program statement, other background information as appropriate, written description of the intent of the Master Plan concept proposed, and recommendations for phased development of the park project, as well as the established elements of other previously adopted master plans.

V. PRGAB Review of Proposed Master Plan

The PRGAB shall consider the proposed Master Plan or Amendment with supporting documents and report to City Council. The public will be given the opportunity to comment on the plan to the PRGAB at a meeting advertised as

prescribed in Section XI. Oral or written comments shall be accepted and transmitted with the proposed Master Plan to the City Council.

VI. City Council Review for Adoption

City Council shall receive the proposed Master plan report with recommendations and comments of the PRGAB for consideration. Final approval of any Master Plan or Master Plan Amendment lies with the City Council after they have completed their review. The City Council may choose to return the plan to the PRGAB for additional revision of key elements.

The Master Plan Committee shall stay in existence until dissolved by the City Council, and the membership will be encouraged to attend the presentation to the City Council.

General Description of the Park Development Process

For a visual representation of the park development process, please refer to the Park Development Process Flow Chart. The “Decisions” outlined below refer to the points at which a decision must be made in the process before continuing on to the next step.

I. Comprehensive Plan

The Park, Recreation and Open space element of the City of Raleigh Comprehensive Plan is the document that guides development of the city’s park system. The City Comprehensive plan projects local and regional growth patterns and public infrastructure needs including parks, greenways and open space for conservation of natural resources and preservation of our environmental quality. The overall Comprehensive plan and its influence on these specific elements must be considered in the context of park planning in order to ensure that public needs are met in the decision-making processes. Future park needs are compared with an existing inventory of park facilities over a twenty to thirty year horizon. Capital improvement funding, acquisition of park properties, classification of new park lands acquired, and master planning of specific parks should each be guided by the recommendations of the Comprehensive Plan.

II. Capital Improvement Program

The Capital Improvement Program (CIP) is a multi-year budget for implementing the Comprehensive Plan. The CIP includes capital allocations for park development projects, including land acquisition, facility development and renovation, including both park bond projects and general fund projects. The City administration reviews and updates its recommendations for the CIP annually and forwards them to the PRGAB for review and comment. Then the Administration forwards its final CIP recommendations to City Council for review and adoption.

Decision 1:

Is the land owned by the City?

(If the City already owns the park land, then skip III and IV and proceed to Decision 2 below).

III. Land Acquisition

The City Administration conducts all land acquisition for the park system with direct supervision by the City Council. Land acquisition includes identification of potential park sites, negotiation of purchase agreements with landowners, and acquisitions. All acquisitions should be consistent with the goals and objectives established by the Comprehensive plan, and must include appropriate environmental investigations and a minimal site assessment prior to recommendation to the City Council.

IV. System Integration Plan

The objective of the System Integration Plan (SIP) is to develop a set of guidelines for the interim management of parkland prior to the initiation of a Master Plan, to document existing site conditions and constraints, to establish the park’s classification consistent with the Comprehensive plan, and if applicable, any proposed special intent for the park. The SIP is not intended to restrict the Master Plan Process.

Public notification of the SIP process shall be given to the City Council, the PRGAB, the CACs, registered

groups, registered park support groups, and appropriate City appointed bodies.

Greenway parcels and open space parcels will generally not require a site-specific System Integration Plan as the purpose and management of greenways is generally defined by the Greenway Element of the Comprehensive plan and the restrictions included in the acquisition instruments. Special segments with unique ecological features or larger nodes in the greenway system may require an SIP and/or a Master Plan. The Master Plan in these cases may equate to a General Management Plan as used by the NC Division of Parks and Recreation or adopted City Parkland Greenway Management policies.

A. SIP Elements:

1. City Council Directed Purpose

Review and confirm any proposed purpose stated by the City Council for the development and use of the property. Utilize the baseline inventory to identify any potential conflicts with existing City policies or ordinances as well as applicable state and federal laws. Potential conflicts and proposed resolutions of these conflicts should be reported to the City Council for final approval.

2. Property Deed Restrictions

Review the deed or purchase agreement for any restrictions, limitations, or commitments to the intended development of the property.

3. Comprehensive Plan Correlation

The current Comprehensive Plan should provide initial direction regarding the classification of, purpose and development intent for the park acquisition. Correlation to the Comprehensive Plan recommendations should be confirmed in the City Council action to acquire the property.

