



Division of Nature Preserves and Natural Resources Natural Resources Section

Initial Biodiversity Assessment: Back Creek Church Road property

Survey date: 05 March 2014

Watershed: Yadkin

Latitude: 35.30537

Longitude: -80.71262

Size: 33.38 acres

Soils: Cecil (CeB2), Enon (EnD), Mecklenburg (MeB), Monacan (MO), Wilkes (WkD, WkE)

This 33.38 acre property (PID # 051-122-98) is located near Back Creek Church Road in Charlotte. Hanberry Boulevard borders the northwest side of the property and residential lots currently being developed on Portaferry Drive border the southwest side of the property. Back Creek Church Road is separated from the property by two privately-owned wooded parcels. Back Creek runs through the southeast side of the parcel as does a power line right-of-way (ROW). The ROW lies parallel to the creek and is located on the east side of it. A tributary of Back Creek is located on the southwest side of the parcel. The tributary continues through an adjacent property, approximately 10 acres in size, which separates the parcel from County owned greenway property.

Overall Site:

The majority of the property exists in various stages of early successional habitat. There are also areas of mature forest that occur along Back Creek and the tributary of Back Creek. These areas of floodplain forest support species typical of a Piedmont Alluvial Forest natural community (Classification of the Natural Communities of North Carolina, Schafale & Weakley, 1990). Based on these distinct areas, the property has been divided into two sections for the purpose of this report.

Section One:

Just over 25 acres of the property occur as early successional habitat. Small areas of this section consist of mostly forbs, grasses and shrubs with the dominant species being Blackberry (*Rubus* sp.), Goldenrod (*Solidago* sp.), Broomsedge (*Andropogon virginicus*) and invasive-exotic species such as Japanese Honeysuckle (*Lonicera japonica*). The majority of the section, however, consists of dense stands of saplings, composed largely of Sweet Gum (*Liquidambar styraciflua*) as well as Eastern Red Cedar (*Juniperus virginiana*) and the invasive-exotic Bradford Pear (*Pyrus calleryana*). Early successional areas closer to the creek and tributary are dominated by the invasive-exotic Chinese Privet (*Ligustrum sinense*). In the central portion of the property, two extremely large White Oak (*Quercus*

alba) trees were observed. The trees are approximately three hundred feet apart from each other. Both trees have a diameter-at-breast-height (dbh) close to 75 inches. The widespread lower limbs of the oaks are characteristic of trees growing in the open without competition, and indicate that at least a portion of the property has been used as pasture land, most likely for several decades.

Section Two:

Areas of Piedmont Alluvial Forest are located on approximately eight acres of the property along Back Creek and the smaller tributary. Species composition is similar in both areas. Canopy trees include Tulip-tree (*Liriodendron tulipifera*), Southern Hackberry (*Celtis laevigata*), Sycamore (*Platanus occidentalis*) and American Elm (*Ulmus americana*). While most canopy trees have a dbh ranging between eight and 20 inches, several larger trees were observed, including a Southern Hackberry and Sycamore with a dbh of approximately 25 inches, an American Elm and Tulip-tree with a dbh close to 30 inches and a large Willow Oak (*Quercus phellos*) with a dbh near 40 inches. The understory includes Box Elder (*Acer negundo*) and Winged Elm (*Ulmus alata*). The shrub layer is dominated by Common Pawpaw (*Asimina triloba*), Spicebush (*Lindera benzoin*) and Chinese Privet. Vines, such as Muscadine Grape (*Vitis rotundifolia*) and Japanese Honeysuckle are also abundant. Several large snags with cavities were observed in the section, including a dead Tulip-tree with an approximate dbh of 35 inches. These snags may be providing important nesting or denning habitat for local wildlife species. Also observed was a woodland pool, which may be providing important breeding habitat for several amphibian species.

Additional Impacts:

Increased runoff and drainage from a newly constructed residential community adjacent to the parcel has widened and extended the tributary on the property. Additional runoff and drainage has also impacted Back Creek by increasing channelization and bank erosion. This has caused the uprooting of numerous canopy trees located along the edges of the creek. There has also been increased sedimentation in the creek with numerous mounds of sediment building up along the banks, especially where bends in the creek are present. Signs of deer hunting/baiting were observed on the property. An old tree stand is located in the western half of the property and scattered corn cobs were found in the central portion of the property.

