

“GREEN MEANS GREEN, NOT ASPHALT-GRAY”: STATE
PARKS AND DEVELOPMENT OF THE RALEIGH
METROPOLITAN AREA, 1936-2016

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Abstract: State parks are a ubiquitous presence on the American landscape with thousands of units in all fifty states that attract far more visitors than the U.S. National Park System. While the sheer diversity and number of state parks can be daunting, their pervasiveness also positions state parks as valuable sources of gauging economic, social, cultural, environmental, and historic development of given locales. This study examines the establishment and development of four units of the North Carolina state parks system located near the state capital of Raleigh and a large, forest tract owned by Duke University often mistaken for a state park by area resident to examine cultural changes that occurred in the region accompanied by rapid urbanization from the 1960s to the present. This urbanization was characterized by the arrival of large numbers of individuals from outside the region who represented the shift from a rural, agricultural region to a densely populated area with large numbers of highly educated, white collar workers in technology industries associated with area research universities.

In this context, the development of recreational opportunities in the form of state parks, which dates to the 1930s, illustrated this rapid expansion of the Raleigh metropolitan area in terms of motivations for their establishment and influences upon their development that involved local, state, regional, and national trends and politics. This included processes such as New Deal-era efforts to utilize denuded farm land for recreation, centrality of recreation to post-World War Two urbanization and suburbanization, 1950s- and 1960s-era desegregation efforts, efforts to procure drinking water and implement flood control measures, and the emergence of the "modern" environmental movement. These processes and events, and the interactions of individual residents, politicians, grassroots organizations, university officials, and municipal bodies illustrate the role of politics and ideology upon environmental perspectives, which may be observed in the presence and development of the region's state parks.

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INTRODUCTION

In 2004, Ney C. Landrum released a broad overview of the development of state parks in the United States, *The State Park Movement in America: A Critical Review*. In it, he observed that widespread establishment of state parks in the United States was largely a twentieth-century phenomenon. While he acknowledged sporadic nineteenth-century actions tied to contemporary historic preservation efforts and the late century onset of the conservation and preservation movements – such as creation of Niagara Falls State Reservation in 1885 by the State of New York (today, the self-proclaimed “Oldest State Park in America”), the establishment of Itasca State Park in Minnesota in 1891, and the cooperative efforts of the States of New York and New Jersey to preserve the Hudson River Palisades capped by formation of the Palisades Interstate Park Commission in 1900 – Landrum viewed the formation of the National Conference on State Parks (NCSP) in 1921 as the precursor for a broad movement.¹ Landrum and other historians, including Freeman Tilden and Rebecca Conard, observed that the NCSP provided little more than a forum for debating the purpose of state parks during the 1920s, be it tourism, scientific research, or social improvement. Despite this, these historians argued the NCSP contributed to the growing recognition of the role of outdoor

¹ Ney C. Landrum, *The State Park Movement in America: A Critical Review* (Columbia, MO: University of Missouri Press, 2004), 1-79.

recreation in the United States and set the stage for an explosion of state parks a decade later under the auspices of the New Deal.²

Since the 1920s, state parks have materialized as a ubiquitous feature on the American landscape, with over 7000 units in all fifty states dedicated to the preservation of natural and historic resources and the provision of recreational opportunities. Recent estimates place annual visitation to state park units at over 720 million, compared to the roughly 296 million annual visits received by the 407 units of the more celebrated U.S. National Park System.³

Unlike the national parks, however, state parks are not regulated by a federal bureaucratic entity such as the National Park Service, which was established by Congress in 1917.⁴ Rather, they are developed at the discretion of individual states. Historians have noted this arrangement makes analysis of state parks challenging as there are fifty discrete systems, each influenced by localized conditions and actors.⁵ While these complexities are daunting in terms of national or regional analysis, Dan K. Utley has observed that due to their pervasiveness and variety state parks can act as “prisms” that reflect economic, cultural, social and environmental perspectives of a given locale over time.⁶

² Landrum, *The State Park Movement*; Freeman Tilden, *The State Parks: Their Meaning In American Life* (New York: Alfred A. Knopf, 1962); Rebecca Conard, “The National Conference on State Parks: Reflections on Organizational Genealogy”, *George Wright Forum* 14, no. 4 (1997), 27-42.

³ “America’s State Parks,” accessed June 1, 2015, <http://www.americasstateparks.org/About>.

⁴ This was preceded by passage of the Antiquities Act of 1906, which granted the President of the United States the authority to establish national monuments on federal lands via proclamation. The National Park Service is among various agencies, including the Bureau of Land Management and United States Forest Service, that currently manages national monuments.

⁵ This difficulty is reflected in the relatively small number of works that even attempt to analyze state parks beyond the boundaries of an individual state and then with the disclaimer that any generalization regarding state parks is fraught with exceptions. See Tilden, *The State Parks*; Landrum, *The State Park Movement*; Thomas R. Cox, *The Park Builders: A History of State Parks in the Pacific Northwest* (Seattle: University of Washington Press, 1988).

⁶ Dan K. Utley and James Wright Steely, *Guided with a Steady Hand: The Cultural Landscape of a Rural Texas Park* (Waco: Baylor University Press, 1998).

Despite the potential insights provided by an analysis of state parks as described by Utley, the large majority of works on state parks beyond guidebooks and pamphlets are essentially histories of the timeline development of a specific state, often sponsored by a state historic commission or government fund. Many of these histories analyze the formation of state parks through the efforts of individual politicians, boosters, and conservationists while occasionally focusing on the efforts of actors such as the Civilian Conservation Corps.⁷ Some histories seek to examine the interaction of state parks within larger cultural contexts, including monographs that analyze the role of the Civilian Conservation Corps, aspects of the debate between supporters of scientific research in state parks versus recreational concerns, and the role of racial segregation in state parks in the American South.⁸

While the expansion of state parks analysis beyond mere administrative history represents an encouraging step, there remain numerous areas of fruitful research. One of these is the intersection of urbanization and state parks, which can also contribute to the study on urban parks and environmental history of urban areas. While the topics of urban parks and urban outdoor recreation have received much attention, the scholarship on these topics rarely

⁷ Examples of the histories of state park systems are varied but often followed an arc of observing the presence of one or two state parks (or none) in a given state prior to the early 1900s, the role of Stephen Mather and the NCPS in the 1920s, and the explosive periods of New Deal-era and Great Society-era growth. Classic examples of these are Dan Cupper, *Our Priceless Heritage: Pennsylvania State Parks, 1893-1993* (Harrisburg, Pennsylvania: Pennsylvania Historical and Museum Commission, 1995); Joseph H. Engbeck, Jr., *State Parks of California From 1864 to the Present* (Portland, Oregon: Charles H. Belding Graphic Arts Center Publishing Company, 1980); Roy E. Meyer, *Everyone's Country Estate: A History of Minnesota's State Parks* (St. Paul: Minnesota Historical Society Press, 1991); and John Young, *State Parks of Utah: A Guide and History* (Salt Lake City: University of Utah Press, 1989).

⁸ James Wright Steely, *Parks for Texas: Enduring Landscapes of the New Deal* (Austin: University of Texas Press, 1999); Tara Mitchell Mielnik, *New Deal, New Landscape: The Civilian Conservation Corps and South Carolina's State Parks* (Columbia, South Carolina: University of South Carolina Press, 2011); Rebecca Conard, *Places of Quiet Beauty: Parks, Preserves, and Environmentalism* (Iowa City: University of Iowa Press, 1997); and William E. O'Brien, *Landscapes of Exclusion: State Parks and Jim Crow in the American South* (Amherst: University of Massachusetts Press, 2016).

touches specifically on state parks. For example, many works on urban parks in North America and the United States tend to discuss their evolution from Old World, aristocratic-style pleasuring grounds to efforts to frame parks as respites from industrialization and urbanization by the latter part of the 1800s. This narrative often serves as a background to twentieth- and twenty-first century demands for leisure tied to suburbanization (also known as “urban sprawl”) and related effects on urban design, politics, and social interactions.⁹ Hal Rothman and Sean Kheraj, have examined the effects of civic political participation, government regulation, and notions of wilderness upon specific parks in San Francisco, California (Golden Gate National Recreation Area) and Vancouver, British Columbia (Stanley Park). Neither of these explore the role of state parks or, in Canada’s case, provincial parks.¹⁰

On a broader scale, the process of urbanization and its influence on outdoor recreation reflects analysis of the rapid growth of outdoor recreation in general, particularly after World War Two, or the growth of national parks from the late 1800s to the present. Often, urbanization is presented as an influential factor in these areas by virtue of its perceived level of threat to both the citizenry and the remaining American wilderness, most acutely articulated by the rhetoric of the early-twentieth-century “wilderness cult”. This philosophy associated wilderness with desirable “American” traits such as virility and toughness while also presenting

⁹ David M. Bluestone, “From Promenade to Park: The Gregarious Origins of Brooklyn’s Park Movement,” *American Quarterly* 39, No. 4 (Winter, 1987), 529-50; Galen Cranz, *The Politics of Park Design: A History of Urban Parks in America* (Cambridge: MIT Press, 1982); Roy Rosenzweig and Elizabeth Blackmar, *The Park and the People: A History of Central Park* (New York: Cornell University Press, 1992); and Karen R. Jones & John Wills, *The Invention of the Park: Recreational Landscapes From the Garden of Eden to Disney’s Magic Kingdom* (Malden, MA: Polity Press, 2005) are among numerous works that examine the evolution of perspectives on urban parks.

¹⁰ Hal Rothman, *The New Urban Park: Golden Gate National Recreation Area and Civic Environmentalism* (Lawrence: University Press of Kansas, 200); Sean Kheraj, *Inventing Stanley Park: An Environmental History* (Vancouver: University of British Columbia Press, 2013).

wilderness as a setting for development of aesthetic appreciation and spiritual contemplation.¹¹

On a cultural level, this view reflected a reinterpretation of nature in light of large scale urbanization and industrialization as a source of potential enlightenment rather than economic survival.¹²

In terms of state parks, if urbanization is discussed it is often as the basis of the desire to pursue outdoor recreation. For Thomas Cox, “urban pressures” led to residents of the Pacific Northwest to seek relief in the outdoors and spurred development of state parks. Freeman Tilden, in his study of the growth of state parks in the United States, makes vague mention of state parks as a respite for “urban dwellers” but does not look at *how* urbanization influenced the placement and design of various state parks.¹³ This analytical approach is reasonable given that the broad emergence of state parks in the 1920s and 1930s coincided with the emergence of the automobile, meaning that most state parks are destinations *away* from the city, a basic tenet that remained as outdoor recreation exploded following World War Two.

An opportunity to utilize state parks as a reflector of social, economic, and cultural aspects related to the urbanization of a given locale exists in the Raleigh metropolitan area of North Carolina, part of the larger Research Triangle. This several-county area includes

¹¹ Roderick Nash’s chapter on the Wilderness Cult in the classic *Wilderness and the American* remains an efficient overview of the motivations and contours of the wilderness cult. See Roderick Nash, *Wilderness and the American Mind, Third Edition* (New Haven: Yale University Press, 1982), 141-60.

¹² Peter J. Schmitt, *Back to Nature: The Arcadian Myth in Urban America* (New York: Oxford University Press, 1969). While the actions of urban “wilderness lovers” have often been presented as the purview of affluent residents with the financial resources and cultural standing to vacation outside the city and utilize nature as a source of spiritual invigoration this perception is expanded by Colin Fisher in his study on Chicago’s working class and its relationship with nature. Fisher argues that working-class Chicagoans in the late nineteenth- and early twentieth-century, including immigrants and African-Americans, pursued recreational experiences, inside and outside the city, similar to their more affluent neighbors. Colin Fisher, *Urban Green: Nature, Recreation, and the Working Class in Industrial Chicago* (Chapel Hill: The University of North Carolina Press, 2015).

¹³Cox, *The Park Builders*, 9-10; Tilden, *The State Parks*, 4-10.

municipalities such as Durham, Cary, and Apex that have experienced huge population surges since the 1960s. The region also houses noted research institutions such as Duke University, North Carolina State University, and University of North Carolina at Chapel Hill, and the massive Research Triangle Park. The area was ranked the fifteenth fastest growing metropolitan area in the United States as of July, 2015 and has garnered a reputation as home to a well-educated, well-compensated population.¹⁴ It is also home to four of the most visited units of North Carolina's state parks system – William B. Umstead State Park, Eno River State Park, Falls Lake State Recreation Area and Jordan Lake State Recreation Area.

The factor that contributes most to the value of analyzing these units of the state park system is their intimate connection to the growth of the Raleigh metropolitan area itself, which did not experience large-scale urbanization until the 1960s and 1970s. The establishment of the state park units reflects shifting economic and demographic patterns in the area reaching back to the 1920s and 1930s, when land previously utilized for cotton and tobacco production began failing due to poor agricultural practices and falling prices, a situation exacerbated by the onset of the Great Depression. By the early 1930s, large tracts of agricultural land were either condemned for failure to pay taxes or simply abandoned due to unproductivity. Several thousands of acres were purchased by various groups, including the federal government and Duke University, to set up a demonstration recreational area and forestry school, respectively. The recreational area – known as Crabtree Creek Recreational Demonstration Area – was deeded to North Carolina in 1943, and later renamed William B. Umstead State Park.

¹⁴ Richard Stradling and David Raynor, "Wake Leads Population Growth in North Carolina," *Raleigh News and Observer*, March 25, 2015, accessed November 16, 2016, <http://www.newsobserver.com/news/state/north-carolina/article16296839.html>.

The Raleigh metropolitan area remained relatively small through the end of the 1940s, with a population of roughly 65,000 in 1950, but was poised to undergo dramatic change tied to two major factors. These were the growth of the Sunbelt, basically encompassing the southern third of the continental United States, following World War Two and the establishment of the Research Triangle Park (RTP) in the late 1950s. The RTP represented a concerted effort by businessmen and the administration of Governor Luther Hodges to attract technology-based corporations to the area, heightened by the presence of highly rated research universities. Thus, as population increased in the Raleigh metropolitan area beginning in the 1960s, it also experienced a major demographic shift as large numbers of highly educated people – often from outside the state – relocated to obtain well-paying jobs in technological fields. This phenomenon also directly affected the status of the existing William B. Umstead State Park and the establishment of Eno River State Park, Falls Lake State Recreation Area, and Jordan Lake State Recreation Area in the period from the late-1960s forward.

In discussing how these respective state park units are illustrative of the demographic and social changes occurring in the Raleigh metropolitan region from the mid-1930s to the present, and how this was influenced by the relationship between people and the environment in the area, this study will examine their establishment on various levels. The secondary literature on the history of state parks development at the national and state level, and the historic development of Raleigh and the immediate surrounding area, will provide context for the onset of state parks development in the area in the mid-1930s. Secondary literature regarding the emergence of post-World War Two processes such as expansion of urban and suburban development, the growing significance of outdoor recreation, and the emergence of

the “modern” environmental movement in the United States will connect the development of the Raleigh area to national trends and processes.

Following this discussion of secondary literature, the study will utilize a variety of primary sources to examine the individual state park units and actions of federal, state, and local actors. Master plans for the individual parks and reports and publications by state government bureaucracies, particularly the North Carolina Department of Conservation and Development, will show how approaches to land management and recreation developed historically at the administrative level, often in response to environmental issues such as land exhaustion and flood control. The reactions of various local actors - including municipal representatives, university officials, state politicians, grassroots organizations, and individual residents – will be examined via newspapers and archival records. Local newspaper, particularly *The Raleigh News and Observer*, provide coverage of the establishment of these parks throughout the period under study. Meanwhile, personal papers, minutes from official meetings, and personal correspondence provide further insight into both individual perspectives on the value of state parks and how “everyday” people became involved in their establishment in the Raleigh metropolitan area.

The first chapter examines development of the North Carolina state parks system from the establishment of North Carolina’s first state park, Mt. Mitchell State Park, in 1915 to the 1990s, when the North Carolina General Assembly enacted legislation providing a stream of funding for state parks. This chapter reveals the historic reticence of the state of North Carolina to adequately fund state parks despite rhetoric often deemed supportive, a trend that continues into the 2010s. It also illustrates how state park development in North Carolina was

affected by larger national trends, such as federal investiture in the South and the efforts of so-called “business Progressives” to tout recreation in the Raleigh area as a pull factor to attract certain industries. This chapter also provides context for how the establishment of the study-specific units both reflected and deviated from the historic patterns of North Carolina state parks.

The second chapter examines the influence of urbanization on the development of William B. Umstead State Park from a “rural” site developed as a Recreation Demonstration Area by the National Park Service in the late 1930s, to the splitting of the park into two entities for black and white visitors in the 1950s, to the perspective of the park as an “urban” site by the 1980s, which also muted memory of the park’s segregated past. The third chapter looks at Eno River State Park and its relationship with “civic environmentalism” as defined by Hal Rothman, and efforts of local citizens such as Margaret Nygard and the Environmentally Conscious Organization of Students (ECOS) at Duke University, to both conserve the Eno River and advocate ecological issues in an area not historically receptive to such ideologies. The fourth chapter focuses on Jordan Lake and Falls Lake State Recreation Areas, including controversies surrounding their development as large reservoirs by the U.S. Army Corps of Engineers and continuing debates concerning water quality and management of the areas. The final chapter considers another large, outdoor recreation site in the region, Duke Forest, which is not part of the state parks system but is often mistaken as a state park. Duke Forest dates to the 1930s, and its presence as a recreational outlet and source of scientific research served to influence outdoor recreation and views on conservation in the area that supported and contradicted views on entities such as state parks.

This study seeks to provide a complex look at state park development in the region by looking at the relationship between people and the landscape in the context of events that force re-evaluation of issues such as land management and outdoor recreation. The swift and massive demographic changes that occurred in the Raleigh area after 1950 influenced a multitude of factors including broad shifts regarding conservation and local history, objectives of state and local government agencies, and the role of universities and federal actors. These contributed to the development of landscapes labeled as state parks that are not tucked away in uninhabited corners of the state but located squarely in one of the fastest growing regions in the United States.

The establishment of these state parks also illustrates disagreements arising amongst local actors relevant to processes of urbanization in the immediate setting of Raleigh, as well as the broader context of the state. The development of Raleigh since the 1960s is part of a larger region known as the Piedmont Crescent that also contains the cities of Charlotte, Winston-Salem, Greensboro, and Durham. As the Piedmont Crescent has expanded, increased pressures have been placed on the surrounding rural areas, including as sources of recreation and drinking water, producing conflicts concerning land management. For example, some rural residents opposed the Jordan Lake reservoir due to dislocation issues and federal involvement in the form of the U.S. Army Corps of Engineers. However, disagreements also arose amongst urbanites and suburbanites regarding land management decisions, including residents who viewed environmental concerns as detrimental to economic growth. The development of state parks in the Raleigh area shows the roots of these conflicts extending back into the 1920s and

1930s while providing a context for examining how these debates influenced, and were influenced by, the relationship between residents and land they inhabited.