4. Site Inventory

An initial evaluation of the property will be conducted to determine the range of features and qualities of the property to provide direction and guidance for the management and future development of the property. This evaluation and management plan will be enhanced by:

- Documentation of existing site conditions and constraints, the extent and character of natural and cultural resources, and any existing facilities.
- Tree, flora, and fauna inventories
- A general review of the site to determine potential stream and watercourse buffers, property buffers, and special features to be addressed in the SIP.
- A review of development regulations for additional requirements that should be addressed in the SIP.
- An inventory of historical data at the local and state levels to determine potentially significant features to be addressed in the SIP.
- An inventory of archeological data at the local and state levels to determine potentially significant features to be addressed in the SIP.

The tree, flora, fauna, ecological, historical and archeological inventories should be performed by staff or consultants specifically qualified to perform such inventories. These findings shall be presented to the PRGAB for review in their entirety along with attached staff comment.

At this stage, the PRGAB should consider referral to an appropriate PRGAB committee to serve as an SIP Advisory Committee to review the findings and assist staff with interim management policies.

Any unique findings will be used initially in management decisions for the property and then later shared with the citizen Master Plan Committee and consultant. Interim management decisions for the site should be resolved to best maintain the environmental quality and ecological function of the site.

B. Develop and Submit for Approval

Parks and Recreation Department staff shall develop the SIP, working with the SIP Advisory Committee where the

PRGAB has chosen to assign to the appropriate PRGAB committee. The draft SIP shall be posted on the City's website and other appropriate publication as suggested by the Public Affairs Department. The public shall be given reasonable opportunity to comment through email or other written communication as well as the formal presentation to the PRGAB. A sign (or more if the property fronts on multiple streets) shall be posted at the site fourteen (14) days prior to presentation to PRGAB. Adjoining property owners and CACs previously identified City appointed bodies, registered neighborhood groups, and registered park support groups will be notified of the plan fourteen (14) days before presentation to the PRGAB. The public shall be given an opportunity to comment in person at a regularly scheduled PRGAB meeting. The PRGAB shall submit the recommended SIP to the City Council for adoption after appropriate review. The SIP shall be established and adopted by City Council as soon as is practical after site acquisition.

Decision 2:

Is a master plan needed?

1. A new Master Plan is needed in the following situations:
 - Every park site should have a minimal baseline inventory showing property boundaries and riparian buffers and a Master Plan or General Management Plan
 - For acquired but undeveloped park property, a Master Plan derived through a public process is required before any development for public utilization
2. A Revised Master Plan is needed in the following situations:
 - When a Master Plan has been in place more than 15 years, the park has not been fully developed and additional facilities or renovations are planned. This may be minimal review by the PRGAB and staff if the plans are consistent with an existing Master Plan, but must be publicly advertised for comment
 - Proposed park improvements are not consistent with the existing adopted Master Plan
 - The Revised Master Plan Process will be the same as for a new Master Plan
3. The following thresholds will be considered when evaluating whether to initiate a new Master Plan, revised Master Plan or Master Plan Amendment:
 - An improvement with a monetary value greater than \$350,000 or \$500,000 over five years
4. A Master Plan Amendment is needed when a new specific use not included in the adopted Master Plan is to be considered for the park or a specific change for the park is proposed that does not significantly alter other uses of the park.
5. A Master Plan is not needed when:
 - There is facility development or maintenance that is consistent with an existing Master Plan
 - Greenway development. However, special segments with unique ecological features or larger nodes in the greenway system may require an SIP and/or a Master Plan. The Master Plan in these cases may equate to a General Management Plan as used by the NC Division of Parks and Recreation or adopted Park and Greenway Management Policies. A Master Plan Amendment to the Greenway Element may also be appropriate.

I. Design

Design is the first step in implementing a Master Plan. The design phase provides the detailed, technical development plans for components and/or phases of a park. The design process is directed by the City staff utilizing appropriate consultants and public comment based on the adopted Master Plan and reflecting the development regulations and codes that regulate the design and implementation of construction projects. Schematic design of components or phases of a park will be reviewed with the PRGAB and the public to provide the Parks and Recreation Department staff with feedback on the compatibility of the project with the adopted park Master Plan. The Master Plan Committee (those who are still local and/or reachable by normal means) shall be notified of the Design Phase and invited to

comment to the PRGAB during the public review. Additional direct community feedback on the project design plans will be solicited by the following methods: (1) For at least 14 days there will be a display/posting of plans on City's website and (2) at a nearby community center for at least 14 days in advance of the advertising of the bid process for public review and comment. Comments shall be forwarded to the PRGAB and the City Council prior to awarding of contracts.