Additional Observations:

Signs of American Beaver (*Castor canadensis*), Raccoon (*Procyon lotor*) and White-tailed Deer (*Odocoileus virginianus*) were observed during the assessment. Incidental observations of bird species were also recorded. A species list is included with this report.

Recommendations:

This property falls within the Back Creek Corridor Natural Heritage Site. It also has connections to nearby county owned property as well as adjacent properties that support

state listed significantly rare plant species. Based on this, the parcel is recommended for protection as a county nature preserve. The area of floodplain forest along Back Creek would also be a suitable location for a county greenway. If a paved greenway is to be developed, it is recommended that larger canopy trees and snags be preserved wherever possible. If the remainder of the property were to be designated as a neighborhood or community park, which would include the development of active use amenities, it is recommended that the buffer of mature forest be maintained around the tributary and the large White Oak trees, possibly some of the largest of this species remaining in the county, be preserved.



Section One: White Oak (*Quercus alba*) with a 75-inch dbh



Section Two: Piedmont Alluvial Forest by the tributary of Back Creek

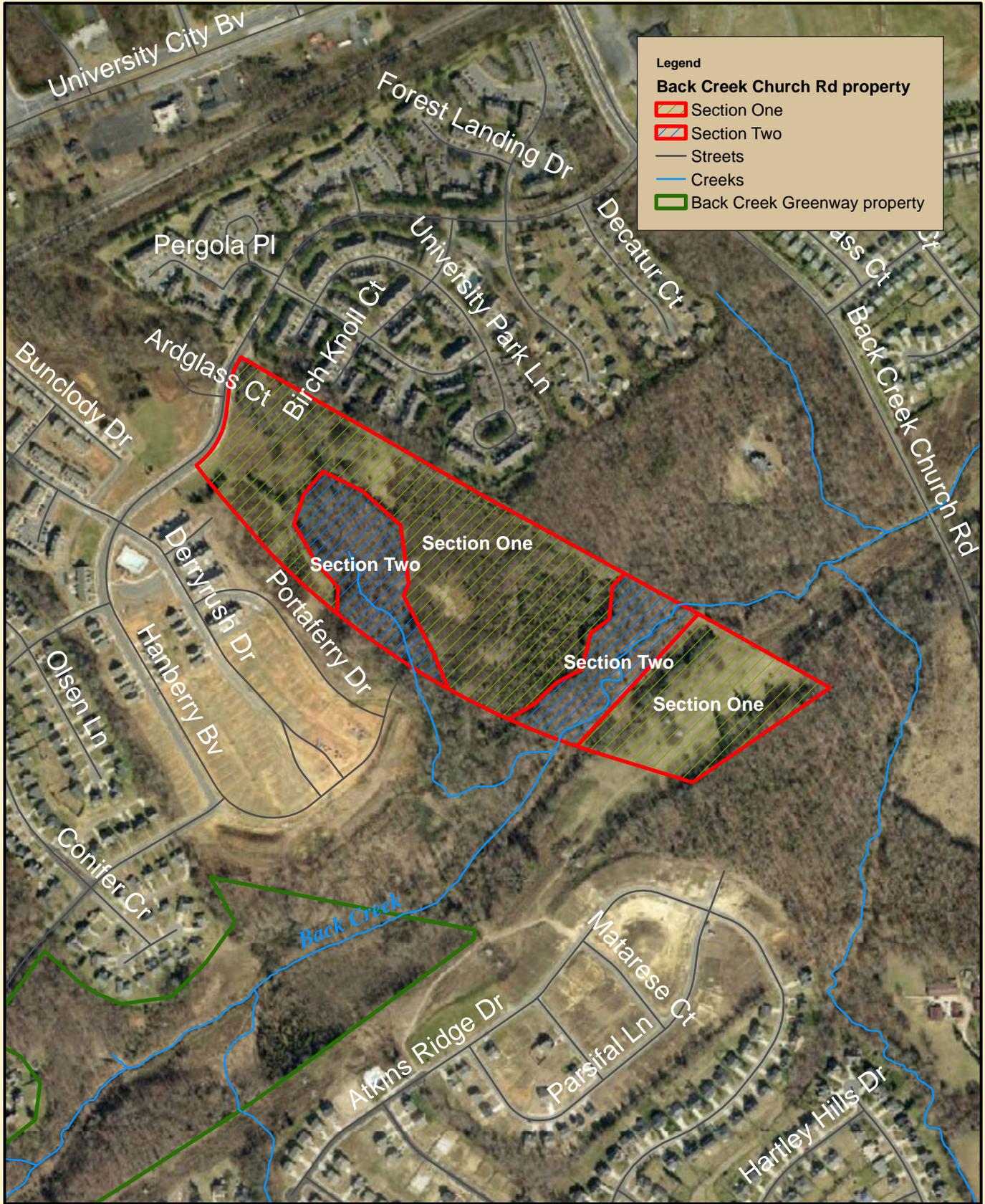


Section Two: Piedmont Alluvial Forest by Back Creek



Section Two: Bank erosion along Back Creek

Prepared by:
Lenny Lampel
Natural Resources Coordinator/Supervisor
05 March 2014



0 0.03 0.06 Miles

2012 Aerial Photography

Back Creek Church Road property Initial Biodiversity Assessment



Map by: Lenny Lampel
Date: March 07, 2014

Site ID: 185.0

Name of Site: Back Creek Church Road property

Plant List as of 03/07/2014

Species Type	Family (Weakley) Family (Radford)	Common Name	Genus (Weakley) Genus (Radford)	Species (Weakley) Species (Radford)	Origin