CHAPTER I

DEVELOPMENT OF THE NORTH CAROLINA STATE PARKS SYSTEM

On March 3, 2015, North Carolina Governor Pat McCrory signed and issued a proclamation at William B. Umstead State Park, located near the state capital of Raleigh, celebrating the centennial of the state parks system. One hundred years earlier, the North Carolina General Assembly enacted legislation that set aside 795 acres atop the summit of Mt. Mitchell, the highest peak in the United States east of the Mississippi River, and created the first state park in North Carolina and the southeastern United States. In his statement, Governor McCrory articulated the value of state parks in both economic and cultural terms. “North Carolina’s state parks,” he exclaimed, “connect us all with our rich natural heritage and our history and contribute significantly to the state’s economy, especially in rural areas where many of the parks are located. This is a premier opportunity to recognize the visionary leaders of our state who set the wheels in motion to create a parks system that delights more than 15 million visitors each year.”¹ The official website for the state’s park system articulates a related

¹ North Carolina Department of Natural and Cultural Resources, “Governor McCrory Celebrates 100th Anniversary of Legislation Establishing N.C.’s First State Park”, March 3, 2015, accessed June 1, 2015, <http://www.governor.state.nc.us/newsroom/press-releases/20150303/governor-mccrory-celebrates-100th-anniversary-legislation>. Last Accessed 1 June 2015.

set of values, minus the emphasis on economics, stating: “Conservation, recreation, and education are what North Carolina state parks are all about.”¹

Whether one regards the North Carolina state parks as economic, educational, or cultural assets, their current popularity with the public is of little question. From a single unit in the mountains of western North Carolina, the system has expanded to over 224,000 acres under various designations, including thirty-four state parks, four state recreation areas, and three state natural areas; furthermore, the system manages land under other designations such as state trails, state rivers, and state lakes. The popularity of these state park units continues to grow. Attendance for 2014 reflected a 10% increase from the previous year and has nearly doubled over the past twenty-five years, from about eight million visitations in 1989 to the fifteen million noted in Governor McCrory’s press release.²

Despite this popularity, North Carolina state parks face serious revenue shortages that have hampered maintenance and land acquisition efforts. In 2009, the Systemwide Plan for North Carolina State Parks identified future land acquisition needs of better than \$394 million and future facility construction needs totaling more than \$417 million to meet demands associated with population growth and expected visitation increases. The Plan noted that the “recent economic downturn” reduced available funding but increased demand for low-cost recreational opportunities.³ This dour assessment has largely materialized. Since 2007, funding

¹North Carolina Division of Parks & Recreation. “About the State Parks System.” Accessed June 8, 2015. ncparks.gov/About/system_main.php.

²North Carolina Department of Parks & Recreation. “North Carolina State Parks: 2016 Annual Report.” Accessed June 16, 2015. http://ncparks.gov/News/media_room/docs/DPR-annualreport-2015.pdf.

³ North Carolina Department of Environment and Natural Resources. “Systemwide Plan for North Carolina State Parks, 2009.” Accessed July 11, 2015. <http://mobile.ncleg.net/documentsites/committees/ERC/ERC%20Reports%20Received/2009/Dept%20of%20Envir>

or the state parks system has been reduced by over eighty percent. In 2013, North Carolina eliminated a revenue source established in 1995 that utilized real estate tax transfer fees to fund state parks. The state considered closing state parks for the winter of 2012 to reduce costs and has discussed the possibility of instituting entrance fees for the first time in the history of the state parks system.

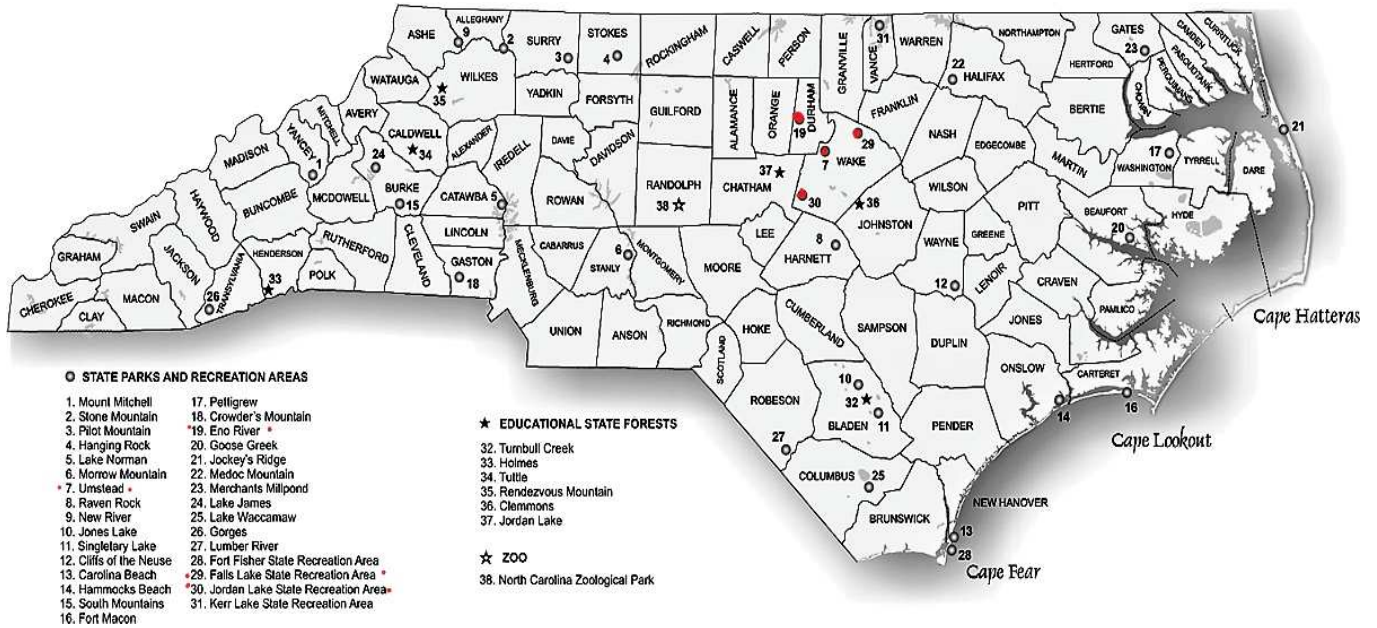


Figure 1. "North Carolina State Parks System" (digital map), NCPedia, accessed April 1, 2017, <http://www.ncpedia.org/state-parks>. Darkened dots (numbered 7, 19, 29, and 30 on the map and list of sites) indicate park units analyzed in the current study.

The current instability of North Carolina's state parks system is not a recent development. In 1988, an article in *North Carolina Insight* – the journal of the North Carolina Center for Public Policy Research – titled “North Carolina's State Parks: Disregarded and in Disrepair” described a system blessed with natural amenities but overwhelmed with funding and maintenance issues. The article noted that the state ranked forty-ninth in the nation in per capita operating budget and had historically ranked low in state parks funding. It provided dramatic descriptions of decrepit conditions at individual parks, including the closing of trails for safety reasons, water leaks that wasted thousands of gallons per week, and collapsing boat docks. Despite these issues, attendance at the parks kept rising, leading one state parks official to comment “...we're sort of like the McDonalds of state parks. We serve millions for very little money.”⁴

This chapter examines the development of state parks in North Carolina between 1915 and 1995, the year North Carolina established supposedly permanent funding for state parks, as influenced by national, state, and local trends and actors, and their perspective on state parks and natural resources. For much of the period from the early twentieth century through the present, North Carolina has been characterized as a political paradox, blending populist and progressive rhetoric and programs with intense conservatism. North Carolina boosters often portray a progressive Southern state in terms of economic development and racial relations, a view often shared by people outside the region. However, historians have commented that this

⁴ Bill Krueger and Mike McLaughlin, “North Carolina's State Parks: Disregarded and in Disrepair,” *North Carolina Insight* (October, 1988): 31-46, accessed July 21, 2015, <http://www.nccppr.org/drupal/content/insightarticle/632/north-carolinas-state-parks-disregarded-and-in-disrepair>.

reputation lies more in the presence of a handful of articulate and effective liberals and is elevated by virtue of comparison to other Southern states rather than the nation as a whole.⁵ The development of state parks in North Carolina reflects a similar inconsistency, with rhetoric heartily supportive of state parks as cultural and economic assets offset by little to no financial support by the General Assembly. For much of the history of North Carolina's state parks system, private citizens and federal policy contributed more to acquisition of land and capital improvements than explicit action by the state government itself, especially after the 1930s.

The advent of state parks is generally ascribed to the period following the Civil War and reactions to increasing urbanization and industrialization in the United States. Instances of land set aside for public access may be found before the Civil War, including colonial Massachusetts claiming bodies of fresh water larger than ten acres in 1641, or the establishment of hot and mineral springs in Arkansas and Georgia in the 1820s and 1830s. However, these are generally viewed as anomalous, with no explicit recreational, educational, or preservation motivations articulated.⁶ The federal government ceded Yosemite Valley and Mariposa Grove to the state of California to be managed as a state preserve in 1864, but it reverted to federal control as a national park in 1890. Meanwhile, in terms of the preservation of historic sites, New York's acquisition of George Washington's headquarters in Newburgh in 1853 was the nation's first

⁵ A 1962 article in *National Geographic* titled "Dixie Dynamo" painted North Carolina in glowing terms as a place for innovative business practices and is often pointed to as cementing a "progressive" moniker for the state in national eyes. *Encyclopedia of North Carolina*, s.v. "Dixie Dynamo" (Chapel Hill: The University of North Carolina Press, 2006), accessed June 28, 2015, <http://ncpedia.org/dixie-dynamo>. The idea that the state's progressive reputation is a bit overblown can be found in various discussions, including: Milton Ready, *The Tar Heel State: A History of North Carolina* (Columbia, South Carolina: University of South Carolina Press, 2005); Thomas C. Parramore, *Express Lanes and Country Roads: The Way We Lived in North Carolina, 1920-1970* (Chapel Hill: The University of North Carolina Press, Published for the North Carolina Department of Cultural Resources, 1983); and Rob Christensen, *The Paradox of Tar Heel Politics: The Personalities, Elections, and Events That Shaped Modern North Carolina* (Chapel Hill: The University of North Carolina Press, 2008).

⁶ Landrum, *The State Park Movement*, 28-30 and Cox, *The Park Builders*, 3-4.

publicly owned historic site, and Texas established the San Jacinto Battleground State Historic Site in 1883.

By the 1870s and 1880s, states began to address increasing concerns over the depletion of natural resources, especially in terms of forest preservation and watershed protection, by claiming areas for management. George Perkins Marsh's *Man and Nature*, published in 1864, discussed the potentially devastating effects of reckless utilization of forests. Marsh noted: "The felling of the woods has been attended with momentous consequences to the drainage of the soil, to the external configuration of its surface and, probably, also, to local climate; and the importance of human life as a transforming power is, perhaps, more clearly demonstrable in the influence man has thus exerted upon superficial geography than in any other result of his material effort."⁷ Marsh's work is often viewed as a seminal articulation of conservationist impulses and influenced advocates and lawmakers in New York in the establishment of the massive Adirondack Forest Preserve in 1892.⁸

By the early 1900s, several forces coalesced that provided a context for more concerted development of state park systems in the decades ahead, including growing support for conservation of natural resources and preservation of scenic areas, "back-to-nature" efforts, and a burgeoning Good Roads movement linked to the increasing affordability of automobiles. The tie that bound these together was political Progressivism, or the willingness to utilize state intervention to reform society that was prevalent in American social and political life during the

⁷ George Perkins Marsh, *Man and Nature; Or, Physical Geography as Modified by Human Action* (New York: Charles Scribner & Co., 1864), Preface.

⁸ "A Political History of the Adirondack Park and Forest Preserve: Prior to 1894 Constitutional Convention", last modified April 12, 2000, accessed June 20, 2015, <http://www.adirondack-park.net/history/political/pre-const.html>. The State of Wisconsin passed legislation in 1876 that designated fifty thousand timbered acres as "The State Park" but this was never developed as such and relinquished to timber interests in the 1890s.

first two decades of the twentieth century. In terms of setting aside parks on the state and national level, Progressivism provided the setting for a shift from relatively random acts to the formation of the National Park Service (NPS) in 1916 and embryonic state park systems in places such as Wisconsin.⁹

The formation of the NPS indirectly led to organization of the National Conference on State Parks (NCSP) in 1921. National parks emerged as economic assets during the 1910s, particularly boosted by increased promotion of national tourism known as “See America First”, which called for Americans to eschew the scenic attractions of Europe in favor of American ones. Meanwhile, the onset of World War One scuttled much American tourism to Europe and further boosted visitation to national parks.¹⁰ The initial Director of the NPS, Stephen T. Mather, grappled with two issues related to increased acclaim. First, he sought to capitalize on the growing popularity of the national parks by improving access to them, specifically via the establishment of national parks east of the Mississippi River and nearer to population centers. This became a reality when Congress approved Shenandoah (Virginia), Great Smoky Mountains (North Carolina and Tennessee), and Mammoth Cave (Kentucky) in the mid-1920s. Second, he faced a dilemma that the desirability of national parks led to numerous proposals for new parks that Mather felt were not nationally significant examples of scenery.

In this light, Mather organized the first meeting of the NCSP in Des Moines, Iowa in 1921. Although Mather organized the meeting, he was unable to fully dictate the direction the

⁹ Cox, *The Park Builders*, 10-13 and Conard, *Places of Quiet Beauty*, 7-8, discuss this relationship explicitly in terms of state parks.

¹⁰ Marguerite S. Shaffer, *See America First: Tourism and National Identity, 1880-1940* (Washington, D.C.: Smithsonian Institute Press, 2001), 100-2.

NCSP took, and during the 1920s the organization became more a forum for debate on the “true” meaning of state parks than a medium for coordinated growth. Typically, debates on the purpose of state parks revolved around conflicting perspectives. Governors Pat Neff of Texas and Arthur Hyde of Missouri envisioned state parks as a means to promote tourism. Others, particularly state park supporters in Iowa, saw them as conduits for conservation and scientific research with tourism a decidedly secondary concern. Meanwhile, a third group argued that state parks were a basis for “human conservation” linking conservation of natural resources with social reform and civic virtue.¹¹ The NCSP never provided a means to bridge these differing views into a coherent national-level perspective and for the remainder of the 1920s there was little tangible progress in the development of state parks.¹²

The establishment of natural resource conservation and state parks in North Carolina reflected these national and regional trends during the period spanning the late nineteenth century to the end of the 1920s. North Carolina political leaders tended to frame support for such matters as an extension of the “New South” rhetoric that emerged following the Civil War. This idea called for greater levels of urbanization and industrialization in the United States South as a means to reorganize the antebellum plantation economy of the region. Concurrently, the rate of timber removal increased dramatically in the Southern Appalachians, reaching its peak between 1880 and 1909 and characterized by a “cut and get out” ethos that sought only the best trees with little concern for reforestation or erosion control, which

¹¹ Rebecca Conard, “The National Conference on State Parks: Reflections on Organizational Genealogy”, *George Wright Forum* 14, no. 4 (1997), 27-42, accessed June 28, 2015, <http://www.georgewright.org/144conard.pdf>.

¹² In 1974, the National Conference on State Parks changed its moniker to the National Society for Park Resources and began operating as an affiliate under the aegis of the National Recreation and Park Association, a conglomerate of organizations with the common objective of promotion of public parks, recreation, and environmental conservation via education, advocacy, research, and policy initiatives.

contributed to degraded watersheds, wildlife populations, forests, and soils.¹³ In western North Carolina, logging activities skyrocketed as railroads expanded into previously inaccessible areas and eased the transport of lumber out of the rugged, mountainous region. This led to the presence of huge logging camps financed by major companies, such as the Champion Paper Company. By 1916, only a few pockets of virgin forest remained.¹⁴

Such activity raised alarms nationwide, evidenced by the passage of the Forest Reserves Act of 1891, that allowed the President of the United States to set aside forest reserves from the public domain, and the expansion of the Division of Forestry within the Department of the Interior to the Bureau of Forestry in 1901. The Division of Forestry became the United States Forest Service (USFS) in 1905. The rhetoric of the USFS and its first Chief, Gifford Pinchot, centered on the “wise use” of natural resources. This attitude was reinforced by the presidency of Theodore Roosevelt as “conservation” came to be defined as the “use of natural resources for the greatest good of the greatest number for the longest time.”¹⁵

In this context, George Washington Vanderbilt brought forestry experts to his estate in Asheville, known as Biltmore House, in the early 1890s in an effort to save the forests of western North Carolina. Among them was Gifford Pinchot, who had recently attended forestry school in Europe. Shortly thereafter, in 1898, the first formal school for scientific forestry in the United States was established at Biltmore. Concurrently, the North Carolina General Assembly

¹³ Albert Cowdrey, *This Land, This South: An Environmental History, Revised Edition* (Lexington, Kentucky: The University Press of Kentucky, 1996), 112-14.

¹⁴ Ready, *The Tar Heel State*, 274-6.

¹⁵ “Resource Conservation in the Twentieth Century.” In *Major Problems in American Environmental History, Third Edition*, edited by Caroline Merchant, 325-64. Boston: Wadsworth, Cengage Learning, 2012. See also Samuel P. Hayes, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, Massachusetts: Harvard University Press, 1959).

established the Geologic Survey in 1891 to assess the mineral, forest, and water resources of the state to foster economic development. In an 1895 study on forest fires commissioned by the Geologic Survey, the value of North Carolina timber was estimated at \$20-25 million but it also warned that lumbermen were removing timber at four times the growth rate and emphasized the need to regulate the utilization of natural resources for future economic development.¹⁶ The centrality of economic growth to conservation rhetoric in the state can be noted in an 1896 report by the North Carolina State Board of Agriculture that praised the research at Biltmore and noted that “Forestry that does not pay is no forestry at all . . .”¹⁷

Although the Geologic Survey faced assorted resistance to its efforts to regulate natural resources, especially amongst fishermen in the eastern counties of the state, governors of the period generally supported it and procured the passage of legislation establishing forestry and fishing commissions, forest fire enforcement (even on private property), and the recognition of Arbor Day by the conservative North Carolina General Assembly. In 1915, the General Assembly provided twenty thousand dollars to acquire land at the summit of Mt. Mitchell, establishing the first state park in the Southeast and cementing then-Governor Locke Craig’s reputation as the “conservation governor.”¹⁸

The oft-told tale surrounding the establishment of Mt. Mitchell State Park holds that Governor Craig, who hunted bear near Mt. Mitchell as a boy, and concerned citizens of western North Carolina valiantly stood up to lumbermen in the area and convinced them to preserve

¹⁶ John R. Ross, “Conservation and Economy: The North Carolina Geological Survey, 1891-1920”, *Forest History* 16, no. 4 (January, 1973), 20-27.