I. Construction

Construction is the final step in implementing the Master Plan. City Administration directs the construction process. Public bid and contract laws and procedures regulate the process of construction bidding, contract award, execution and implementation of construction projects.

II. Post Occupancy Evaluation/Continuous Monitoring and Evaluation

After each major phase of development and construction, the park facilities and customer satisfaction with the facilities will be evaluated by the staff through user surveys. The objective of these evaluations is to identify improvements that the City can make to improve functioning of the park. The staff will prepare a report to the PRGAB and the planning consultant including information from public survey or comment. The PRGAB shall report to the City Council as they deem appropriate.

Adopted and Effective: April 25, 2003

Revised January 6, 2004

Appendix B

Contributors to Kyle Drive Property

System Integration Plan

Contributing Staff and Agencies to the Forestville Road Property System Integration Plan

City of Raleigh Parks and Recreation Staff:

Melissa Salter, Land Stewardship Coordinator

David Shouse, Senior Planner

Dick Bailey, Design/Development Administrator

Emily Ander, Planner 1

Andy Hayes, GIS Technician

Kelsey Obernuefemann, GIS Technician

Gretchen Sedaris, Gardener District #6

Tammy Reed, Parks and Recreation Crew Supervisor District #6

Sally Thigpen, Urban Forester

Sherry Graham, Tree Planting Coordinator

City of Raleigh staff:

Paul Kallam, City of Raleigh Transportation Engineer

Cesar Sanchez, City of Raleigh Public Utilities Project Engineer

Parks Committee, Parks, Recreation and Greenway Advisory Board

USDA Natural Resources Conservation Service

NC Wildlife Resources Commission

Progress Energy

Appendix C

Phase 1 Environmental Assessment Report

Executive Summary

Phase 1 Environmental Site Assessment
for Gholizadeh Tract 4700 Kyle Drive
conducted by Geologix on Sept 2, 2008

Executive Summary

A Phase I Environmental Site Assessment (ESA) was conducted by *GeoLogix* personnel on a parcel consisting of 25.35 acres of land located at 4700 Kyle Drive in Raleigh, North Carolina. The property studied in this report may be referred to as the "subject property" or "tract". Information regarding the subject property was gathered through an on-site reconnaissance of readily-accessible areas of the tract, a review of aerial photographs, an interview, and a review of environmental regulatory agency database information.

There were no buildings observed on the subject property during the site reconnaissance. No structural ruins or foundations were observed on the tract. A transmission line tower in the transmission line corridor is partially situated on the tract. Aerial photographs were available from years 1949, 1965, 1971, 1981, 1993, and 2006. The subject property appeared to be partially open in the 1949 photo, and may have been farmed. In the 1965 photo, while much of the property appeared wooded, distinct cleared or partially areas were visible in the northern and western regions of the subject property. In the 1971 aerial photograph, more trees were visible in the previously cleared areas of the subject property, and the electrical transmission line corridor was visible along the western boundary of the tract. In the 1981 and 1993 photos, the subject property generally appeared wooded except for the electrical transmission line corridor. In the 2006 photo, the subject property appeared similar to today's appearance. Copies of the photographs reviewed are contained in Appendix C.

On land previously used for agricultural purposes, pesticides, herbicides, insecticides, fungicides and/or other farm-related chemicals may have been applied. However, there was no evidence of prolonged use or misapplication of pesticides, etc., or other chemicals or fertilizers observed on the subject property during the site reconnaissance.

Four (4) UST/groundwater/release incidents and one (1) State Hazardous Waste Site were identified within or close to standard ASTM search distances of the subject property in a review of environmental regulatory agency databases ordered from Environmental Data Resources (EDR). The four UST/groundwater/release incidents are located at least one-quarter mile from the subject property. The State Hazardous Waste Site is located over one mile from the subject property. The identified facilities would not be anticipated to have an adverse environmental impact to the subject property. No NPL sites, RCRA Hazardous Waste Notifiers, State Hazardous Substances Disposal sites, permitted solid waste facilities or other facilities of concern were identified within or close to standard ASTM search distances of the subject property in the radial database search.