<i>Herbaceous</i>					
	Alliaceae	Allium sp.	<i>Allium</i>	<i>sp.</i>	
	Liliaceae				
	Aspleniaceae	Ebony Spleenwort	<i>Asplenium</i>	<i>platyneuron</i>	Native to County
	Asteraceae	Leafy Elephant's-foot	<i>Elephantopus</i>	<i>carolinianus</i>	Native to County
	Asteraceae	Common Dog-fennel	<i>Eupatorium</i>	<i>capillifolium</i>	Native to County
	Asteraceae	Goldenrod sp.	<i>Solidago</i>	<i>sp.</i>	
	Brassicaceae	Hairy Bittercress	<i>Cardamine</i>	<i>hirsuta</i>	Non-native/Exotic
	Geraniaceae	Carolina Crane's-bill	<i>Geranium</i>	<i>carolinianum</i>	Native to County
	Lamiaceae	Perilla, Beef-steak Plant	<i>Perilla</i>	<i>frutescens</i>	Non-native/Exotic
	Poaceae	Broom Sedge	<i>Andropogon</i>	<i>virginicus</i>	Native to County
	Poaceae	Flexible Sasa-grass, Japanese-grass	<i>Microstegium</i>	<i>vimineum</i>	Non-native/Exotic
	Poaceae	Paspalum sp.	<i>Paspalum</i>	<i>sp.</i>	
	Rosaceae	Wild Strawberry	<i>Fragaria</i>	<i>virginiana</i>	Native to County
<i>Woody</i>					
	Altingiaceae	Sweet Gum, Red Gum	<i>Liquidambar</i>	<i>styraciflua</i>	Native to County
	Hamamelidaceae				
	Anacardiaceae	Winged Sumac	<i>Rhus</i>	<i>copallinum</i>	Native to County
			<i>Rhus</i>	<i>copallina</i>	
	Anacardiaceae	Poison Ivy	<i>Toxicodendron</i>	<i>radicans</i>	Native to County
			<i>Rhus</i>	<i>radicans</i>	
	Annonaceae	Common Pawpaw	<i>Asimina</i>	<i>triloba</i>	Native to County
	Aquifoliaceae	Chinese Holly	<i>Ilex</i>	<i>cornuta</i>	Non-native/Exotic
	Aquifoliaceae	American Holly	<i>Ilex</i>	<i>opaca</i>	Native to County

Nomenclature follows A. S. Weakley, Working Draft of 17 January 2006. Flora of the Carolinas, Virginia, Georgia, and surrounding areas. Chapel Hill, NC. and A. E. Radford, H. E. Ahles, and C. R. Bell, 1968. Manual of the Vascular Flora of the Carolinas. The University of NC Press. Chapel Hill, NC.