¹⁷ North Carolina State Board of Agriculture, *North Carolina and Its Resources* (Winston, North Carolina: M.I. and J.C. Stewart, Public Printers and Binders, 1896), 52.

¹⁸ Ross, “Conservation and Economy.”

Mt. Mitchell's summit. Craig praised the decision as one that would preserve the "original beauty and grandeur" of Mt. Mitchell for "ourselves and our posterity."¹⁹ Despite these nods to aesthetics, Craig operated from a decidedly utilitarian position, insisting upon the economic potential of setting aside a park as a tourist attraction. Further, he carefully avoided direct criticism of the lumber companies and placed the blame for the degradation on Mt. Mitchell squarely on forest fires ". . . that followed the lumberman", an expected stance for a staunch business progressive.²⁰

By the early 1920s, North Carolina began to more assertively seek economic rewards from its natural resources, particularly in terms of potential tourism. The 1920 Highway Act enacted by the state established a one-cent per gallon gasoline tax to construct a statewide road system. Commercial objectives were the primary impetus, but scenic attractions, especially in the western part of the state, were recognized as assets. The Highway Act explicitly described the system as a means to connect principal towns, county seats, and state parks.²¹ Given that only one state park existed at the time, the reference to multiple parks implies that the state sought to acquire more.

In the ensuing years, North Carolina established a fiscally conservative approach towards acquisition of state parks. While it supported the idea of state parks as potential revenue streams, North Carolina's General Assembly was reluctant to utilize tax revenue for

¹⁹ Mary F. Jones, editor, *Memories and Speeches of Locke Craig, Governor of North Carolina, 1913-1917, A History Political and Otherwise from Scrapbooks and Old Manuscripts* (Asheville, North Carolina: Hackney and Moale Company, 1923), 224-6.

²⁰ Timothy Silver, *Mount Mitchell & the Black Mountains: An Environmental History of the Highest Peaks in Eastern America* (Chapel Hill: The University of North Carolina Press, 2003), 148-152.

²¹ North Carolina State Board of Agriculture, *North Carolina: The Land of Opportunity*, Compiled and Published by the State Board of Agriculture, W.A. Graham, Commissioner (Raleigh: Mitchell Printing Company, State Printers, 1923), 77-8.

land acquisition. In 1924, the state acquired a second state park, Fort Macon, a Civil War-era military installation located on the southern end of the North Carolina's barrier islands, but this was acquired from the federal government for the sum of one dollar. In 1929, the state passed legislation transferring ownership of all bodies of fresh water larger than fifty acres to the state to be administered as "provided for other recreational areas", essentially taking control of all lakes in the state. That same year the General Assembly passed legislation barring appropriations for the acquisition of land for future parks, placing the onus of expansion upon private donation.²² The North Carolina General Assembly would not approve state funds for land acquisition for state parks again until the late 1960s.

Perhaps the most significant conservation action taken by North Carolina during the 1920s was the replacement of the Geologic Survey with the Department of Conservation and Development in 1925. This forerunner to the modern-day Department of Environment and Natural Resources consolidated several aspects of natural resource management into a single organization, including the management of state forests and parks. Epitomizing a business progressive approach, the new bureaucratic unit viewed natural resource management as a component of economic development. The Department of Conservation and Development described itself as essentially a state-level chamber of commerce. North Carolina's action influenced other Southern states – including Virginia, Alabama, and South Carolina – to establish similar organizations within a few years.²³

²²Association of Southeastern State Park Directors, *Histories of the Southeastern Park Systems*, Ney C. Landrum, editor, 1992, 106-7.

²³ Cowdrey, *This Land, This South*, 142.

Early publications by the Department of Conservation and Development reflected a sense among state officials that North Carolina was a state on the cusp of major economic advances, and the tourist trade represented untapped potential. At that time, the state was not a major tourist destination but a place people passed through on their way to Florida. This notion was not limited to North Carolina elected officials. In 1924, American humorist and writer Irvin S. Cobb, who possessed the name recognition associated with film stars and who hosted the Academy Awards in 1935 and 1936, penned a book on North Carolina as part of his American Guyed Series. The book was part light-hearted travel information and part booster material that made numerous references to North Carolina's natural attractions overlooked by health and pleasure seekers. The frontpiece of the book featured a cartoon with the caption, "If invalids who go down to Florida every year for their health would leave the train at North Carolina they would find a climate where the very air is a tonic." Later in the book, Cobb remarked that North Carolina had "... an assortment of natural attractions and natural glories as is to be found enclosed by any set of state boundaries this side of the Pacific slope" with scenery the equal of Yellowstone or the Grand Canyon.²⁴

The Department of Conservation and Development directly quoted Cobb's book as a lead-in to its 1928 report on economic opportunity in the state, *North Carolina: A Good Place to Live*: "Let some statistician tell the tale in exultant terms of bank clearings and enlarged bank deposits, in exports, in enhancement of wealth and production. Going only by what these two eyes have seen, I proclaim that NC today is the foremost State of the Union in material

²⁴ Irvin S. Cobb, *Cobb's American Guyed Books: North Carolina* (New York: George H. Doran Company, 1924). The *American Guyed Books* series also had entries for Indiana, Kansas, Kentucky, Maine, and New York.

progress, in public spirit, in educational expansion and optimism of outlook.”²⁵ The report itself featured typical booster rhetoric that extolled the production value of the state and its economic progress. An indication of the value the Department of Conservation and Development placed on the potential of natural attractions in terms of tourist dollars was that the report opened with a paean to the desirability of the state’s climate and the notion that mountainous western North Carolina, the locale of attractions such as Mt. Mitchell State Park and the resort town of Asheville, was destined to become the “natural playground of eastern America.”²⁶ Unbeknownst to state leaders at the time of this report, the Great Depression was little more than a year away and with it came a significant shift in the utilization of natural resources that involved unprecedented involvement of the federal government.

The election of Franklin Roosevelt as President of the United States in 1932 ushered in the collection of legislation and social programs known as the New Deal. It instigated tremendous growth in the number of state parks, developed primarily through the Civilian Conservation Corps (CCC). The CCC, colloquially referred to as “Roosevelt’s Tree Army”, is generally regarded as one of the most popular New Deal programs and was utilized to put young, unemployed men to work in natural resource conservation. The CCC established camps in every state except Delaware and in territories such as Puerto Rico and the U.S. Virgin Islands. The army of young men in the ranks undertook various tasks, including planting trees for erosion control, fire control and prevention, trail cutting, and construction of campsites and other facilities. Historian Neil Maher regards the CCC as the pivotal link between Progressive-

²⁵ North Carolina Department of Conservation and Development, *North Carolina: A Good Place to Live* (Raleigh: Observer Printing House, Inc., 1928), Frontpiece.

²⁶ *Ibid.*, 13.

era conservation and the emergence of the modern environmental movement in the United States following World War Two by virtue of the huge number of individuals who participated in the program (and later became supporters of environmental initiatives) and the publicity the CCC received.²⁷

The CCC influenced growth in the presence of state parks in two ways. First, the CCC built over 800 state parks during its existence between 1933 and 1942, and expanded existing state park acreage from 300,000 acres to 600,000 acres.²⁸ Second, the availability of funding for CCC work caused many states to aggressively pursue land acquisition either to expand their state park systems or simply create a park to qualify for CCC work.²⁹ Overall, some foresters estimated that during its eight year existence, the CCC advanced state and national conservation twenty-five to forty years with particular influence on the United States South in terms of fire and erosion control.³⁰ Similarly, much CCC work involving the expansion of state park systems occurred in the U.S. South, and states such as Tennessee, Virginia, and South Carolina received their first state parks.³¹

In North Carolina, the CCC was a conspicuous presence. At its apex, the CCC had eighty-one camps in the state, over 16,000 enrollees, and represented a period of federal-state cooperation. The CCC built trails, developed recreational facilities and landscape projects, assisted on flood and erosion control projects and, according to one historian, “fathered” the

²⁷ Neil Maher, *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (New York: Oxford University Press, 2008).

²⁸ *Ibid.*, 74.

²⁹ Landrum, *The State Park Movement*, 132-3.

³⁰ Cowdrey, *This Land, This South*, 159-63.

³¹ Maher, *Nature's New Deal*, 74 and Ney C. Landrum, editor, *Histories of the Southeastern State Park Systems*, Association of Southeastern State Park Directors, 1992.

state park system, which grew from two to nine parks.³² Although the CCC accomplished much enduring work on the state parks, the idea that the agency was solely responsible for expansion of the system neglects the fact that the CCC did not acquire land, but simply developed it.

As noted earlier, North Carolina enacted legislation in 1929 that restricted land acquisition for state parks to private donation. The state did gain state parks in this manner, notably Hanging Rock and Cape Hatteras State Parks, but the main impetus for physical growth of the system was tied to federal programs, namely the Resettlement Administration and development of Recreation Demonstration Areas by the National Park Service. The Resettlement Administration (RA) sought to assist struggling urban and rural families by relocating them to planned communities operated by the federal government, principally aiding farmers and other agricultural workers. Often, the RA went about restoring the abandoned land for recreational purposes. In North Carolina, this program was central to the development of facilities at Jones Lake, opened as the first state park in North Carolina for African American use in 1939.

The National Park Service's (NPS) Recreation Demonstration Areas (RDA) provided another influential element in the expansion of state parks in North Carolina and were part of a broad sense among federal, state, and local government actors of the social benefits of recreation. The NPS viewed RDAs as a means to develop recreational areas near urban centers, primarily by acquiring marginal agricultural lands and then developing them as future state or local parks. From the NPS perspective, these demonstration areas were not necessarily meant to compete with state parks, but provide recreational opportunities for people who were too

³² Ready, *The Tar Heel State*, 333-5.

poor to travel to state and national park sites.³³ Eventually, forty-six demonstration areas were established, most of which were turned over to local governments. However, some were added to existing national parks, such as Shenandoah and Acadia, or authorized as new units, including Theodore Roosevelt National Monument Park.³⁴

In North Carolina, two RDAs – Crabtree Creek and Singletary Lake – were developed. The Crabtree Creek site represented the ideal of resettling individuals and families off unproductive farmland and “improving” it as a recreational site. In 1934, federal and state agencies procured roughly 5,000 acres of sub-marginal agricultural land on Crabtree Creek, just outside Raleigh. At one time, much of the land was dotted with homesteads, vegetable gardens, and fields of cotton, wheat, and corn. By the early 1920s the land was exhausted, identified as the least productive farmland in Wake County by sociologist W.A. Anderson. In 1934, many of the farms in the area faced tax delinquency and several had been abandoned.³⁵ Although featuring rocky, unproductive soil, the land chosen for the RDA was also deemed aesthetically pleasing, partially due to nascent reforestation on the abandoned areas.³⁶

From the NPS perspective, the location of the land was ideal due to its proximity to numerous municipalities and a large rural population, with over two million people residing

³³ National Park Service, “Recreational Demonstration Projects as Illustrated by Chopawamsic, Virginia Being Developed by the United States Department of the Interior, National Park Service, Resettlement Administration, and Civilian Conservation Corps”, accessed June 29, 2015, <http://www.nps.gov/prwi/learn/historyculture/upload/1936%20report.pdf>.

³⁴ Richard West Sellars, *Preserving Nature in the National Parks: A History* (New Haven, Connecticut: Yale University Press, 1997) 135-6. Theodore Roosevelt National Memorial Park was established in 1947 as a memorial park and remained the only such unit in the U.S. National Park System until 1978, when its status was changed to that of a national park and the unit renamed Theodore Roosevelt National Park. See National Park Service, “Theodore Roosevelt National Park, Park History”, accessed April 19, 2017, <https://www.nps.gov/thro/learn/historyculture/park-history.htm>.

³⁵ Tom Weber, *Stories in Stone: Memories from a Bygone Farming Community in North Carolina: An Oral History of the William B. Umstead Park Area with Mapped Hikes* (Raleigh: The Umstead Coalition, 2011), 1-16.

³⁶ *Ibid.*, 68.

within one hundred miles of the site who had no extensive recreational opportunities.³⁷ The underlying motivation of outdoor recreation as potential community enhancement was apparent from the early developmental plans. The NPS intended to develop Crabtree Creek primarily for organized group camping and proposed construction for five group camps to serve the needs of community entities such as churches and Boy Scout troops. Only a single picnic area was contemplated for individualized public use.³⁸ The CCC eventually developed four group camps in the area, which officially opened as Crabtree Creek State Park in 1937, although it did not come under control of North Carolina until six years later when the state purchased the site from the federal government for one dollar. In 1955, Crabtree Creek State Park was renamed William B. Umstead State Park in honor of the recently deceased governor of North Carolina, a supporter of conservation who had died in 1954 from heart issues after little more than a year in office.³⁹

Another opportunity for federal involvement with state parks came in 1936, when Congress passed the Park, Parkway, and Recreation Area Study Act. This action authorized a comprehensive, federal survey of existing parks, parkways, and recreation facilities at the federal, state, county, municipal, and private levels for the purposes of developing a comprehensive land management strategy. The NPS planned to administer and coordinate the survey through its Branch of Recreational Planning and State Cooperation via interaction with park, conservation, and planning agencies of the individual states, as well as civic groups and

³⁷ C.G. Mackintosh, Inspector to A.P. Bursley, Assistant Regional Officer, National Park Service, District C, First Region, Richmond, Virginia, October 31, 1936, State Parks Division, State Parks and Lakes File, 1930-1970 at State Archives, Raleigh, North Carolina, Box 14, File "Work Program Proposed, CCC and ERA for Complete Development of Park, Crabtree Creek".

³⁸ Ibid.

³⁹ Landrum, *Histories of the Southeastern State Park Systems*, 108.

other local organizations. By 1940, a total of thirty-four states completed preliminary reports, which led to publication of *A Study of the Park and Recreation Problem in the United States* the following year. The report covered topics such as aspects of recreation planning, existing legislation concerning recreation at all levels of government, and descriptions and recommendations regarding individual states and their parks.⁴⁰

Regarding North Carolina, the federal study provided an outline for the first comprehensive plan for a *system* of parks that took existing facilities into account with an eye towards future population growth and recreation needs. The opportunity the report and its recommendations presented for North Carolina state parks failed to materialize, primarily due to the entry of the United States into World War Two. This also severely curtailed federal involvement with issues such as recreation and natural resource conservation. Even the popular CCC saw its funding extinguished in 1942. Visitation to national and state parks also witnessed a major drop, tied to restrictions on leisure travel and rationing of gasoline and other products during the war.

In North Carolina, the period between 1933 and 1942 was one of growth and development for state parks, albeit growth that relied heavily on federal involvement in terms of land acquisition, development of facilities, and resource management. The level of federal oversight was such that, despite NPS declarations otherwise, the state of North Carolina explicitly referred to its state parks as supplemental attractions to the Great Smoky Mountains

⁴⁰ Harlan D. Unrau and G. Frank Willis, "Chapter Four: New Initiatives in the Field of Recreation and Recreational Area Development" in *The National Park Service: Expansion of the National Park Service in the 1930s: An Administrative History* (Denver: National Park Service, Denver Servicing Center, 1983), accessed July 3, 2015, http://www.nps.gov/parkhistory/online_books/unrau-williss/adhi.htm.

National Park.⁴¹ Further, North Carolina lacked a comprehensive plan for its state parks until implementation of the Parks, Parkway, and Recreation Area Study Act. Although the North Carolina General Assembly articulated interest in state parks from a tourism point of view, it severely restricted the ability of the state to undertake land acquisition by legally disallowing state expenditures, relying instead on private donation or federal largesse. This suggested that state parks, and recreation, were a relatively low priority for the state legislature, despite the recognition of the economic potential of tourism.

As demand for recreation increased in the immediate post-war years, North Carolina took steps that seemingly elevated the status of state parks. In 1948, state parks were afforded bureau-level status in the state government with the establishment of the Division of State Parks within the Department of Conservation and Development, which, in turn freed the Division of Forestry from management of the state parks. Accompanying the creation of this new bureaucratic division were allocations by the General Assembly in 1947 and 1949 for the purchase of land to supplement existing parks and the construction of public use facilities. The Division of State Parks was relieved of management of historic resources to focus on development of scenic and recreation parks in 1955 with the establishment of the Department of Archives and History.⁴² While these actions are often viewed as innovations for the growth of the system, other signs show a general reluctance by the General Assembly to financially support the state parks.

⁴¹ North Carolina Department of Conservation and Development, *North Carolina: Today and Tomorrow* (Winston-Salem, North Carolina: Winston-Salem Printing Company, 1936), 211.

⁴² Landrum, *Histories of the Southeastern State Park Systems*, 110.

Issues with the development of state parks in North Carolina were illuminated by a report submitted to the General Assembly in 1947. It decried the slashing of appropriations for maintenance of state parks for the upcoming fiscal biennium of 1948 and 1949. The report noted that the original appropriation of \$107,000 for each year of the biennium (a total of \$214,000) had been reduced to less than half that amount, to \$42,000 for 1948 and \$43,000 for 1949. The report argued that this was not enough money to even maintain existing standards, much less improve upon facilities.

The report also compared North Carolina to surrounding states and showed that it lagged far behind in several areas of development. For example, North Carolina's total state parks appropriations budget for fiscal year 1947 was just over \$50,000, with the state ranking last among a group of southeastern states that included Florida, South Carolina, Tennessee, and Virginia. The next lowest state in that group, Virginia, had a budget over \$150,000. Although state parks were not lavishly financed in any state discussed in the report (South Carolina, for example, topped the list, with a \$225,000 budget) North Carolina had a smaller parks budget than several of its municipalities, including Charlotte, Asheville, and Winston-Salem. North Carolina also had the worst developed tourist facilities, with a total of five vacation cabins and no hotel rooms available in conjunction with state parks. By comparison, the next worst state, Louisiana, had similar levels of development before a major jump to Kentucky, which had forty-five cabins and fifty hotel rooms available.⁴³ This situation emanated both from circumstance and the focus of individual state legislatures. For example, in Kentucky a focus on overnight

⁴³ North Carolina State Parks Division, "Permanent Improvements Program Proposed, Submitted to 1947 General Assembly", State Parks and Lakes File, 1930 – 1970, Box 14, File "Permanent Improvements Program Proposed, Submitted to 1947 General Assembly".

accommodations in state parks emerged following the end of World War Two and the state had acquired large man-made lake and property tied to the completion of a series of dams by the Tennessee Valley Authority in the early 1940s.⁴⁴

The report discussed the plight of Crabtree Creek State Park (renamed William B. Umstead State Park in 1955) outside Raleigh to highlight the dire straits of state park funding in North Carolina. It discussed unacceptable numbers of fires and rampant vandalism due to the fact that the state had been unable to consolidate control over the lands it managed and desperately needed money to do so. It also pilloried the “crude and unsanitary” state of public facilities at the park, which consisted of only a few tables and benches, three or four outdoor fireplaces, a hand pump, and two small privies. This situation, according to the report, led to thousands of people being turned away each summer due to the lack of facilities.⁴⁵

The situation at Crabtree Creek/William B. Umstead seemed to have improved little fifteen years later according to a 1963 memorandum that described picnic facilities as “entirely inadequate.”⁴⁶ Another memo called for the planting of tens of thousands of pine seedlings to shore up “raw, unfinished sites” and extensive work on park trails that had received no attention for twenty-five years, which would have referred to CCC work done in the 1930s when the site was still a Recreation Demonstration Area. The poor condition of the trails were deemed problematic for two reasons. First, it rendered the effort to combat forest fires on the park “impossible.” Second, heavy use of the trails by hikers had left them badly eroded and a detriment to public safety. The report concluded that in addition to rehabilitation of the trails

⁴⁴ Landrum, *History of Southeastern State Park Systems*, 60-2.