There was no physical evidence observed during the site reconnaissance to indicate the existence of an underground fuel storage tank (UST) on the tract. It is unknown for certain if any other old, unregistered UST(s) may have existed on site in association with previous activities on the subject property. No above ground storage tanks were observed during the site reconnaissance.

Solid waste was observed disposed on the property during the site reconnaissance. The waste was generally domestic or land-clearing debris/yard waste in nature. Most of the solid waste observed was disposed behind residential properties which border the subject property to the south and southeast. Otherwise, only isolated solid waste was observed on site. These wastes would not be anticipated to have a significant adverse environmental impact on the subject property. There was no evidence of hazardous or toxic substances, wastes, materials or other environmental contaminants currently being used on or stored on the subject property.

No significant environmental concerns were positively identified on adjacent properties.

In summary, this Phase I assessment revealed no conclusive evidence of environmental contamination, environmental impairment, or Recognized Environmental Conditions (REC) in association with the subject property for in-scope items. The potential for significant surface or subsurface environmental contamination to currently exist at the subject property appears to be low based on available information.

This Phase I Environmental Site Assessment represents a thorough attempt to identify potential sources of environmental contamination. However, there is always the possibility that sources of contamination have escaped detection due to the limitations of this study, the inaccuracy of governmental records, the presence of undetected and unreported environmental incidents, or the inaccuracy of information furnished by other parties used to arrive at the conclusions reached in this report.

The findings contained in this report are relevant to the dates of the site work and should not be relied upon to represent site conditions at other times. The Phase I study of the subject property was performed generally within the scope and limitations of the older standard, ASTM Practice E-1527-00, with one exception. A formal chain-of-title search was not conducted. *GeoLogix* was able to reach appropriate conclusions regarding the subject property without conducting a formal title search. This Phase I ESA was not conducted to be compliant with the new All Appropriate Inquiry requirements of ASTM E-1527-05.

Appendix D

Flora Resources

Kyle Drive Property

Inventory of Flora Observed on Kyle Drive Property



Trees and Shrubs

<i>Acer rubrum</i>	Red Maple
<i>Alnus serrulata</i>	Tag Alder
<i>Baccharis halmifolia</i>	Groundsel Tree
<i>Carpinus caroliniana</i>	Ironwood
<i>Carya spp.</i>	Hickory
<i>Catalpa speciosa</i>	Northern Catalpa
<i>Cornus amomum</i>	Silky Dogwood
<i>Cornus florida</i>	Flowering Dogwood
<i>Euonymus americana</i>	Strawberry Bush
<i>Fraxinus sp.</i>	Ash
<i>Ilex decidua</i>	Possumhaw
<i>Ilex opaca</i>	American Holly
<i>Ilex verticillata</i>	Winterberry
<i>Juniperus virginiana</i>	Eastern Redcedar
<i>Liquidambar styraciflua</i>	Sweet Gum
<i>Liriodendron tulipifera</i>	Tulip Poplar
<i>Magnolia virginiana</i>	Sweet Bay
<i>Morella cerifera</i>	Wax Myrtle
<i>Nyssa sylvatica</i>	Black Gum
<i>Oxydendrum arboreum</i>	Sourwood
<i>Pinus taeda</i>	Loblolly Pine
<i>Quercus alba</i>	White Oak
<i>Quercus marlandica</i>	Blackjack Oak
<i>Quercus nigra</i>	Black Oak
<i>Quercus phellos</i>	Willow Oak
<i>Quercus rubra</i>	Red Oak
<i>Rosa sp.</i>	Rose
<i>Rhus aromatica</i>	Fragrant Sumac
<i>Rhus copallinum</i>	Winged Sumac
<i>Rubus allegheniensis</i>	Allegheny Blackberry
<i>Sambucus canadensis</i>	Elderberry
<i>Sycamore plantanus</i>	Sycamore
<i>Taxodium distichum</i>	Bald Cypress
<i>Ulmus sp.</i>	Elm
<i>Vaccinium arboreum</i>	Farkleberry
<i>Vaccinium corymbosum</i>	Highbush Blueberry
<i>Viburnum dentatum</i>	Southern Arrowwood

Vines

Campsis radicans
Centrosema virginiana
Clitoria mariana
Gelsemium sempervirens
Mikania scandens
Mitchella repens
Parthenocissus quinquefolia
Smilax spp.
Toxicodendron radicans
Vitis spp.