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	Asteraceae	Groundsel-tree	<i>Baccharis</i>	<i>halimifolia</i>	Native to County
	Betulaceae	River Birch	<i>Betula</i>	<i>nigra</i>	Native to County
	Betulaceae	American Hornbeam	<i>Carpinus</i>	<i>caroliniana</i>	Native to County
	Cannabaceae Ulmaceae	Southern Hackberry, Sugarberry	<i>Celtis</i>	<i>laevigata</i>	Native to County
	Caprifoliaceae	Japanese Honeysuckle	<i>Lonicera</i>	<i>japonica</i>	Non-native/Exotic
	Cornaceae	Flowering Dogwood	<i>Cornus</i>	<i>florida</i>	Native to County
	Cupressaceae	Eastern Red Cedar	<i>Juniperus</i>	<i>virginiana</i>	Native to County
	Ebenaceae	American Persimmon	<i>Diospyros</i>	<i>virginiana</i>	Native to County
	Fabaceae	Honey Locust	<i>Gleditsia</i>	<i>triacanthos</i>	Native to Eastern
	Fabaceae	Black Locust	<i>Robinia</i> <i>Robinia</i>	<i>pseudoacacia</i> <i>pseudo-acacia</i>	Native to Piedmon
	Fagaceae	White Oak	<i>Quercus</i>	<i>alba</i>	Native to County
	Fagaceae	Willow Oak	<i>Quercus</i>	<i>phellos</i>	Native to County
	Juglandaceae	Black Walnut	<i>Juglans</i>	<i>nigra</i>	Native to County
	Lauraceae	Northern Spicebush	<i>Lindera</i>	<i>benzoin</i>	Native to County
	Magnoliaceae	Tulip-tree, Yellow Poplar	<i>Liriodendron</i>	<i>tulipifera</i>	Native to County
	Oleaceae	Green Ash, Red Ash	<i>Fraxinus</i>	<i>pennsylvanica</i>	Native to County
	Oleaceae	Chinese Privet	<i>Ligustrum</i>	<i>sinense</i>	Non-native/Exotic
	Platanaceae	Sycamore, Plane-tree	<i>Platanus</i>	<i>occidentalis</i>	Native to County
	Rosaceae	Black Cherry	<i>Prunus</i>	<i>serotina</i>	Native to County
	Rosaceae	Bradford Pear, Callery Pear	<i>Pyrus</i>	<i>calleryana</i>	Non-native/Exotic

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	Rosaceae	Multiflora Rose	<i>Rosa</i>	<i>multiflora</i>	Non-native/Exotic
	Rosaceae	Blackberry sp.	<i>Rubus</i>	<i>sp.</i>	
	Sapindaceae Aceraceae	Box Elder	<i>Acer</i>	<i>negundo</i>	Native to County
	Simaroubaceae	Tree-of-heaven	<i>Ailanthus</i>	<i>altissima</i>	Non-native/Exotic
	Smilacaceae Liliaceae	Whiteleaf Greenbriar, Wild Sarsaparilla	<i>Smilax</i>	<i>glauca</i>	Native to Piedmon
	Smilacaceae Liliaceae	Catbrier, Greenbriar sp.	<i>Smilax</i>	<i>sp.</i>	
	Ulmaceae	Winged Elm	<i>Ulmus</i>	<i>alata</i>	Native to County
	Ulmaceae	American Elm, White Elm	<i>Ulmus</i>	<i>americana</i>	Native to County
	Vitaceae	Muscadine	<i>Vitis</i>	<i>rotundifolia</i>	Native to County

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Date: 03/05/14

SpeciesType	Family	CommonName	Genus	Species
<i>Birds</i>	Corvidae	Blue Jay	<i>Cyanocitta</i>	<i>cristata</i>
	Paridae	Carolina Chickadee	<i>Poecile</i>	<i>carolinensis</i>
	Troglodytidae	Carolina Wren	<i>Thryothorus</i>	<i>ludovicianus</i>
	Troglodytidae	Winter Wren	<i>Troglodytes</i>	<i>hiemalis</i>
	Turdidae	American Robin	<i>Turdus</i>	<i>migratorius</i>
<i>Mammals</i>	Castoridae	American Beaver	<i>Castor</i>	<i>canadensis</i>
	Cervidae	White-tailed Deer	<i>Odocoileus</i>	<i>virginianus</i>
	Procyonidae	Raccoon	<i>Procyon</i>	<i>lotor</i>