⁴⁵ *Ibid.*

⁴⁶ Memorandum, December 3, 1963, State Parks and Lakes File, Box 14, File “Additions to Public Area.”

themselves the park also needed trailside signs and exhibits.⁴⁷ Freeman Tilden subtly jabbed at these conditions in a description of William B. Umstead that applauded the land rehabilitation from its 1930s condition while stating the park could greatly improve its “summer business if it changed the tenor of its present management.”⁴⁸

Individuals within state government also recognized the substandard conditions in many of North Carolina’s state parks and a discernible shift in the tone of the Department of Conservation and Development by the early 1950s. In 1952, the Department of Conservation and Development issued *North Carolina’s Natural Resources*, part of a series of bulletins on the state. The book length report included a section on state parks that reflected some of the continuing influence of the organized recreation motif articulated by the National Park Service in the 1930s regarding development of Recreation Demonstration Areas. In particular, the idea that “human conservation” was a primary purpose for the state parks. Advocates of human conservation viewed entities such as state and national parks as critical components in programs of social improvement, including promotion of public health and patriotism through nature education and outdoor activities.⁴⁹ The need for state parks was deemed so important in *North Carolina’s Natural Resources* that scenic and historic purity were deemed expendable so long as a park provided adequate scenery for “wholesome” and “beneficial” activity, such as organized group camping.⁵⁰

⁴⁷Memorandum, December 3, 1963, State Parks and Lakes File, Box 14, File “Park Improvement and Landscaping, Reforestation, Construction & Reconstruction of Trails.”

⁴⁸ Tilden, *The State Parks*, 254.

⁴⁹ Conard, “The National Conference on State Parks”, 30-2.

⁵⁰ North Carolina Department of Conservation and Development, *North Carolina’s Natural Resources* (Raleigh: Sponsored by the North Carolina Resource-Use Education Commission, 1952), 22-26.

The same year that *North Carolina's Natural Resources* was published, a three day "Conservation Congress" was held in Raleigh in mid-November. The first day keynote address was delivered by George Ross, Director of the North Carolina Department of Conservation and Development. In it, he noted the growing importance of tourism in general, and state parks in particular, to the state's economy. Ross' address was followed by a presentation by Superintendent of State Parks Thomas W. Morse that included some stinging indictments of North Carolina's failure to develop anything resembling a system of state parks.

Morse began by advocating a more sophisticated perspective by the state regarding the interaction of state, county, and municipal parks and the need to approach their development holistically, as levels of parks sustaining a larger whole of recreational pursuit. Morse invoked the language of human conservation over tourism and economic benefits, contending that state parks existed to promote physical fitness, spiritual and mental health, aesthetic appreciation, and knowledge of state and national history. He further argued that usage of parks intensified in the 1930s and characterized this as a shift from park "visitors" to park "users." In this vein, he reiterated his view that state parks existed for natural and historic preservation purposes, and that while state parks should provide facilities for outdoor recreation, more intensive, organized activities should be developed in the county and municipal parks.⁵¹

This led Morse to his greatest objection to the approach of North Carolina towards state parks, a near total lack of financial commitment to land acquisition. He noted that between

⁵¹North Carolina Department of Conservation and Development, *Conservation and Development in North Carolina, Volume I, Conservation Congress, November 17-18-19, 1952: "Being a Transcript of Prayers and Papers Delivered at the Conservation Congress*, Compiled by C. Sylvester Green, (Raleigh, 1952), 14-20.

1915, the year Mt. Mitchell State Park was established, and 1952, the state spent less than \$100,000 on land acquisition, relying almost exclusively on gifts of land, whether from private citizens or the federal government.⁵² In Morse's view, this was no way to develop a first-rate state park system and reflected a great disservice to North Carolina citizens. Morse concluded that only a carefully developed land purchase program would allow the state to adequately address rapidly expanding recreational needs.

The emphasis on a systematic approach to state park development was more fully articulated in January, 1955 when the Department of Conservation and Development adopted "Principles Governing the Establishment, Extension, and Development of the State Park System of the State of North Carolina", referred to as the General Principles.⁵³ The General Principles discouraged private donations of land while defining different "types" of state parks, including scientific sites, recreational sites, and scenic sites. The document focused on how North Carolina should approach development of these sites and maintain standards, including: 1) complete inclusion of the features (scientific, scenic, or recreational) marked for protection, 2) provision of buffer areas, and 3) adequate habitat for indigenous wildlife; and development of recreational and public use areas without impairing the protected features.

The General Principles also prioritized development of existing state parks over acquisition of new ones and voiced preference for large, well developed parks rather than a scattering of small ones as a means to better concentrate resources. Public access was deemed

⁵² Ibid., 18. The state appropriated money in the 1947 and 1949 budgets but this was earmarked for maintenance of existing facilities not land acquisition for new parks.

⁵³ North Carolina Department of Conservation and Development, "Principles Governing the Establishment, Extension, and Development of the State Park System of the State of North Carolina", accessed July 6, 2015, https://archive.org/stream/northcarolinasta68unse/northcarolina68unse_djvu.txt.

important and provision of adequate parking sites, access roads, and sanitary drinking water viewed as a minimum standard at all state parks. Development of facilities at state parks was generally tied to the purported use. For example, “recreational” parks were to focus on providing natural, outdoor recreation, defined as picnicking, hiking, camping, or boating (the General Principles advocated activities such as organized sports be the purview of county and municipal parks) and be located near population centers. “Scenic” parks, on the other hand, were to be established based upon scenic value, regardless of nearby population, and development restricted to the minimum standards of access.

While the General Principles provided objectives for development and established desired standards for state parks, the system continued for the next decade much as it had for the previous forty years. Expansion of the system happened as a result of donations. Through 1970, private donations represented eighty percent of the acreage in the state park system⁵⁴ - including Duke Power State Park (a gift from energy provider Duke Power) and Mount Jefferson State Park (gifted by private citizens), both established under General Principles directives. Mount Jefferson State Park, created as a local park in the 1930s, gained access to the state system in 1956 for scenic value and this judgment seems apt, as the area was named a national natural landmark by the National Park Service in 1974. Acceptance was delayed as the tract did not meet the 400-acre minimum for state parks outlined in the General Principles, and local citizens had to procure the required acreage.⁵⁵ Duke Power State Park (today known as Lake

⁵⁴ Landrum, *Histories of the Southeastern State Park Systems*, 112.

⁵⁵ “Mount Jefferson State Natural Area”, accessed July 7, 2015, <http://www.ncparks.gov/Visit/parks/moje/history.php>. The 400-acre minimum did not apply designations of the system such as state natural areas.

Norman State Park) was established in 1962 as a recreational park around Lake Norman, created when Duke Power Company constructed the Cowans Ford Dam across the Catawba River to generate electrical energy for the growing Charlotte metropolitan area.⁵⁶

Funding for state parks received a boost in 1964 but, once again, the source lay in federal policy with Congressional establishment of the Land and Water Conservation Fund (LWCF) to assist land acquisition by federal, state, and local governments. Since its inception, the LWCF has appropriated over \$9 billion towards the purchase of seven million acres of land, with state and local purchases equaling a third of the acreage.⁵⁷ In North Carolina, LWCF funds contributed to acquisition of parks such as Pilot Mountain and Stone Mountain State Parks in the late 1960s and as of the early 2000s, the state had utilized over \$227 million of LWCF money for land acquisition.⁵⁸

The moratorium on the use of state funds for land acquisition continued until the 1969 purchase of land that became Carolina Beach State Park, the first such expenditure since the establishment of Mount Mitchell State Park. In 1970, the state bought a series of quartzite formations on the Caper Fear River that became Raven Rock State Park, with the assistance of matching federal funds. These forays into state appropriations to expand the state parks system retreated again until the mid-1970s, when North Carolina approved a series of expenditures for acquisition and operations totaling several millions of dollars and adopted new state park designations. This included creation of a Natural Scenic Rivers System, State Trails System, and

⁵⁶ "Lake Norman State Park: History", accessed July 7, 2015, <http://www.ncparks.gov/Visit/parks/lano/history.php>.

⁵⁷ "U.S. Forest Service: Lands and Realty Management", accessed July 9, 2015, <http://www.fs.fed.us/land/staff/LWCF/about.shtml>. The fund itself is supported by a portion of offshore drilling fees.

⁵⁸ "Our Land, Our Water, Our Heritage", accessed July 9, 2015, http://www.lwcfcoalition.org/files/FY17%20State%20Factsheets%20updated/North_Carolina17_update.pdf.

Natural Heritage Program. These echoed similar federal programs that emerged during the 1960s and 1970s, when the peak of the post-World War Two environmental movement instigated unprecedented levels of federal involvement – and bipartisan support - with “environmental” issues, including pollution control, clean air and water legislation, and expanded wilderness designations.⁵⁹

The expansion of the state parks system from the early 1970s to the late 1980s largely reflected gains made in land acquisition, as total acreage in 1988 – the year of the damning “North Carolina’s State Parks: Disregarded and in Disrepair” report – reached over 124,000 acres. This placed North Carolina twenty-first among the nation’s state park systems in terms of total acreage. Yet most of this represented private donations or gifts from the federal government. Funding for state parks, after briefly receiving attention in the early 1970s, nosedived again between 1975 and 1985 and left North Carolina’s state parks in a paradoxical state. An impressive array of natural areas stretched from the Atlantic Ocean in the east to the mountainous western part of the state, but they were described by newspaper editorials as “an unwanted stepchild” and “an embarrassing disgrace” with several areas closed to the public due to budget shortages.⁶⁰

Beginning in 1985, North Carolina entered a period of greater legislative attention paid to state parks that continued a history of mixed results. In 1985, the General Assembly approved a \$25 million appropriation for land acquisition but this was reduced to just over \$16 million as the program encountered early delays. In 1987, the General Assembly enacted the

⁵⁹ Hal Rothman, *The Greening of a Nation? Environmentalism in the United States Since 1945* (Ft. Worth: Harcourt Brace College Publishers, 1998).

⁶⁰ Krueger and McLaughlin, “North Carolina’s State Parks”, 33, 43.

State Parks Act, which provided legal protection for the system of state parks and defined its purpose as protecting representative examples of North Carolina’s unique biological, recreational, geological, scenic, and archaeological resources. The State Parks Act also required, for the first time, that the General Assembly itself approve additions to the state parks system and provide appropriations for their development and operation. Prior to passage of this legislation, the Council of State, an eleven-member panel of elected officials, had typically accepted land donations that were then assigned by the executive branch to a state agency for management.⁶¹

During the 1990s, North Carolina provided further attention to its state parks system. In 1993, voters approved a \$35 million bond package to fund capital improvements and land acquisition. Two years later, the state established the real estate transfer fee supported fund discussed earlier. Then in 1997, it completed a series of bureaucratic reorganizations that divided the existing Department of Environment, Health, and Natural Resources and placed state parks in a new Department of Environment and Natural Resources that, theoretically, could better focus on issues facing the system. In 2000, the General Assembly enacted a “million-acre goal” into law that sought to place an additional million acres of farmland, open space, and threatened areas under state protection and management.⁶²

The legislative actions taken by the General Assembly instigated further physical expansion of the state parks system. In 2015, the total acreage of North Carolina state parks, including easements, stood at over 224,000 acres, an increase of roughly 100,000 acres from

⁶¹ Ibid., 33.

⁶² “A History of the North Carolina Department of Environmental Quality”, accessed July 12, 2015, <http://deq.nc.gov/about/history-of-deq>.

the late-1980s. From 2000 to 2008, the Division of Parks and Recreation identified dozens of potential new sites and added five state parks, eight natural areas, and two state trails.⁶³

Despite these additions, the state parks system continued to face serious funding obstacles, staffing shortages, and outdated facilities in the 2010s that were similar to issues from thirty years before.

On the one hand, the modern-day struggles of the North Carolina state parks system could be somewhat attributed to the rapid population growth of the 1990s and 2000s. While North Carolina as a whole did not experience the blistering population growth of states such as Nevada, Arizona, or Colorado, which witnessed annual population increases of better than thirty per cent, the state registered annual increases in the high teens. Much of this growth occurred in the so-called “Piedmont Crescent”, a conurbation extending from Charlotte north to the Winston-Salem area and then east to the Raleigh area. This region became a magnet for in-migration of people attracted to the availability of technology sector jobs, low taxes, and pleasant climate.⁶⁴ Similar to other states, North Carolina has struggled to deal with an influx of population that has strained services and produced contentious debates regarding land management.⁶⁵

⁶³ North Carolina Department of Environment and Natural Resources, “Systemwide Plan for North Carolina State Parks, 2009”, 1-1, accessed July 19, 2015, <http://mobile.ncleg.net/documentsites/committees/ERC/ERC%20Reports%20Received/2009/Dept%20of%20Environment%20and%20Natural%20Resources/2009%20Systemwide%20Plan%20for%20North%20Carolina%20State%20Parks.pdf>.

⁶⁴ Ole Gade, Athur B. Rex, James E. Young, with L. Baker Perry, *North Carolina: People and Environments, 2nd Edition* (Boone, North Carolina: Parkway Publishers, Inc., 2002), 79-82.

⁶⁵ For description of some of these issues see Janet Rothenberg Pack, editor, *Sunbelt/Frostbelt: Public Policies and Market Forces in Metropolitan Development* (Washington, D.C.: Brookings Institution Press, 2005).

While this population growth has certainly led to increased visitation to state parks and placed greater pressure on the system, it is also apparent that the historical perspective of North Carolina regarding resource management played a significant role. From the establishment of the first state park in 1915 until the mid-1990s, North Carolina was notoriously closed-fisted with regards to funding state parks, as demonstrated by a legislative moratorium on state money for land acquisition that lasted over forty years. Beyond this moratorium on state funded land acquisition, maintenance of state parks received little budgetary attention before the roughly twenty-year period of increased appropriations that began in the mid-1980s. Judging by the state of the parks system described in 1988, the approved funds simply were not enough to allow for both recommended capital improvements and land acquisition. The decision to prioritize land acquisition, while rational in light of increasing prices for property, seems to have left the system as a whole essentially stagnant in terms of development.

Part of this historical frugality by the state stemmed from federal activity related to recreation and land management that extended from the New Deal era well into the 1980s. While Civilian Conservation Corps activities ended in North Carolina in the early 1940s, other federal agencies such as the Soil Conservation Service and U.S. Forest Service were active in land management, which often reduced pressure on state officials to undertake action. Some also viewed the systems of county and municipal parks – one of the most extensive in the nation by the early 2000s – as filling in gaps that allowed for the General Assembly to underfund state parks without major citizen backlash.⁶⁶ On another front, the development of

⁶⁶ Krueger and McLaughlin, “North Carolina’s State Parks”, 35.

North Carolina's state parks system compared to its neighbors entailed matters of political ideology and action in the context of historic development patterns. Simply put, other state legislatures chose to appropriate funds for acquisition and development of concessions and establish bureaucratic institutions for the management of state parks before North Carolina did, as shown by the example of Kentucky's state parks system, which had echoes in states such as Tennessee, Virginia, and South Carolina.⁶⁷

Thus, it is notable that Governor Pat McCrory's announcement of the celebration of the centennial of the state parks described the state parks as valuable cultural, economic, and educational assets amidst huge cuts to their operating budget and elimination of revenue streams. He also extended a broad recognition to the "visionary leaders of our state" that lumped the whole state together rather than noting the rather tepid actions of elected state leaders compared to North Carolina citizens. It also totally ignored the federal contribution. The remarks, coupled with the obstacles facing the state parks, indicates a continuation of North Carolina's tendency to combine rhetoric that extols the potential of the state's ability to provide sound management with a reticence to truly invest in that management.

⁶⁷ Landrum, *Histories of the Southeastern State Park Systems*.

CHAPTER II

URBANIZATION AND UMSTEAD STATE PARK

Northwest of Raleigh, North Carolina – one of the fastest growing metropolitan areas in the United States for the better part of three decades and expected to remain so for the foreseeable future – and lying between two major thoroughfares, U.S. 70 and Interstate 40, is William B. Umstead State Park. The heavily forested tract of better than 5500 acres features several miles of foot paths and bridle trails, as well as three large man-made lakes available for fishing, boating, and canoeing. Despite lacking a major geographical feature or landmark, Umstead State Park was the most utilized state park in the North Carolina system in 2014, with over 1.29 million visits. It was praised by a recent newspaper article as exemplifying “what North Carolina state parks are all about” and an opportunity to enjoy “the simple pleasures of nature.”¹

William B. Umstead State Park provides the opportunity to analyze the interaction of people and environment in an urban setting, a complex relationship between human and non-

¹ Gary McCullough, “William B. Umstead State Park”, *The Charlotte Observer*, April 8, 2016, Travel Section, accessed October 27, 2016, <http://www.charlotteobserver.com/living/travel/article70570137.html>.

human actors. Umstead State Park (USP) reflects the active search for nature, and wilderness, by urbanites and suburbanites as they coped with the effects of rapid urbanization. The Research Triangle (RT) provides additional context due to the circumstances of its development. It reflects contemporary (since World War II) processes such as the emergence of the South and West as centers of economic growth – commonly referred to as the Sunbelt phenomenon – as well as the presence of towns and cities with distinct histories tied to the region’s urbanization history.¹ Umstead State Park also offers the opportunity to examine the interaction between urbanization and perspectives on conservation and outdoor recreation during a period of broad social change in North Carolina and the American South. This includes aspects such as shifting views on the value of USP to the surrounding area and alterations to the role of race in accessing outdoor recreation in a region of the country that often maintained separate facilities and park units for black and white patrons into the 1960s.