Trumpet Creeper
Spurred Butterfly Pea
Atlantic Pigeonwings
Carolina Jessamine
Climbing Boneset
Partridge Berry
Virginia Creeper
Greenbriar
Poison Ivy
Muscadine Grape

Ferns

Asplenium platyneuron
Athyrium filix femina
Polystichum acrostichoides
Osmunda regalis
Woodwardia areolata

Ebony Spleenwort
Southern Lady Fern
Christmas Fern
Royal Fern
Netted Chain Fern

Herbaceous Plants

Agalinis purpurea
Ambrosia artemisiifolia
Andropogon virginicus
Aponycum cannabinum
Arundinacea gigantea
Asclepias tuberosa
Bidens bipinnata
Boehmeria cylindrica
Carex sp.
Chamaecrista fasciculata
Chimaphila maculata
Cinna arundinacea
Commelina virginica
Elephantopus tomentosa
Elymus hystrix (*Hystrix patula*)
Erigeron sp.
Eupatorium capillifolium
Eupatorium hyssopifolium
Eupatorium perfoliatum
Euphorbia corollata
Helenium sp.
Helianthus giganteus
Hypericum hypericoides
Hypericum perforatum

Gerardia
Ragweed
Broomsedge Bluestem
Indianhemp
Giant Cane
Butterfly Weed
Spanish Needles
False Nettle
Sedge
Partridge Pea
Pipsissewa
Sweet Woodreed
Virginia Dayflower
Elephant's Foot
Eastern Bottlebrush Grass
Fleabane
Dogfennel
Hyssop Boneset
Common Boneset
Flowering Spurge
Sneezeweed
Swamp Sunflower
St. Andrew's Cross
St. John's Wort

Impatiens capensis
Monarda punctata
Oenothera sp.
Peltandra virginica
Penstemon
Persicaria spp.
Persicaria sagittata
Phytolacca americana
Pluchea foetida
Pseudognaphalium obtusifolium
Pycnanthemum sp.
Sagittaria latifolia
Saururus cernuus
Scutellaria incana
Solidago spp.
Spiranthes cernua
Tipularia discolor
Typha latifolia
Verbesina occidentalis
Vernonia noveboracensis
Viola sp.

Jewelweed
Spotted Beebalm
Primrose
Arrow Arum
Beardtongue
Smartweeds
Tearthumb
Pokeweed
Stinkweed
Rabbit Tobbaco
Mountain Mint
Arrowhead
Lizard's Tail
Hoary Skullcap
Goldenrods
Nodding Lady's Tresses
Crippled Crane fly
Broad -leaved Cattail
Yellow Crownbeard
Ironweed
Violet

Invasives

Albizia julibrissen
Arundodonax variegata
Glechoma hederacea
Lespedeza cuneata
Ligustrum sinense
Lonicera japonicum
Microstegium vimineum
Morris sp.
Murdannia keisak
Pueraria Montana var. *lobata*
Pyrus calleryana
Nandina sp.
Rosa multiflora
Solanum viarum

Silktree/ Mimosa
Giant Reed Grass
Ground Ivy
Lespedeza
Chinese Privet
Japanese Honeysuckle
Japanese Stilt Grass
Morris
Marsh Dayflower
Kudzu
Callery Pear
Heavenly Bamboo
Multiflora Rose
Tropical Soda Apple