On the surface, the growth of the Raleigh metropolitan area from the late 1950s to the present represents a straightforward threat to the stability, and even existence, of Umstead State Park due to factors ranging from expansion of surrounding development to overuse by an expanding population. Yet this narrative reflects the tendency to oversimplify the effects of urban and suburban development on “natural environments” as inherently “bad” while also examining what one historian referred to as a “disconnect” between historic preservationists, environmentalists, and land managers. According to Rebecca Conard, this disconnect emanated from the propensity to separate the places people live from idealized versions of nature, such

¹ William M. Rohe, *The Research Triangle: From Tobacco Road to Global Prominence* (Philadelphia: University of Pennsylvania Press, 2011), 1-3.

as wilderness areas or state and national parks, and could be partially overcome by crafting more complex stories that examined how environmental and social institutions interacted in the siting of historic buildings and structures.² Other historians, including Grace Karskens and Christopher Sellers, have critiqued the tendency to oversimplify the influence of urban and suburban development on “natural environments” as one of unadulterated declension that often seeks to minimize human activity upon preserved areas. Sean Kheraj has argued the need to focus on the environment itself when discussing matters of land management and public policy.³ Meanwhile, Paul Sutter has called for more nuanced discussion of “representative nature” in the establishment of state parks, one that considers the elements of human occupation and landscape restoration, particularly in relation to the role of denuded land in the establishment of state and national parks in the South that are often overlooked in scholarly analysis.⁴

Umstead State Park was originally established as a recreational outlet and means to rehabilitate overworked farmland, but by the 1990s the park was described as a wilderness oasis.⁵ This perception coincided with a view that USP owed its existence to the foresight of policy makers and planners. This sense was reflected in a recent edition of *Forest History Today*,

² Rebecca Conard, “Spading Common Ground: Reconciling the Built and Natural Environments”, in *Public History and the Environment*, edited by Martin Melosi and Philip Scarpino, 3-22. Malabar, Florida: Krieger Publishing Company, 2004.

³ Grace Karskens, “Water Dreams, Earthen Histories: Exploring Urban Environmental History at the Penrith Lakes Scheme and Castleragh, Sydney”, *Environment and History* 13, no. 2 (May 2007), 115-54; Sean Kheraj, *Inventing Stanley Park: A History* (Vancouver: CBC Press, 2013); and Christopher C. Sellers, *Crabgrass Crucible: Suburban Nature and the Rise of Environmentalism in Twentieth-Century America* (Chapel Hill: University of North Carolina Press, 2012).

⁴ Paul S. Sutter, “What Gullies Mean: Georgia’s “Little Grand Canyon” and Southern Environmental History”, *The Journal of Southern History* 76, no.3, (Aug., 2010), 579-616.

⁵ Nan K. Chase, “The Triangle by Degrees: The Unexpected Wilderness of North Carolina’s Raleigh-Durham Metropolis”, *The Washington Post*, September 8, 1996, Travel Section; “Umstead’s Green Blessing”, *Raleigh News and Observer*, January 9, 1992.

in which editor James G. Lewis discussed his appreciation for the “wooded oases” of the Raleigh-Durham area, including Umstead State Park, Eno River, and Duke Forest. In a nod to debates concerning legal versus cultural constructs of wilderness, Lewis acknowledged that these units represented the spirit of wilderness, if not meeting legal definitions of the term. He also framed the existence and evolution of these areas as paralleling federal wilderness areas in terms of a moment that someone decided that intervention to protect landscape on behalf of the public “was a greater good for both the land and people.”⁶

⁶ James G. Lewis, “Editor’s Note”, *Forest History Today* 20, nos. 1 & 2 (Spring/Fall 2014), 2.

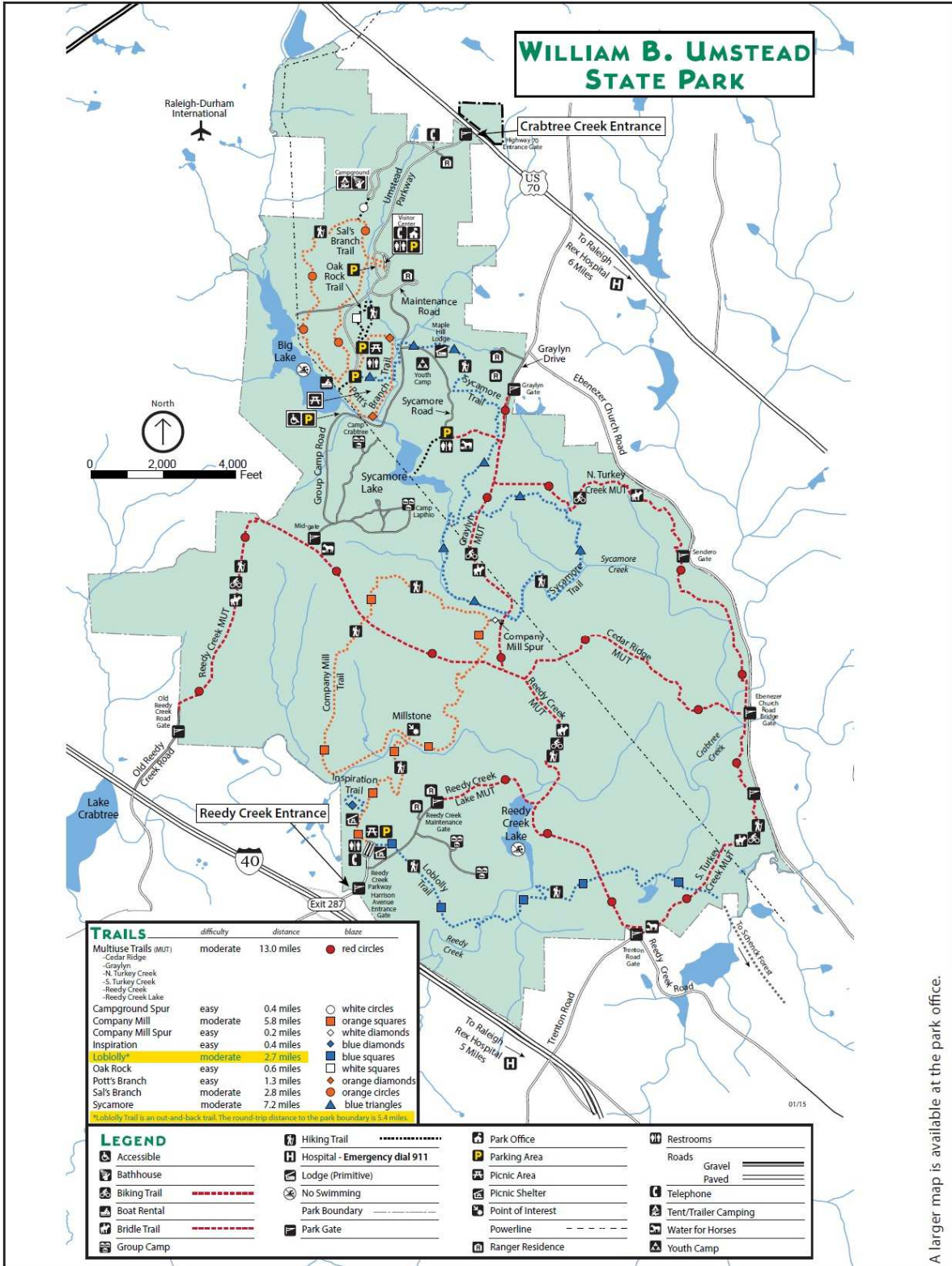


Figure 2. "William B. Umstead State Park" (digital map), North Carolina Trail Life USA, accessed April 1, 2017, <http://nctraillife.org/wp-content/uploads/2015/11/Park-Map.jpg>. Note the separate Crabtree Creek and Reedy Creek entrances, a remnant of the segregated period in the park's history. Reedy Creek was the entrance to the "Negro" section.

A larger map is available at the park office.

Lewis is certainly correct in identifying the role and foresight of individual efforts at USP and other areas set aside and managed as “wilderness.” His commentary also provides a jumping-off point to examine how the establishment of USP reflects an explicit relationship with the development of the region from the 1830s to the 1930s, how management of the park afterward intertwined with both rapid population growth following World War Two (itself tied to national and regional shifts), and changing views on the environment that affected a range of issues, including land management, private and commercial development, and recreation. By the early 2000s, the characterization of USP as a wilderness oasis was counterbalanced by the increased development within the park itself, including handrails and street signs placed in remote areas of the park, and efforts to promote USP and other parks in the area as meccas for mountain bikers from across the country.⁷ Analyzing the historical interaction of USP with broader processes associated with urbanization of the region provides a more nuanced understanding of how various human actions interact with particular areas, rather than merely acting upon them, to produce and utilize entities such as state parks.

William B. Umstead State Park was one of forty-six Recreation Demonstration Areas established by the National Park Service during the New Deal, which sought to acquire denuded agricultural areas near urban centers for conversion into recreational areas with the intent of ultimately turning these places over to state and local entities for management. The Civilian Conservation Corps (CCC) often implemented measures on such land, including tree planting and construction of check dams to stabilize the soil, and the development of amenities such as

⁷ Joe Miller, “Lost in the Woods? Look for the Street Signs”, *Raleigh News and Observer*, September 24, 2006; Phillip Barron, “Could the Triangle be the Next Mountain Bike Mecca?”, *The Herald-Sun* (Durham, North Carolina), June 9, 2005.

group picnic areas. The approximately 5000-acre tract acquired by the federal government around Raleigh in the 1930s fit this pattern of CCC development. In 1943, the federal government deeded the area to North Carolina for the sum of one dollar and it operated as Crabtree Creek State Park until 1955, when it was renamed in honor of North Carolina Governor William B. Umstead, a supporter of conservation measures who had recently died while in office.⁸ The presence of this large area for acquisition by the federal government in the 1930s represented more than simply a coalescence of poor agricultural techniques with dire economic circumstances. It also reflected the interaction of land and people reaching back well over a hundred years.

From the colonial period into the mid-1800s, North Carolina was dominated by the neighboring states of Virginia and South Carolina and grappled with deep internal divisions between the eastern and western portions of the state. This situation partially stemmed from North Carolina's political boundaries, which established a rather long, narrow entity cutting east to west across physical boundaries including shoreline, wetlands, forests, rolling hills, and mountains. North Carolina lacks a deep-water port and its rivers tend to be either too shallow or narrow to allow for efficient transportation and navigation. Combined with the barrier of islands known as the Outer Banks, rugged mountains in the western third of the state, and historically poor roads, North Carolina developed incrementally throughout the colonial period and failed to produce a significant commercial crop, cities of any size, or centralizing social

⁸ North Carolina Division of State Parks, "William B. Umstead State Park, Master Plan", accessed August, 11, 2015, https://archive.org/stream/williambumsteads00unse/williambumsteads00unse_djvu.txt. For a detailed discussion of the farming community that existed prior to the establishment of the park see Tom Weber, *Stories in Stone: Memories from a Bygone Farming Community in North Carolina* (Raleigh: Umstead Coalition, 2011).

forces. The colony lacked a center of government until almost the end of the colonial period, which, along with the other factors mentioned, contributed to its reputation as “backwards.” North Carolina earned the disparaging nickname of the Rip van Winkle State in the 1800s, for seeming economic stagnation while neighboring states hummed with activity.⁹

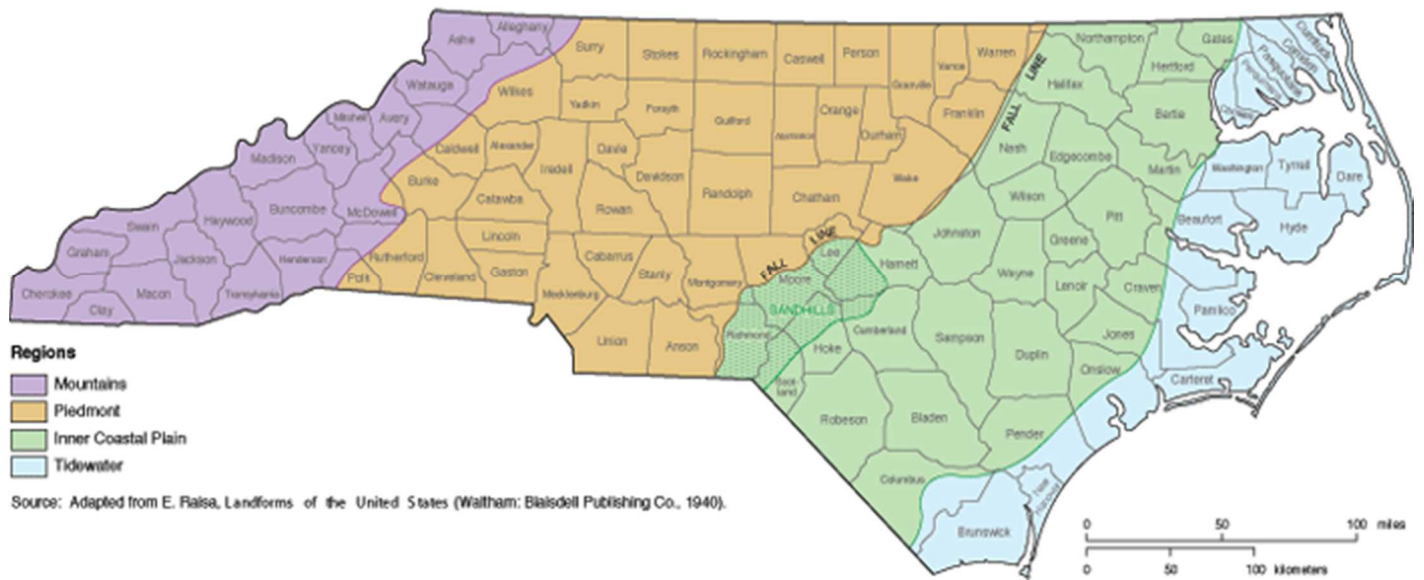
This supposed economic tranquility was not tied to a dearth of natural resources. The state is located in the Temperate Deciduous Forest Biome, a natural community designation present in the eastern United States and Canada, as well China, Japan, and much of Europe. The temperate deciduous forest in the United States is dominated by broadleaf trees, such as oak and hickory, with evergreen species also present. The average annual rainfall is between 28 and 60 inches, which contributes to diverse plant and animal species. The temperate deciduous forest is also notable for the presence of four distinct seasons with generally warm summers and cold winters, although broad variances in both climate and weather occur. In terms of political boundaries, the state is long and narrow, stretching over five hundred miles east to west, but never more than two hundred miles north to south. The Atlantic Ocean comprises its eastern border with Virginia to the north, Georgia and South Carolina to the south, and Tennessee to the west.

North Carolina is generally described as composed of three basic physiographic regions – the Atlantic Coastal Plain, Piedmont, and Mountains - with some sources categorizing the shoreline of the Atlantic Coastal Plain as the Tidewater or Outer Coastal Plain. Each of these

⁹ See William S. Powell, *North Carolina Through Four Centuries* (Chapel Hill: University of North Carolina Press, 1989) or Milton Ready, *The Tar Heel State: A History of North Carolina* (Columbia, South Carolina: University of South Carolina Press, 2005).

Figure 3. "Physical Regions of North Carolina" (digital map), NCpedia, accessed April 1, 2017, http://www.ncpedia.org/sites/default/files/physical_regionsmap.gif.

Figure 1a. Physical Regions



regions reflects a distinct history and the differences between them were quite pronounced until well into the twentieth century when social and economic forces coalesced, bringing the regions into greater contact.¹⁰ The North Carolina Piedmont, which houses the Raleigh metropolitan area and is part of the Piedmont Plateau that extends from central Alabama northward into the southern edges of Pennsylvania and New Jersey, is bracketed by the Atlantic Coastal Plain to the east and mountains to the west, most of which are part of the Appalachian Mountains range that run from Canada to Alabama. The Piedmont's eastern edge is demarcated by the so-called Fall Zone, a geological transition from the erosion-resistant rocks of the Piedmont to the softer rocks of the Coastal Plain. The Fall Zone is the terminus of navigation due to naturally occurring falls and rapids and played a prominent role in transportation and settlement aspects of North Carolina history. In the present day, the Fall Zone is important for measurement and management of river pollution in North Carolina as scientists study the effects of pollutants on each side of the Fall Zone.¹¹

From the Fall Zone, the Piedmont extends up to 200 miles westward where it merges into the foothills of the Blue Ridge and Appalachian Mountains. Piedmont terrain is generally characterized as irregular, or "rolling", with elevations between 500 and 1,500 feet, although pockets of eroded mountain ranges – such as the Uwharries, South Mountains, and Sauratowns – reach heights over 2,500 feet above sea level. With the exception of a handful of river systems, including the Yadkin, Neuse, Cape Fear and Roanoke, the North Carolina Piedmont is dominated by rocky, shallow, narrow streams that proved obstacles to widespread commerce

¹⁰ "Geography & Environment", *NCPedia*, accessed July 22, 2015, <http://ncpedia.org/category/subjects/regions>.

¹¹ Jim Fowlkes, "Fall Line", last modified January 1, 2006, accessed August 1, 2015, <http://ncpedia.org/fall-line>.

and transportation until railroad construction commenced in the 1850s. The swift flowing streams proved valuable as sources of water power for grist mills and textile mills and, later, as sources of hydroelectric power.¹²

In agricultural terms, the Piedmont terrain was generally conducive to farming with well drained, clay soils, albeit less fertile than the darker Coastal Plain soils. The aforementioned transportation obstacles tended to hamper large scale agricultural development and slowed European settlement of the area. The area attracted the attention of legislators searching for a location for a permanent state capital at the end of the 1700s. Due to its central geographic location and availability of land, several tracts in Wake County were eyed by the General Assembly despite complaints by some that a capital at that locale would never grow beyond the status of a village. In 1792, the state purchased one thousand acres of land from a Wake County plantation owner for development as the City of Raleigh. Three years later, the University of North Carolina began instruction in the nearby town of Chapel Hill and the “industries” of government and education were established in the area.¹³ Until the 1850s, much of the Piedmont region, including the area around Raleigh, largely featured mills (though they tended to be small and attached to local markets), small farms, and villages. However, it lacked a solid economic connection to the eastern portion of the state.

Efforts to remedy this situation dated to the mid-1830s, when the Whig Party attained political dominance in North Carolina and sought to institute sweeping economic reform, with a

¹² Lindley S. Butler and Bland Simpson, “Geography: Part 3: The Piedmont Region: Economic Center of the State”, last modified January 1, 2006, accessed August 1, 2015, <http://ncpedia.org/geography-part-3-piedmont-region>.

¹³ Joe A. Mobley, *Raleigh, North Carolina: A Brief History* (Charleston, South Carolina: The History Press, 2009), 9-12.

state-owned railroad system at the center of these plans. In 1848, the North Carolina General Assembly passed legislation calling for an east-west railroad to connect the Coastal Plain and Piedmont for economic development and ultimately linking with other railroad systems to access the Pacific coast. By 1856, a 233-mile long corridor ran from Goldsboro west through Raleigh and Greensboro before bending southwest toward Salisbury and on to Charlotte. The railroad served as an impetus for the growth of the so-called Piedmont Urban Crescent as towns and cities along its route experienced increased commerce and population.¹⁴

Following the Civil War, North Carolina embraced the “New South” philosophy of urbanization, industrialization, and agricultural diversification. It emerged as a regional industrial leader by the early 1900s, featuring prominent rhetorical spokesmen such as Daniel A. Tompkins and Henry Woodfin Grady. While much has been made of the extreme boosterism that accompanied New South rhetoric, historian David Goldfield argued that despite statistics that purported progress the region actually *regressed* relative to the rest of the country and was less urban and prosperous in 1920 than in 1860. Further, Southern cities tended to retain a rural “feel” more attuned to agrarian perspectives than cities outside the region. This characterization remained as such until widespread migration by Southerners into urban areas between the 1920s and 1940s that accompanied the emergence of New Deal policies and farm mechanization.¹⁵

¹⁴ Ready, *The Tar Heel State*, 178-81. For other aspects of the North Carolina Railroad see Allen W. Trelease, “North Carolina Railroad”, last modified January 1, 2006, accessed August 1, 2015, <http://ncpedia.org/north-carolina-railroad>; North Carolina Railroad Company, “NCRR History”, accessed August 1, 2015, <http://www.ncrr.com/about-ncrr/ncrr-history/>.

¹⁵ David R. Goldfield, *Cotton Fields and Skyscrapers: Southern City and Region, 1607-1980* (Baton Rouge: Louisiana State University Press, 1982), 130-43. For an in-depth discussion of the influence of farm mechanization on the South, see Jack Temple Kirby, *Rural Worlds Lost: The American South, 1920-1960* (Baton Rouge: Louisiana State University Press, 1987).

During the late 1800s and early 1900s, the state witnessed growth in the form of mill towns and smaller cities that continued to reflect older southern traditions of “urban” landscaping, such as the presence of large lawns and gardens. The expansion of railroad mileage from the 1830s forward instigated a population shift from the coast into the Piedmont but this growth dispersed “horizontally” into large towns and small cities rather than “vertically” into metropolises. This type of growth influenced North Carolina’s urbanization pattern into the twentieth- and twenty-first-centuries with the prevalence of clusters of towns, referred to as triads or triangles, such as the Greensboro-Winston Salem-High Point Triad (also known as the Piedmont Triad), the Hickory-Lenoir-Morganton Triad, or the Raleigh-Durham-Chapel Hill Triad.¹⁶ This pattern shaped the early North Carolina approach to road construction, which sought to connect county seats and principal cities rather than develop hardtop arteries designed for rapid, heavy transit. This allowed for the continuation of dispersed growth and a road system characterized by a few decent primary roads and a host of lower quality secondary roads. Efforts to construct better roads only emerged in the 1950s.¹⁷

Thus, in the mid-1930s, when the federal government began acquiring land for the Recreational Demonstration Area that later became the state park, the Raleigh area represented a historically agricultural region of North Carolina that failed to develop large-scale agricultural or industrial activities until the tobacco industry in Durham that emerged in the late 1800s. Although the city was home to institutions of higher education (such as the University of North Carolina at Chapel Hill) and state government, the area remained relatively lightly

¹⁶ Ready, *The Tar Heel State*, 277-78 and 360-2.

¹⁷ *Ibid.*, 73-4.

populated. The city of Raleigh – with a population of just over 37,000 in 1930 – was North Carolina’s capital but existed in a rural context in a state that lacked a large urban area on par with an Atlanta or Richmond. To understand the rural characterization of Raleigh during this period, the 1940 U.S. census showed Charlotte as the most populous urban area in North Carolina, which ranked ninety-first among the largest one-hundred urban areas in the United States, with a population just over 100,000.¹⁸

The area acquired by the federal government was essentially overworked farm land with no iconic geographic feature. An internal National Park Service memo from 1936 noted the primary purposes for that particular RDA were organized group camping aimed at youth groups and access for nearby forestry schools.¹⁹ Given the largely rural population of the area and the condition of the land, the RDA was as much about rehabilitating the land, providing organized nature junkets for area youth, and taking advantage of research opportunities as providing a recreational outlet for people seeking outdoor activities such as hiking or camping. Many of these attributes reflected what notable state and national parks advocate Freeman Tilden later framed as an issue of “physical and moral well-being.”²⁰

Tilden’s remark appeared in a vignette on Umstead State Park that was part of a longer work published in the early 1960s assessing the role of state parks in American society. While he lauded the *opportunity* Umstead State Park provided for recreation and education he also

¹⁸ United States Census Bureau, “Table 17: Population of the 100 Largest Urban Places: 1940”, last modified June 15, 1998, accessed December 23, 2016, www.census.gov/population/www/documentation/twps0027/tab17.txt.

¹⁹ Memorandum from C.G. Mackintosh, Inspector to Mr. A.P. Bursley, Assistant Regional Officer, District C, First Region, Richmond, Virginia, National Park Service, October 31, 1936, North Carolina State Archives: State Parks Division: State Parks and Lakes File, 1930-1970 (hereafter referred to as State Parks and Lakes File), Box 14, Folder “Work Program Proposed, CCC and ERA for Complete Development of Park, Crabtree Creek.”

²⁰ Freeman Tilden, *The State Parks: Their Meaning in American Life* (New York: Alfred A. Knopf, 1962), 254.

gently chided park management for the lack of recreational development. His critique was supported by reports and memorandums produced within the North Carolina State Parks Division in 1963 regarding capital improvements in Umstead State Park. These noted that despite representing an excellent opportunity for natural history education, the recreational facilities at USP were woefully inadequate, including serious erosion along trails that had not been maintained since the Civilian Conservation Corps blazed them in the 1930s.²¹ Despite limited facilities, unmaintained trails, and areas deemed unappealing due to lack of tree cover, Umstead State Park drew relatively large numbers of visitors from both the immediate area and out-of-state visitors (extending to Canada).²² In the early 1950s, the then-Crabtree Creek State Park attracted better than 115,000 annual visitations and was deemed a vital recreational outlet for the growing numbers of people in the region employed in the defense industry. In a reflection of the time period, a State Parks Division memorandum discussed recreation for defense workers as an overlooked, but important, component in the broader Cold War defense effort.²³

The percentage of Southerners living in cities increased from roughly 30% to over 50% between the early 1930s and early 1960s, but North Carolina's rate of urbanization lagged relative to the region at large. It remained just under 40% in 1960.²⁴ As late as 1954, over one-third of North Carolinians remained tenant farmers although manufacturing – particularly

²¹ "Memorandum: Park Improvement and Landscaping, Reforestation, Construction & Reconstruction of Trails, William B. Umstead State Park", December 3, 1963, State Parks Division, Box 13, Folder "Capital Improvement Projects, 65-67, Office".

²² "Umstead State Park Attracts Campers from Throughout U.S., Canada", *Raleigh News and Observer*, July 26, 1959.

²³ "Memorandum: Relation to Defense Effort", October 3, 1952, State Parks Division, Box 14, "Folder – Project II (2) – 1949 Appropriation Bathhouse, Crabtree Creek"

²⁴ Goldfield, *Cotton Fields and Skyscrapers*, 140-3.

textiles, tobacco, cotton, and furniture – represented greater wealth levels than agriculture in the state. However, by the end of the 1950s, mechanization began to drive farm consolidation and the national dominance of North Carolina tobacco, textile, and cotton industries began to fade, leading to increased energies to attract tourism and outside capital investment.²⁵ At this same time, North Carolina political and business leaders, particularly during the administration of Governor Luther Hodges (1954-1961), began to actively promote the area around Raleigh as a locale for an ambitious research and development park that seized on both the growing momentum of suburban development in the United States and the region’s research universities. Both were viewed as potential “pull” factors for capital investment and job seekers.

This vision became the Research Triangle Park (RTP), today a world-renowned research and development center that houses more than 170 companies on over 7000 acres of land, making it the largest research and development park in the United States. RTP opened in 1959 and attracted its first tenant the following year when Chemstrand, the developers of AstroTurf, moved to the park. The arrival of IBM shortly thereafter stabilized the future of RTP as a center of technology-based industry, and contributed mightily to the explosive population growth and demographic change the region experienced beginning in the 1960s.²⁶ The establishment of the RTP reflected efforts to adapt to the declining dominance of tobacco, textiles, and furniture in North Carolina’s economy. It also occurred in the context of growing concerns regarding the rapid onset of post-World War Two suburbanization. This growth was keyed by factors such as

²⁵ Parramore, *Express Lanes and Country Roads*, 3-51.

²⁶ The Research Triangle Foundation of North Carolina, “Who We Are”, accessed December 27, 2016, <http://www.rtp.org/about-us/>.

financial support provided by the G.I. Bill, which offered low interest rate mortgages for veterans, and technological advancements, such as earth movers, that increased the places builders could construct homes, including environmentally sensitive areas such as wetlands and steeply sloped terrain. Another influence of this so-called suburban sprawl was the prevalence of construction on farmland – which was still widely available in the RT area of North Carolina in the 1950s – that provoked concerns over the loss of open space.²⁷

These parameters were also reflected in the establishment of the RTP itself as planners took the “park” aspect literally and utilized restrictions on lot development that sought to balance use with aesthetics. An early proposal to convert Umstead State Park into the research park was abandoned, partially on the argument of Superintendent of State Parks Thomas W. Morse that acquiring new land would be cheaper than attempting to buy the land that comprised USP.²⁸ Rather than using an existing state park, designers concocted a layout that ultimately resembled a state park, albeit one that also housed office complexes. Lot sizes were set at a minimum of eight acres with a limit of five percent coverage by buildings and thirty percent coverage by all improvements – including roads, sewer lines, and buildings - leaving 70% of lot space wooded. Planners also utilized ridges and contours endemic to Piedmont topography by construction structures along ridge lines, and placing power mains and sewer lines in the small valleys and low spots.²⁹

²⁷ Adam Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York: Cambridge University Press, 2001), 1-11 and 119-52.

²⁸ Albert N. Link, *A Generosity of Spirit: The Early History of the Research Triangle Park* (The Research Triangle Foundation of North Carolina, 1995), 45-53.

²⁹ Rohe, *The Research Triangle*, 76-83.

The RTP played a significant role in the explosive population growth of the area over the ensuing decades, which also affected areas across North Carolina.³⁰ Prior to 1960, North Carolina experienced overall outmigration, as more people left the state than relocated to it. Any population gain was achieved via birth rate. In the 1960s, this situation reversed itself relative to the white population and in the 1970s the same became true for the African-American population (itself part of a larger reversal of the Great Migration of African Americans out of the South between the 1910s and 1970s). During the 1970s, North Carolina emerged as a place of net in-migration with population growth tied to individuals from outside the state and region. These demographic shifts echoed into the 1980s and 1990s, as the birth rate dropped and in-migration represented better than half of the population gains. North Carolina grew from roughly 5.5 million inhabitants in 1975 to 7.3 million in 1995, a rate that continued into the 2000s.³¹ Much of the population gain for North Carolina during this period was concentrated in the Piedmont Urban Crescent that first emerged in conjunction with construction of the North Carolina Railroad. During the 1990s, population in the Piedmont Urban Crescent increased at a rate of over 25%, with even higher rates of growth on the eastern terminus of the crescent, which includes the Research Triangle (RT). Wake County, which includes Raleigh, grew at a rate of 47.3% during the 1990s, and the City of Raleigh

³⁰ Ibid., 1-4. The Research Triangle is a somewhat ambiguous term. At its narrowest it refers to essentially the Raleigh-Durham-Chapel Hill area which features the prominent research universities North Carolina State, Duke, and the University of North Carolina, respectively. As the area has grown the borders of the Research Triangle have grown fuzzier and it is now generally conceived of as a multiple county area that has spread in various directions.

³¹ Ole Gade, Arthur B. Rex, James E. Young, with L. Baker Perry, *North Carolina: People and Environments, 2nd Edition* (Boone, North Carolina: Parkway Publishers, Inc., 2002), 77-79. Today, the state's population is roughly 9.9 million people.

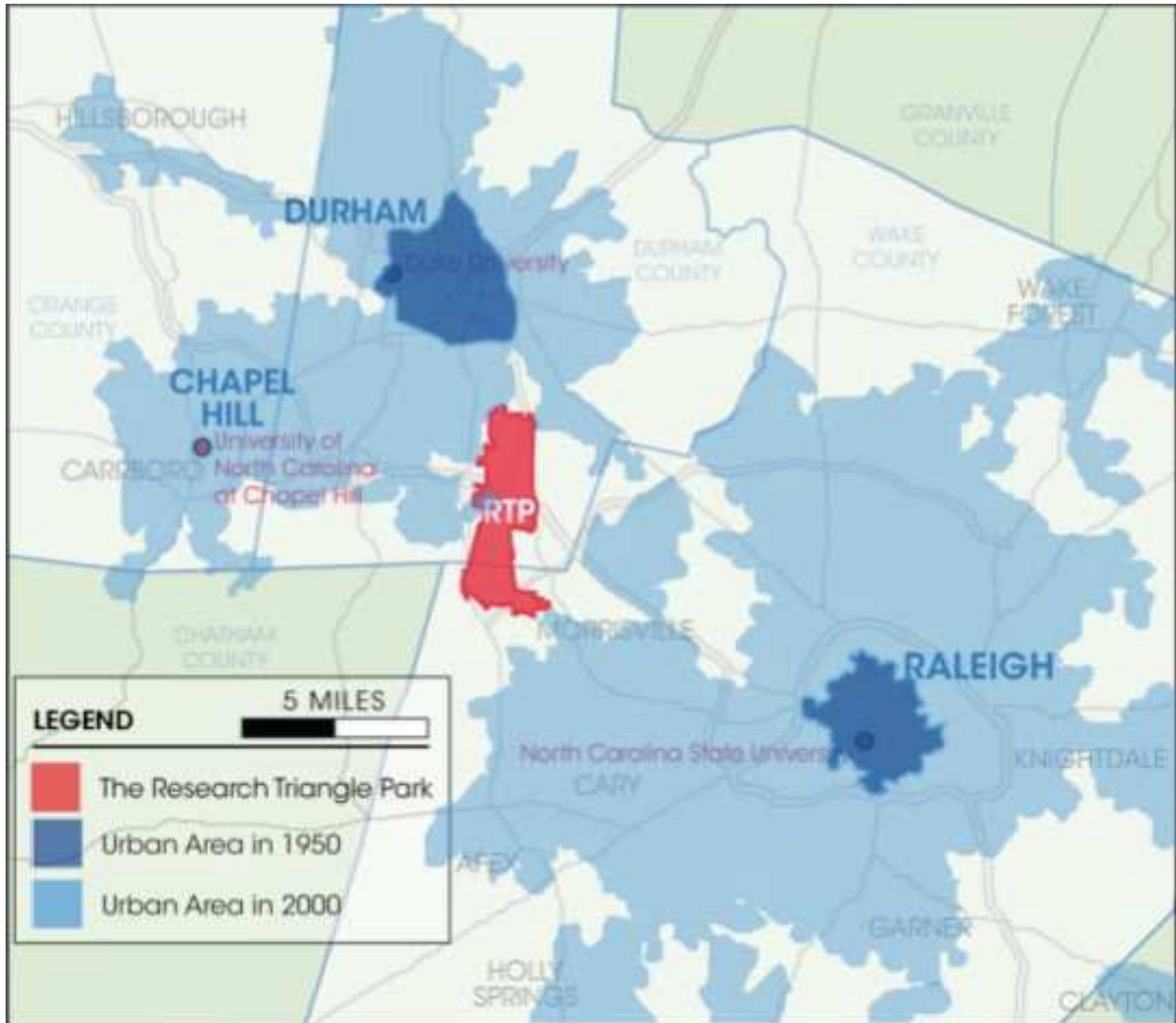


Figure 4. "Research Triangle Park" (digital map) LEARN NC, accessed April 3, 2017, <http://www.learnnc.org/lp/editions/nchist-recent/6177>. This map reflects the spread of urban development in the area between 1950 and 2000, as well as the location of the Research Triangle Park, Duke University, North Carolina State University, and the University of North Carolina at Chapel Hill.

to the onset of the Sunbelt in the U.S. South by the end of the 1960s³⁶: 1) the perception of racial accommodation, tied to a growing black middle class in the region, that encouraged capital investment from outside the South; 2) the shift in the national economy from industrial to service based and the prevalence of low taxes and cheap labor in the South; and, 3) changing lifestyle patterns of Americans, including greater concern for “quality of life” issues, such as access to outdoor recreation.³⁷

Two additional factors related to Sunbelt growth applicable to North Carolina and the Research Triangle were continued federal spending in the region and shifts in the state’s political leadership. By the 1950s, the emergence of business-oriented conservatives, referred to by one historian as “New Whigs”, in some areas of the South led to an active pursuit of federal investment, particularly in research and development arenas, as a means to achieve economic growth while minimizing labor conflict. Further, the growing economic importance of tourism and retirees to the South accompanied greater concern for aspects such as highway and airport construction and recreational outlets.³⁸

The so-called modern environmental movement coincided with these Sunbelt-related demographic, economic, and political shifts. According to Hal Rothman, this movement differed

³⁶ The boundaries of the U.S. South are somewhat debated and one can find definitions that range from the states of the Confederacy to broader definitions that include fringe states such as Delaware, West Virginia, Maryland, and Oklahoma.

³⁷ David Goldfield, *Region, Race, and Cities: Interpreting the Urban South* (Baton Rouge: Louisiana State University Press, 1997), 289-91. For a discussion of the emergence of “quality of life” issues on a national scale following World War II, see Samuel P. Hays. *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (New York: Cambridge University Press, 1987). Exact causes for the population growth of the Sunbelt remain a topic of discussion. A recent analysis discussing the “pull factors” of the region argued that so-called Southern “amenities”, such as climate, played a negligible role while economic growth and the understudied aspect of a large and elastic housing supply were the primary causes. See Edward L. Glaeser and Kristina Tobio, “The Rise of the Sunbelt”, *Southern Economic Journal* 74, no. 3 (Jan., 2008), 609-43.