Appendix E

Fauna Resources

Kyle Drive Property

Inventory of Fauna Observed on Kyle Drive Property

Vertebrates - Birds

<i>Aix sponsa</i>	Wood Duck
<i>Ardea herodias</i>	Great Blue Heron
<i>Branta canadensis</i>	Canada Goose
<i>Buteo lineatus</i>	Red Shouldered Hawk
<i>Cardinalis cardinalis</i>	Northern Cardinal
<i>Ceryle alcyon</i>	Belted Kingfisher
<i>Chaetura pelagica</i>	Chimney Swift
<i>Corvus brachyrhynchos</i>	American Crow
<i>Corvus ossifragus</i>	Fish Crow
<i>Cyanocitta cristata</i>	Blue Jay
<i>Dendroica petechia</i>	Yellow Warbler
<i>Dumetella carolinensis</i>	Gray Catbird
<i>Melanerpes carolinus</i>	Red Bellied Woodpecker
<i>Mimus polyglottos</i>	Northern Mockingbird
<i>Myiarchus crinitus</i>	Great Crested Flycatcher
<i>Parus bicolor</i>	Tufted Titmouse
<i>Passerina cyanea</i>	Indigo Bunting
<i>Picoides villosus</i>	Hairy Woodpecker
<i>Pipilo erythrophthalmus</i>	Eastern Towhee
<i>Poecile carolinensis</i>	Carolina Chickadee
<i>Poliophtila caerulea</i>	Blue Grey Gnatcatcher
<i>Quiscalus quiscula</i>	Common Grackle
<i>Thryothorus ludovicianus</i>	Carolina Wren
<i>Turdus migratorius</i>	American Robin
<i>Wilsonia citrina</i>	Hooded Warbler
<i>Zenaidura macroura</i>	Mourning Dove

Vertebrates - Reptiles and Amphibians

<i>Terrapene carolina</i>	Eastern Box Turtle
---------------------------	--------------------

Vertebrates - Mammals

<i>Castor canadensis</i>	Beaver
<i>Odocoileus virginianus</i>	White-tailed deer
<i>Procyon lotor</i>	Raccoon

Kyle Drive Property

System Integration Plan

Comments and Records

System Integration Plans – Kyle Drive and Forestville Road Properties

Chair of the NE CAC introduced the topic and City of Raleigh presenters. David Shouse, Senior Planner with Parks and Recreation Design/ Development began the presentation by requesting a show of hands for how many people were there from the Kyle Drive area versus the Forestville Road area. According to the sign-up sheet there were 23 citizens present from the Kyle Drive vicinity and 18 from the Forestville Road area. Shouse explained the difference between SIPs and Master Plans and where SIPs fit within the overall Park Master Planning process. He informed the group that the evening's meeting was not to discuss park use and elements. Melissa Salter, Land Stewardship Coordinator with Parks and Recreation presented the SIPs for both sites and guided discussion and questions from the public. After the presentation some citizens gathered around the site maps posted in the room to speak with neighbors and staff.

Questions & Comments on the Kyle Drive Property

- Methods of control and effects of controlling fire ants within the Progress Energy powerline easement. Concerns were raised that controlling the ants on one property would encourage the ants to relocate to adjacent properties.
- Impact of a sanitary sewer spill in 2009 on the wetland. Is staff aware that the wetland is going to act as a catch basin for such spills?
- What is the population surrounding each site?
- Are there other Raleigh Parks that are of similar size and make-up to Kyle Drive that we could look at to get an idea of what could be done at this site?
- Did Parks coordinate with Public Utilities on this project?
- Wood duck boxes should be placed throughout the wetland area.
- When will this park be developed?
- Where does the funding come from to develop the parks? To buy the parks?
- When will Kyle Drive be widened?

Questions & Comments on the Forestville Road Property

- Recommendation to purchase adjacent former trailer park property and add it to the park
- Is the park going to affect our property values and therefore tax assessment?
- When will this park be developed?
- Why didn't I receive a postcard?

Public Comments received during the System Integration Plan Public Review Process

From: Harry Legrand, Zoologist, North Carolina Natural Heritage Program

Received: February 8, 2010

Re: System Integration Plans for Kyle Drive Property and Forestville Road Property; City of Raleigh, Wake County

The Natural Heritage Program has no record of rare species, significant natural communities, significant natural heritage areas, or conservation/managed areas at the two sites nor within 1/2 mile of the project areas. Although our maps do not show records of such natural heritage elements in the project area, it does not necessarily mean that they are not present. It may simply mean that the area has not been surveyed. The use of Natural Heritage Program data should not be substituted for actual field surveys, particularly if the project area contains suitable habitat for rare species, significant natural communities, or priority natural areas.

Neither of these sites appear to have been surveyed previously by staff of our Program, nor are any previous reports for them available in our files. After a brief perusal of the two draft SIP documents, I offer the following comments.

Kyle Drive Property: This 27.24 acre tract appears to contain two features of biological interest. The wetland(s) on the tract are quite extensive. However, the vegetation at these pools (perhaps a Piedmont Swamp Forest) consists mainly of exotic species, and thus it seems unlikely that the City can restore these wetlands back to a more natural setting. However, the dead trees might be important foraging and nesting habitat for woodpeckers, and perhaps the pools are used for breeding by salamanders. Thus, some animal survey work at these wetlands would be of interest. The site also contains a powerline clearing, which adds diversity of native plants - e.g. wildflowers and grasses - to this tract. Such powerline clearings can be important habitats for animals such as butterflies or moths, as well as a few vertebrates. Some butterflies in the region are essentially restricted to powerline clearings, especially species whose hostplants are grasses or other herbaceous species found in openings or edges. Thus, it is important that this habitat be maintained by mowing/bush-hogging, rather than by herbiciding.

From: Tom and Carol Davis

Received: February 11, 2010

Place woodduck boxes on Kyle Drive property!!

From: Jacquelyn Wallace, Urban Wildlife Biologist, NC Wildlife Resources Commission
Received: March 11, 2010

Hello City of Raleigh staff,

Thank you for the opportunity to review the Kyle Drive and Forestville Rd. SIPs. I am really impressed with both documents, particularly the detailed treatment of plant and animal resources. Nice work! My comments on each plan are listed below:

Kyle Drive SIP

- The SIP states that "The Kyle Drive property is located within a sub-watershed that contains fish or mussels listed with the state of North Carolina as Priority Species in the Wildlife Action Plan." This sub-watershed (or 14 digit HUC) actually contains state-listed species. So while the current statement is true because all state-listed species are priority species, I would suggest rephrasing to say "The Kyle Drive property is located within a sub-watershed that contains state-listed fish or mussels."
- In the discussion of stream/wetland buffers on p. 16, you could point out that to protect wildlife resources on the site (herps using the wetland and any aquatic wildlife using the stream), much wider buffers than the 50 ft. Neuse Riparian buffer will be needed. In sub-watersheds with state-listed fish/mussels, the WRC recommends 200 ft buffers on each side of perennial streams and 100 ft buffers on each side of intermittent streams. As far as the wetland buffer, the larger the better.
- To facilitate reptile/amphibian inventory, you may want to consider placing coverboards, sheets of tin, and/or PVC pipes on site. This could help you detect what herps are using the site. These techniques are certainly not necessary, but just a thought.

Let me know if you have any questions.

Best regards,
Jacquelyn Wallace
Urban Wildlife Biologist
NC Wildlife Resources Commission
(919) 360-9680
jacquelyn.wallace@ncwildlife.org

Parks Committee
June 25, 2008

Draft Notes taken by Jill Braly in regard to the SIP Process

The sub-committee had several recommendations/comments:

- 1) Jimmy Thiem discussed the idea of having a standard built in perimeter buffer between new park acquisitions and adjacent properties, where appropriate.
- 2) Standardizing initial steps, either through a checklist or standard inventory form, for the SIP process will help compare apples to oranges, stream line the process. The group acknowledged that the work must go on simultaneous to the process development. Tina Certo used the term progressive evaluation to capture the idea of improving the process as we practice/use it.
- 3) Kevin suggested we identify and notify new neighbors as soon as we purchase park property to increase communication/transparency.
- 4) The committee would like to see the SIP document broken down into categories, such as safety, environmental management, access/property identification, and then have those categories somehow prioritized.

They were very complimentary regarding the document and work being done. I think all agreed this dynamic, on-going in-house process is much better than hiring a consultant. David may have more to add.

(Draft) Parks Committee Meeting

Minutes

June 4, 2009

6:00 P.M.

JAYCEE MODULE

MEMBERS PRESENT:	Jimmy Thiem and Gail Till
STAFF PRESENT:	David Shouse and Melissa Salter
PUBLIC PRESENT:	Jan Pender – PRGAB Member
NOTE TAKER:	Janice Spadorcia
CALL TO ORDER TIME:	6:00 p.m.

Agenda Topic

SYSTEM INTEGRATION PLANS (SIP)