³⁸ Bruce J. Schulman, *From Cotton Belt to Sunbelt: Federal Policy, Economic Development, and the Transformation of the South, 1938-1980* (New York: Oxford University Press, 1991).

from the conservation movement of the Progressive Era, which largely concerned itself with “efficient” utilization of natural resources, by virtue of its connection with the affluence of postwar America. For Rothman, the early environmental movement arose as a “radical critique” of the widespread adulation for development that permeated the nation in the aftermath of World War Two, peaked with anti-pollution efforts that culminated with Earth Day in 1970, and ebbed by the end of the 1980s as economic concerns instigated a backlash towards what were viewed as anti-development forces.³⁹ One aspect of this broadening environmentalism in the 1950s and 1960s was growing awareness by federal and state agencies of the increased interest in outdoor recreation in “natural” settings. Efforts to provide greater access to outdoor settings also produced deepening debates between those who wished for more developed facilities and those who desired undeveloped areas, particularly in areas designated as wilderness.⁴⁰

Another aspect of this period was a push by the National Park Service for the development of urban parks. This initiative contributed to the establishment of units such as Golden Gate National Recreation Area (California) and Gateway National Recreation Area (New York/New Jersey) in 1972.⁴¹ The notion of urban parks and debates over proper use of undeveloped areas, including the imagery of wilderness, were also present in discussions

³⁹ Hal K. Rothman, *The Greening of a Nation? Environmentalism in the United States since 1945* (Fort Worth: Harcourt Brace College Publishers, 1998).

⁴⁰ Hays, *Beauty, Health, and Permanence*, 115-21. The idea of wilderness has a long and convoluted history and American attitudes towards the concept have shifted throughout its history. The idea of wilderness as worthy of preservation in its own right is often linked to efforts of individuals and groups such as Aldo Leopold, Robert Marshall, and the Wilderness Society that emerged in the 1920s and 1930s. The mainstreaming of these views peaked in the 1960s with efforts to define wilderness and provide federal protections, such as passage of the Wilderness Act of 1964 or Wild and Scenic Rivers Act of 1968. The idea of wilderness has come under increased scrutiny over the past thirty years amid arguments that wilderness is a social construct and traffics in the myth of “pristine” areas untouched by humans, which shrouds the relationship between people and nature.

⁴¹ Hal Rothman, *The New Urban Park: Golden Gate National Recreation Area and Civic Environmentalism* (Lawrence: University Press of Kansas, 2004), ix-xi.

regarding management of Umstead State Park. By the late 1960s, Umstead State Park pulled in more than 300,000 visitations per year while also facing encroachment by the developing metropolitan area itself, especially the desire to expand the adjacent Raleigh-Durham International Airport. When a proposal to convert USP into a recreational complex replete with a zoo, golf course, outdoor theater, swimming pools, and theme park modeled after Six Flags over Texas became public in 1968, it instigated an energetic response.⁴²

The announcement of the proposed development plans for USP engendered immediate calls by groups such as the North Carolina Wildlife Federation and North Carolina Academy of Science – later joined by national groups such as the Wilderness Society – to fight the “Disneyland” development.⁴³ The furor led to an editorial by North Carolina State Board of Conservation and Development Chairman J.W. York, a supporter of the USP development plans. York argued that the “changing complexion . . . from a rural to urban way of life” necessitated major adaptations to land management and development of “intensive-use urban parks” near population centers. He defended the urban park concept and cited similar efforts in Virginia, New Jersey, California, and Pennsylvania, while noting that USP represented a prototype tied to a long and complex development process. York concluded his essay by pointing out that the development plans as written called for use of roughly 900 acres, leaving nearly 4300 acres in a “natural or wilderness state.”⁴⁴

⁴² “Plan Proposes Umstead Park as Site of Zoo”, *Raleigh News and Observer*, April 23, 1968.

⁴³ “War Declared on Park Plan”, *Raleigh News and Observer*, April 24, 1968; “Umstead Park Facing National Battle”, *Raleigh News and Observer*, June 24, 1968.

⁴⁴ J.W. York, “Editorial: The Urban Park Concept”, *Raleigh News and Observer*, September 22, 1968.

Shortly after J.W. York's defense of the USP development, the Board of Conservation and Development dropped its plans citing the "violent storm of protest and controversy", but also reiterated the conviction that North Carolina needed to further analyze the concept of urban parks.⁴⁵ The short-lived episode revealed two important shifts regarding USP already prevalent in the demographics of the Raleigh metropolitan area. First, the use of rhetoric such as "wilderness" to describe USP reflected how much the region had changed. Just thirty years before, the area was overworked farmland lying outside the smallish city of Raleigh. By the late 1960s, the area became forested and surrounded by urban and suburban development, undergirding the perspective that the park was a "wild" area. Second, the swiftness with which the plans were dropped reflects the changes to the Raleigh area itself, as increasing numbers of people migrated to the area from outside the state and region who were drawn by the well-paying technological jobs and amenities available in the form of entities such as USP. Another significant factor in the cancellation of the development plans related to requirements associated with the deeding of the area to North Carolina by the National Park Service in 1943. The language of the land transfer stated that the area reverted to federal control if it was used for purposes other than a nature reserve and represented a significant legal hurdle.

A potent example of the breadth of the demographic shifts occurring in the Raleigh metropolitan area, symptomatic of broad shifts occurring in areas across the South, involved the history of recreational opportunities in the area for African Americans. The exclusion and segregation of African Americans from state parks and other public recreational facilities, such as municipal golf courses, illustrated the pervasiveness of Jim Crow-era attempts to restrict and

⁴⁵ "C&D Drops Umstead Park Plan", *Raleigh News and Observer*, October 29, 1968.

define African American usage of virtually any public facility. From the 1930s to the 1960s, Southern states made limited attempts to provide African Americans with outdoor recreational opportunities in state parks. These usually manifested themselves as the establishment of a “Negro area” of an existing state park or a separate facility in the proximity of the original state park. These areas usually featured separate access roads and were situated far enough from the rest of the park to maintain landscape buffers between the black and white sections.⁴⁶

When the National Park Service established the Crabtree Creek Recreational Demonstration Area in the 1930s, it included a segregated group camp, Camp Whispering Pines, on a section of the park separated from the rest by Reedy Creek. Throughout the 1940s, this area was maintained as a separate use facility, but one that fell woefully short addressing African American recreational needs. As late as 1947, it lacked any real provisions for usage and a report to the General Assembly that year noted the dire need for picnicking and swimming facilities to serve the “many requests of Negro individuals, family groups, and organizations.”⁴⁷ The segregated area was designated Reedy Creek State Park in 1950 and administered separately from Crabtree Creek State Park, including a separate supervisor and administrative buildings. Although the North Carolina Department of Conservation and Development argued that it made “every effort” to maintain equal facilities at the two units, the reality was that in a

⁴⁶ William E. O’Brien, *Landscapes of Exclusion: State Parks and Jim Crow in the American South* (Boston: University of Massachusetts Press, 2016), 3-17. O’Brien also notes that state parks became a focus of legal efforts to dismantle Jim Crow via lawsuits designed to challenge access restrictions. On the other hand, some Southern states also took the approach of trying to present the existence of separate facilities as proof of their attempts to provide opportunities and show that “separate but equal” was viable. This same process regarding golf courses is discussed in George B. Kirsch, “Municipal Golf and Civil Rights in the United States, 1910-1965”, *The Journal of African American History* 92, no. 3 (Summer, 2007), 371-91.

⁴⁷ “Permanent Improvements Program Proposed, Submitted to 1947 General Assembly”, State Parks and Lakes File, Box 14, Folder “Permanent Improvements Program Submitted to 1947 General Assembly”.

state that was historically loathe to budget money for improvements in any state park, Reedy Creek suffered from severe financial shortages and often saw development plans dropped in favor of improvements in the white section.⁴⁸

A U.S. Supreme Court ruling in November of 1955, in the wake of the monumental *Brown v. Board of Education* decision the previous year, affirmed that public park segregation was unconstitutional. This set off a series of lawsuits in the South aimed at desegregating state parks, which met with various levels of resistance.⁴⁹ In North Carolina, Reedy Creek State Park remained a separate unit until 1966, when it was folded into the existing Umstead State Park (renamed in 1955.) The passage of the Civil Right Act of 1964 left some states with little choice but to comply with desegregation or dissolve their entire system of parks. While North Carolina's reaction to desegregation did not reach the extremes of state such as South Carolina, which closed its entire system of state parks for about two years (and some individual parks remained closed for longer) before implementing desegregation, there was localized resistance. Usually, this came in the form of whites avoiding state parks previously designated for black use (these included Reedy Creek, Jones Lake, and Hammocks Beach), although this scenario unfolded differently at Umstead/Reedy Creek primarily due to the factor of rapid urbanization.

In 1972, a University of North Carolina-Chapel Hill student, Dennis Eugene Jones, wrote a master's thesis on recreational geography that sought to gauge how race influenced

⁴⁸ "1949 Appropriation, Public Picnic Grounds (White), Crabtree Creek", State Parks and Lakes File, Box 14, Folder "Project II (1) – 1949 Appropriation"; "1949 Appropriation Bathhouse, Crabtree Creek", State Parks and Lakes File, Box 14, Folder "Project II (2); "1949 Appropriation, Roads to Recreational Areas, Crabtree Creek", State Parks and Lakes File, Box 14, Folder "Project II (11).

⁴⁹ O'Brien, *Landscapes of Exclusion*, 133-44. For example, Virginia cautiously sought to desegregate on an experimental basis while states such as South Carolina and Georgia vehemently resisted desegregation of state parks. South Carolina went as far as closing its entire system of state parks in 1963 (with some parks having been closed since 1956) before re-opening them in 1964.

individual perception of an area by examining use at the previously African American-use state parks. Jones concluded, unsurprisingly, that white usage of parks previously designated “black” was negatively influenced by racial perception. In his analysis, however, he noted that the Reedy Creek section of USP proved to be a far different entity than either Jones Lake or Hammocks Beach, particularly due to the rapid urbanization of the Raleigh area beginning in the early 1960s. Jones observed that African American usage of Crabtree Creek State Park (or, the “white” area) rose significantly in the years prior to desegregation, indicating an increased willingness among inhabitants and officials to not strictly enforce segregation. In interviewing users at each park, Jones also noted a far lower awareness that a separate black park had existed at USP than the other two sites, usually because the interviewee was a new arrival to the area.⁵⁰ Essentially, the historic racial contours of utilization of USP were overwhelmed by the rapid demographic change associated with the urbanization characteristics of the Raleigh metropolitan area.

By 1970, the population of Raleigh jumped to more than 122,000 and a Master Plan for Umstead State Park, written in 1974, addressed the reality that urbanization and suburbanization had spread west from the Raleigh area and abutted the eastern edge of the park. However, it made no mention of the recent desegregation of the park. The Master Plan also noted that development of the Crabtree Valley Shopping Center, Interstate 40, and expansion plans for Raleigh-Durham Airport represented potential pressures while observing

⁵⁰ Dennis Eugene Jones, “Spatial Patterns of Racial Participation at Previously Black State Parks in North Carolina”, (master’s thesis, University of North Carolina-Chapel Hill, 1972).

that continued urbanization likely meant increased flooding for the area stemming from erosion along the Crabtree and Sycamore Creek watersheds.⁵¹

Contrary to the image discussed earlier in this chapter of Umstead State Park as a “wilderness oasis” the Master Plan explicitly discussed the park as valuable for its depiction of the relationship between people and the land: “The main natural feature of Umstead Park is not a particular formation but the *process* (emphasis added) which has acted to form the natural setting. The combination of geology, soils, topography, water, plants, and animals – their interaction over time and their adaptation by past land use patterns have afforded the Park’s 5,217 acres a unique natural resource. It is a classic example of old field succession...”⁵² Despite this acknowledgement of the agricultural past of the land that comprised USP, the Master Plan largely ignored elements of its past use to focus on how to maintain the area in the face of a rapidly growing population that was putting increased pressure on the park itself. In fact, the Plan argued, “Foremost among management and land use problems in Umstead Park is the aspect of control – the regulation of access and use of park land and facilities.” The Plan stated this issue was exacerbated by poor locating of Umstead Park offices and information centers, lack of permanent staffing, and complex, inadequately marked boundaries. Further, the utilization of trails in Umstead Park featured growing numbers of hikers, as well as increased presence of bicycles and horses, that were creating problems of compaction and erosion of soils, and safety issues where different types of trails intersected.

⁵¹ North Carolina Division of State Parks, “Umstead State Park, Master Plan” (Raleigh, 1974), accessed December 29, 2016, https://archive.org/stream/williambumsteads00unse/williambumsteads00unse_djvu.txt.

⁵² Ibid.

Ultimately, the Master Plan devised a multifaceted, phased approach to land management in Umstead Park that attempted to juggle the cross purposes of maintaining the “essence” of the park’s purpose – representation of succession of plant and animal species – while actively developing certain areas for varying levels of usage, be it group camping, day use, or “semi-wilderness” camping in the lowlands sections. Although the Master Plan articulated these goals as an aspect of land management and preserving watersheds, and examples of succession amidst a growing population, another view reflects the reality that recreation, and the setting of this recreation, lay at the heart of the plan’s suggestions and observations.

For example, at one point the Master Plan critiqued the scenery of USP as redundant but largely ignored the role of past re-planting efforts to combat soil erosion – supposedly a concern of the Master Plan. This practice planted tens of thousands of pine seedlings, which largely contributed to the scenery present in the early 1970s. While Civilian Conservation Corps activities in this regard were mentioned, the plan entirely omitted large scale planting of pine seedlings undertaken just ten years before by park management.⁵³ The plan also tended to focus on management of ridge tops from a perspective of siphoning use into these areas as a means to both protect sensitive low-lying area and ensuring the maintenance of vistas along roadways and easements. In many ways, the utilization objectives for USP were very similar in the 1970s and the 1930s – the provision of recreational opportunities in a natural setting – but rapid urbanization and social processes in the area related to urbanization placed increased

⁵³ “Park Improvement and Landscaping, Reforestation, Construction & Reconstruction of Trails”, William B. Umstead State Park, December 3, 1963, State Parks and Lakes File, Box 14, Folder “Capital Improvement Projects, 1965-1967”.

emphasis on perceiving Umstead State Park as a “wild” place rather than a component of development.

Since production of the 1974 Master Plan, the identification of Umstead State Park as wild seems more synonymous with undeveloped areas within the park– or, at least, controlled development – and the growing connection of USP to a network of “green spaces” in the Research Triangle. These include Eno River State Park, Jordan Lake and Falls Lake Recreation areas, Duke Forest, numerous county and municipal parks, and a growing system of greenways. By 2011, the Research Triangle area, anchored by the Raleigh-Durham-Chapel Hill conflux, featured over 120,000 acres of state and locally managed areas, viewed as a significant “pull” factor to the region – along with low unemployment and relatively low taxes. These lands are a major element in the consistent rankings of the Research Triangle as one of the best areas in the United States to live, start a business, or raise a family.⁵⁴

Despite the attractiveness of such areas, the growth of the region continued to put pressure on USP’s boundaries and cause tensions among those using these areas, although the characteristics of these efforts changed somewhat. In the late 1980s and early 1990s, Umstead State Park faced mounting pressures from the continued development of the area, including airport noise, silting of park streams, erosion of trails, and sewage spills in surrounding communities. These issues caused a leading environmental lobbyist to call USP the most embattled unit in the system. This pressure reached a high point in 1990, when a state official suggested selling up to four-fifths of USP to fund other projects within the state parks system. Public outcry quickly tabled the proposed sale and, according to one official, reflected a

⁵⁴ Rohe, 95-100.

growing awareness among RT residents that protecting what remained of natural areas outweighed merely providing recreational opportunity.⁵⁵

Since the early 1990s, the development of greenways and other outdoor areas has complicated utilization of Umstead State Park and land management in general. The growing network of greenways and trails in the area has placed Umstead State Park as a cog in a patchwork system of national, state, local, and private management. For example, in 2009 the Town of Cary – itself largely a product of the rapid growth of the RT – announced plans to partner with developers of the East Coast Greenway (ECG). The ECG is a planned 3,000-mile shared-use pathway slated to reach from Calais, Maine to Key West, Florida upon completion. In the context of the agreement with the Town of Cary, the ECG would link to existing greenways and link Umstead State Park to the American Tobacco Trail, a 22-mile long Rails-to-Trails project within the Research Triangle utilizing an abandoned railroad bed built for the American Tobacco Company in the 1970s.⁵⁶

Despite the extension of such greenway and trails systems, and the recent passage of a massive state bond referendum that included millions of dollars in funding for state parks projects, Umstead State Park and the Research Triangle continue to wrestle with issues related to urbanization. In 2015, the North Carolina State Senate proposed legislation that included a proposed land swap between Raleigh-Durham Airport and USP that raised protest from local groups, echoing similar efforts from the past.⁵⁷ Meanwhile, the long running rate of growth in

⁵⁵ “Umstead’s Role at Crossroads” *Raleigh New and Observer*, February 9, 1992; “Editorial: Umstead: Preserve and Protect”, *Raleigh News and Observer*, July 22, 1992.

⁵⁶ Jordan Cooke, “Trailblazing Partnership”, *Cary News*, June 24, 2009.

⁵⁷ “Senate Bill 486 Proposed to Take Land from Umstead State Park”, accessed January 4, 2017, <http://www.umsteadcoalition.org/page-1525369/3464793>.

the area continues to prompt searches for places to develop as office and living space as entities such as the Research Triangle Park have filled to capacity. An indicator of the rate of development is the recent announcement of a 7000-acre planned, mixed use community called Chatham Park. It will lie adjacent to downtown Pittsboro, which is over thirty miles from Raleigh but is now feeling the reach of development from the state capital.



Figure 5. "Proposed East Coast Greenway" (digital map) Inhabit, accessed April 3, 2017, <http://inhabitat.com/new-bike-greenway-stretching-from-florida-to-maine-is-31-complete/>. As noted, this is the proposed route of the ECG, of which a little over 30 percent is complete.

Conversely, an effort to protect an area roughly twelve miles to the east of Raleigh, known as the Mark's Creek Initiative, is underway. Rather than denuded farmland, the areas under purview of the Mark's Creek Initiative (MCI) are characterized by supporters as a range of wetlands, farms, forests and rural churches that represent a "time warp." The area also houses more than 7500 acres of undeveloped land with the potential to be a "huge, natural park, larger than Umstead State Park."⁵⁸ While the description of the area as a "time warp" reflects some of the disconnect between land managers, environmentalists, and historic use discussed by people such as Rebecca Conard and Grace Karskens, the parameters of the MCI also reflect shifts from the establishment of Umstead State Park. MCI represents a public-private partnership rather than government acquisition and would be managed by the Triangle Land Conservancy (TLC), a localized version of the Nature Conservancy. TLC was formed in the early 1980s and works with private landowners and other partners to both acquire and manage land with the aim of preserving "natural habitats."⁵⁹ Further, the MCI goal reflects a greater embrace of human occupation of the area, as opposed to the efforts to erase signs of occupation – including houses, churches, and stores – in the area of Umstead State Park in the 1930s.⁶⁰

The growing presence of greenways and natural parks, such as the proposed Mark's Creek Initiative, potentially lessen reservations about processes such as the recently called for land swap between the airport and USP. As development continues, proponents of airport expansion could conceivably point to the availability of other natural areas as mitigating any

⁵⁸ Triangle Land Conservancy, "Conservation Initiatives", accessed January 2, 2017, <https://www.triangleland.org/strategic-conservation/conservation-initiatives>.