DISCUSSION:	<p>David began the discussion by reviewing Resolution (2003) 735, page 8, first two paragraphs – System Integration Plan. Melissa is the Parks and Recreation Land Stewardship Coordinator and will perform due diligence in assessing and documenting the existing property and structure conditions, maintain a natural resources inventory and form relationships with the neighbors.</p> <p>The goal of the Parks Committee will be to establish park classification consistent with the Comprehensive Plan or, if applicable, a proposed special intent. Once a draft SIP is established by P&R staff and the Parks Committee, the intent is to take it to City Council and the applicable CAC and neighbors.</p> <p>The presentation at this meeting was to include four park properties, but there was only time to review two sites: NPS-16 on Forestville Road and NPS-28 between Leesville Road and Erinsbrook.</p>
ACTION:	<p>Jimmy Thiem was concerned that more members of the Parks Committee were not present for the review and asked P&R staff to send the handouts to all members of the PRGAB. After members review the presentations, it will be determined if a site visit will be necessary. Staff will continue working to develop a draft report with inventory. Staff and the Parks committee will work together to determine an interim management plan.</p> <p>Jimmy also proposed meeting for 1-1/2 hours next time instead of the usual 1 hour.</p>
ANNOUNCEMENTS:	<p>The next Parks Committee meeting will be held either July 2nd or July 9th. David Shouse will notify Giavonia once a decision is made and a notice will be sent to everyone.</p>
ADJOURNMENT TIME:	7:30 p.m.



(Draft) Parks Committee Meeting

Minutes

SEPTEMBER 3, 2009 6:00 PM

JAYCEE MODULE

MEMBERS PRESENT:	Gail Till
STAFF PRESENT:	David Shouse, Melissa Salter
GUESTS PRESENT:	Jan Pender, PRGAB member
NOTE TAKER:	David Shouse
CALL TO ORDER TIME:	6:05 pm

Agenda Topics

SYSTEM INTEGRATION PLAN (SIP)

MELISSA SALTER

DISCUSSION:	Melissa presented revised draft for NPS 16 incorporating comments from August 6 Comm meeting. Discussion included formatting report in In Design program similar to the Horseshoe Farm Wildlife Habitat Zone Advisory Team report. Also discussed were opportunities to further incorporate the relationship of the 2030 Comp Plan, such as adjoining parks and Future Land Use Map (FLUM). The process of public input for SIP's should take into consideration the principles and schedule for the ongoing Public Input Policy Study by NRLI.
ACTION:	Incorporate comments into NPS 16 draft (and future SIP reports); bring first draft of NPS 41 to next comm. Mtg Oct. 1. Copies of Sept 3 meeting's revised draft for NPS 16 to be supplied to members not in attendance.

ANNOUNCEMENTS:	Next meeting on Oct. 1. This meeting to be held in Frank Evans Admin Bldg conference room.
ADJOURNMENT TIME:	7:15 pm



(Draft) Parks Committee Meeting

Minutes

OCTOBER 1, 2009

6:00 PM

JAYCEE CONFERENCE ROOM

MEMBERS PRESENT:	Jimmy Thiem Kevin Brice
STAFF PRESENT:	David Shouse, Melissa Salter
GUESTS PRESENT:	
NOTE TAKER:	Janice Spadorcia
CALL TO ORDER TIME:	6:00 pm

Agenda Topics

SYSTEM INTEGRATION PLAN (SIP)

MELISSA SALTER

DISCUSSION:	Meeting notes from September 3, 2009
ACTION:	Kevin approved minutes from September 3, 2009, Jimmy seconded.

DISCUSSION:	<u>NPS 41</u>
	The group discussed access points and surrounding properties.
	The report will be the same format as NPS 16. The report will coincide with the new Public Policy after the first of the year. Public notification at a minimum:
	<div>Advertising SIP Reports</div> <div>Signs on the property 14 days in advance</div> <div>Notices to adjacent property owners</div> <div>Discussion at PRGAB meeting for comment</div> <div>Northeast CAC – at a regular meeting or a special meeting</div>
	<p>Melissa will start building relationships with neighbors. At the presentation, we will receive feedback and put a face with the project. This will also be an opportunity to learn what we don't know and to find out if anyone is interested in stewardship.</p> <p>Problems include dumping, ATVs, encampments. The group also discussed property management and public use of the site and liability.</p> <p>At this time it is expected the draft plan will go to the PRGAB in January or February.</p>
ACTION:	Melissa will incorporate changes suggested by Jimmy Thiem and send the updated document to everyone.
DISCUSSION:	The group also reviewed NPS 16 and Jimmy gave his observations to Melissa.
ACTION:	Melissa will incorporate Jimmy Thiem's suggestions.
ANNOUNCEMENTS:	Next meeting on November 5, 2009, in the Jaycee Module
ADJOURNMENT TIME:	7:30 pm

Kyle Drive Property

System Integration Plan

Work Progression and Updates