⁵⁹ Triangle Land Conservancy, "About", accessed January 2, 2017, <https://www.triangleland.org/about>.

⁶⁰ Weber, *Stories in Stone* includes a discussion of the inhabitants of the communities in the area that became USP. The book also offers a growing effort to preserve the memory of those communities and even offers interpretive trail descriptions that relate to leftover markers, such as tombstones, in the area.

negative effects from a land swap. In a worst case scenario, the sale of parkland proves too much to resist, although such an action would necessarily invoke the clause that the USP reverts to federal control if it is no longer utilized as a natural reserve, creating a separate set of issues. The evolution of Umstead State Park should not ultimately be viewed as either a cautionary tale related to urbanization or a triumph of farsighted individuals. Rather, it is an example of how closely related such entities are to the history of the interaction of people with the land, including the influence of past uses and the degree to which management of these areas is often more reactionary or subject to idealization than is often realized.

CHAPTER III

ENO RIVER STATE PARK AND CIVIC ENVIRONMENTALISM

In his book on the development of Golden Gate National Recreation Area (GGNRA) in San Francisco, officially established in 1972, Hal Rothman argued that the National Park Service (NPS) unit reflected broad shifts in 1960s American society, stemming from Lyndon Johnson's administration, that led to "broader representations of national heritage already contained in its purview" and a "neopopulist" idea of "parks for the people, where the people are." Rothman describes how GGNRA represented a foray into urban parks for an agency historically concerned with large scenic natural areas, with little concern for developing recreational outlets within park units. According to Rothman, GGNRA was significant for a pair of reasons. First, the combination of recreation, history, wilderness, and nature in GGNRA reflected a new NPS "archetype" that moved away from elitist views tied to preserving "pristine" nature to an approach that sought to include a range of views among a changing American public. Second, he observed the centrality of politics to the formation and management of GGNRA, its inception among civic-minded interest groups, and political jockeying among local, state, and national entities. This politicization was significant for it represented the coalescence of a

growing environmental movement in the United States with grassroots politics, what Rothman termed “civic environmentalism.”¹

While not a primary focus of Rothman’s analysis, it was significant that a major figure in the grassroots drive for GGNRA was Amy Meyer, a self-described “stay-at-home mother and a dissatisfied artist, with two daughters ages nine and five” whose previous experience with activism amounted to stuffing envelopes for political campaigns. Meyer emerged from a small group concerned about a planned National Archives building in their residential neighborhood to the leader of a complex, grassroots political campaign that included attendance at Congressional hearings in Washington, D.C.² Her experience reflected the growing involvement of women in the burgeoning environmental movement of the 1960s, a period when environmentalism shifted from overt concerns with wilderness preservation to a diverse movement concerned with a range of issues including pollution, population growth, consumer habits, and environmental racism.³

The connection of women to environmental concerns was not new in the 1960s. Women were active in environmental concerns reaching back to at least the Progressive era, including the efforts of Alice Hamilton and Florence Kelley who advocated reform on issues such as toxic substances and occupational hazards, or the needs of children in the urban and

¹ Hal K. Rothman, *The New Urban Park: Golden Gate National Recreation Area and Civic Environmentalism* (Lawrence: University Press of Kansas, 2004), ix-xi.

² Amy Meyer, *New Guardians of the Golden Gate: How America Got a Great National Park* (Berkeley: University of California Press, 2006), xiii-xv.

³ Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (New York: Cambridge University Press, 1987); Kirkpatrick Sale, *The Green Revolution: The American Environmental Movement, 1962-1992* (New York: Hill and Wang, 1993); Steven Stoll, *U.S. Environmentalism since 1945: A Brief History with Documents* (New York: Palgrave MacMillan, 2007); Benjamin Kline, *First Along the River: A Brief History of the U.S. Environmental Movement, 4th Edition* (Lanham, Maryland: Rowman & Littlefield Publishers, Inc., 2011).

industrial order. The League of Women Voters – formed in 1920 – also mobilized middle class women for work in environmental conservation.⁴ The 1960s witnessed greater numbers of women involved in grassroots activism that, similar to Amy Meyer, had backgrounds as housewives with little experience in political activism until spurred by an action viewed as threatening to their immediate environment. This heightened activism involved a range of activities including advocacy for the establishment of parks, preservation of streams and rivers, and protest of pollution issues, especially concerning water and atomic pollution. Although this participation in the environmental movement initially lacked a strong connection to the women’s movement of the late 1960s, the identification of these as “women’s issues” achieved predominance during the 1970s and 1980s. Women from poorer backgrounds, particularly women of color, played increasingly important organizational and leadership roles in the expansion of the environmental justice movement into the 1980s and beyond.⁵

The shift in women’s participation in environmental issues during the 1960s, that was characterized by greater grassroots activism in general and greater focus on pollution, mirrors alterations to the larger environmental movement that occurred during the same period in the United States. Various historians have noted the contextualization of the emergence of the “modern” American environmental movement in the tumult of the 1960s itself and how it reflected both the restlessness and optimism of the decade. From this perspective, the Earth

⁴ Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement, Revised and Updated Edition* (Washington, D.C.: Island Press, 2005), 83-88 and 100-102; Terriane K. Schulte, “Citizen Experts: The League of Women Voters and Environmental Conservation,” *Frontiers: A Journal of Women’s Studies* 30, no. 3 (2009), 1-29.

⁵ Adam Rome, “‘Give Earth a Chance’: The Environmental Movement and the Sixties,” *The Journal of American History* 90, no. 2, (Sep., 2003), 524-54 and Gottlieb, *Forcing the Spring*, 275-306. On the role of women of color see, Shirley A. Rainey and Glenn S. Johnson, “Grassroots Activism: An Exploration of Women of Color’s Role in the Environmental Justice Movement,” *Race, Gender, & Class* 16, no. 3/4 (2009), 144-73.

Day events of 1970 represent a tipping point, as the following decades witnessed more emphasis on national organizations and federal legislation followed by backlash during the administrations of Ronald Reagan and George H.W. Bush. Since the 1990s, a sense of pessimistic ambivalence seems to characterize views on the direction and influence of the American environmental movement. On the one hand, environmental “values” are viewed as important to many Americans on a personal level but this is counterbalanced by a lack of actual participation.⁶

The Eno River State Park in North Carolina provides an opportunity to examine the influence of the broad changes in environmentalism in the 1960s and 1970s as reflected in the formation of a state park. On the surface, the narrative is highly characteristic of the environmental activism of the period. The movement to establish the Eno River State Park (ERSP) was identified with Margaret Nygard, who embodied the “typical” example of women’s involvement in environmental activism – white, in her forties, residing in a college town, and married to a white-collar male.⁷ Her efforts were comparable to those of Amy Meyer with GGNRA, with the notable exception that Eno River is a state park in the southeastern United States while GGNRA is a national park unit on the West Coast. Both women were political neophytes whose initial involvement stemmed from a highly localized action but evolved into a leadership role in a complex organization.

⁶ Hal Rothman, *The Greening of a Nation? Environmentalism in the United States Since 1945* (Fort Worth: Harcourt Brace College Publishers, 1998); Samuel P. Hays, *A History of Environmental Politics Since 1945* (Pittsburgh: University of Pittsburgh Press, 2000); Philip Shabecoff, *A Fierce Green Fire: The American Environmental Movement, Revised Edition* (Washington, D.C.: Island Press, 2003).

⁷ Rome, “Give Earth a Chance”, 538.

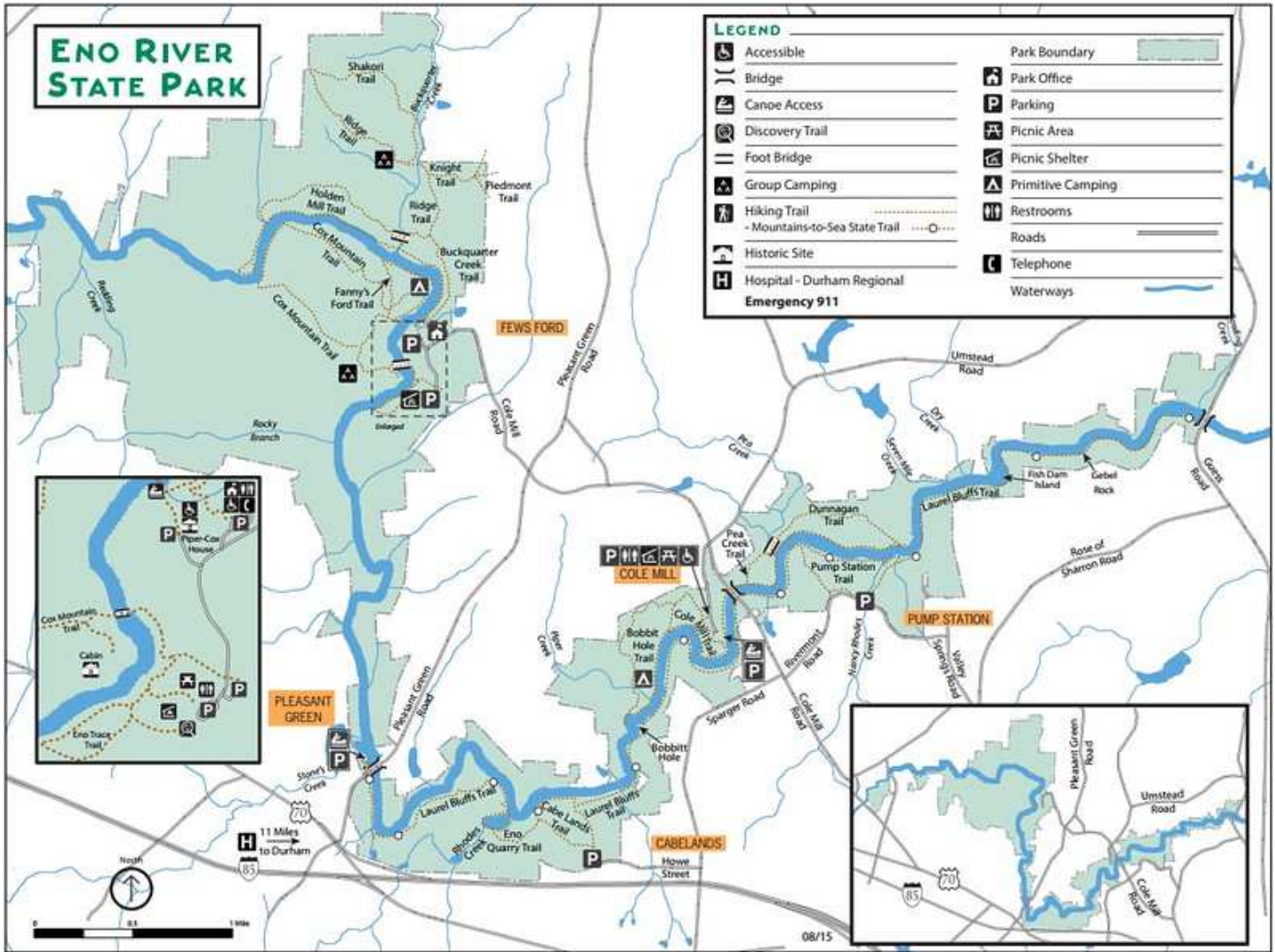


Figure 6. "Eno River State Park Map" (digital map) North Carolina State Park Maps, accessed April 3, 2017, <http://www.dwhike.com/Maps-Vault/State-Park-System-Maps/North-Carolina-State-Park-Maps/>.

The example of Margaret Nygard and ERSP allows for more than merely a change of venue relative to Amy Meyer and GGNRA. It also allows for an examination of the interaction of changes to the Raleigh-Durham region of North Carolina as it underwent the onset of rapid population growth and social shifts occurring in the area as it attracted growing numbers of residents not native to the region. The activism on the part of ERSP cannot be purely attributed to “outside forces” as the push for a state park on the Eno River also revealed environmental attitudes and local concerns about growth and development. It also reflected a convergence of environmental and historic preservation efforts emblematic of the period.

The Eno River is a swift, shallow body of water that rises in Orange County, North Carolina and flows roughly thirty-three miles before joining the Flat River, ultimately feeding into the Neuse River and Falls Lake. For much of its length, the Eno River runs in a general northeasterly direction – with several kinks and bends – before turning sharply south at Few’s Mill near the City of Durham.⁸ The river is named for the Eno Indians, one of the loosely related Siouan-speaking groups who resided in the North Carolina Piedmont around the time of colonization. Little is known about the group, and discussion of their existence is confined largely to seventeenth and early eighteenth century documents. It is believed the Eno merged with other groups in the area.⁹

Although the Eno River valley, and the nearby Little River and Flat River valleys, were fertile enough to support grain and tobacco production, the region’s fast flowing streams

⁸ “The North-South Segment of the Eno River”, The Geology of North Carolina: An Interactive Guide to the Mountains, Piedmont, and Coastal Plain, accessed March 13, 2016, http://www.ncgeology.com/Eno_interactive_webs/north_south_segment_eno_river_fews_ford.html.

⁹ North Carolina Division of Parks and Recreation, “Eno River State Park: History”, accessed March 22, 2016, <http://www.ncparks.gov/eno-river-state-park/history>; Jean B. Anderson, “Eno Indians”, last modified January 1, 2006, accessed March 22, 2016, <http://ncpedia.org/eno-indians>.

proved most valuable for mills. By the mid-1700s, numerous mills were located along the Eno River (some estimate as many as thirty) and milling remained a central economic and social component of the region into the twentieth century, despite the propensity for floods damaging both mills and mill dams.¹⁰ Despite the relative profitability of the mills and their location near Raleigh, the state capital, the region surrounding the Eno River experienced only incremental population growth until the latter stages of the nineteenth century. As late as 1880, Raleigh had a population of less than ten thousand people. During the 1880s, some business leaders in the Piedmont region of North Carolina supported the rhetorical call increased urbanization and industrialization known as the New South. Subsequently, the area around Raleigh – including the cities of Durham, Chapel Hill, and Hillsborough – experienced relatively rapid population growth, with Raleigh’s population doubling to more than twenty thousand, by 1910.¹¹ This growth contributed to contemporary pollution concerns along the Eno River, with Hillsborough identified as the primary culprit.¹²

By the 1950s, the desire to attract new business ventures to North Carolina spurred thoughts of a low-impact industrial park, centered on research and the development of technology-oriented concerns. The idea garnered invaluable support from the administration of Governor Luther Hodges (1954-1961), who appointed a committee to raise funds for the

¹⁰ William Kenneth Boyd, *The Story of Durham, City of the New South* (Durham: Duke University Press, 1925), 1-3 and Jean Anderson, “A Community of Men and Mills”, *Eno Journal* 7, “Special Issue, Papers from the Seminar on Water Wheels and Windmills”, (July, 1978), accessed March 20, 2016, <http://www.enoriver.org/store/journals/volume-7-special-issue/community/>.

¹¹ Joe A. Mobley, *Raleigh, North Carolina: A Brief History* (Charleston: The History Press, 2009, 12-13).

¹² William Powell, *Raleigh-Durham-Chapel Hill: A Student’s Guide to Localized History* (New York: Teacher’s College Press, 1968), 1-2.

purchase and development of a five-thousand-acre tract near Raleigh that became the Research Triangle Park (RTP). The RTP fundamentally altered North Carolina's economy by attracting technology companies, spurring high-technology start-ups, and attracting large numbers of people from outside the state and region.¹³

During the 1960s, the population of the Raleigh metropolitan area increased from 93,000 to over 122,000, with many of those arriving from outside the state.¹⁴ In the early 1960s, this growth spurred the Research Triangle Planning Commission to begin formulating long range plans for water supply sources, including damming the Eno River, to supplement a reservoir on the Flat River as a water supply for the City of Durham. In 1966, the City of Durham accelerated land acquisition plans due to a proposed private housing development which threatened to both remove land from the market and drive up prices for surrounding lands. Within two weeks of the announcement, local citizens began organizing protests, including the formation of the Association for the Protection of the Eno River Valley, today known as the Eno River Association (ERA), out of a loosely organized "walking group." Several of its members owned riverfront property threatened by the reservoir plans. Within two years, the efforts of the ERA led to the Eno River reservoir project being deprioritized, and in 1972, North Carolina approved the establishment of a state park, which officially entered the system three years later.¹⁵

¹³ William S. Powell, *North Carolina Through Four Centuries* (Chapel Hill: The University of North Carolina Press, 1989), 530-33 and Milton Ready, *The Tar Heel State: A History of North Carolina* (Columbia, South Carolina: University of South Carolina Press, 2005), 369-72.

¹⁴ James Vickers, *Raleigh: City of Oaks, An Illustrated History* (Woodland Hills, California: Windsor Publications, Inc.; Sponsored by Wake County Historical Society, 1982), 128.

¹⁵ Jean Bradley Anderson, *Durham County: A History of Durham County, North Carolina* (Durham: Duke University Press, 1990), 453-8; *Eno* (Newsletter of the Association for the Preservation of the Eno River Valley), undated, box

Among this group was Margaret Nygard and her husband, Dr. Holger Nygard, who assumed early leadership positions in the ERA. Margaret emerged as a forceful proponent of a proposal to establish a state park along the Eno River. After early struggles to garner support and learn the political machinations that accompanied such an effort, she became an effective promoter of the individual state park who provided a broader vision of the conservation of public lands for recreational, cultural, and historic purposes amidst rapid population growth and commercial development. The Nygards epitomized the element of “outsiders” that were a key component of the demographic changes occurring in the Raleigh metropolitan area during the 1960s and 1970s.

Margaret Nygard was born in 1925 in Nasik, India, the daughter of a British civil servant, and resided in England and Canada before moving to the United States. She studied English and literature and received a doctorate from the University of California at Berkeley where she met her husband, Holger. Holger Nygard was born in a village in the Swedish part of Finland in 1921, but spent much of his youth in Canada, where his family operated a boarding house. Holger and Margaret were wed in 1944, and he received his doctorate from the University of California at Berkeley eleven years later. After stints at the University of Kansas and the University of Tennessee, Holger Nygard gained employment at Duke University in the early 1960s, and the couple relocated to Durham.

In 1963, they and their four children moved into a 150-year old farmhouse once owned by a local miller named Cole, which Holger christened Yggdrasil after the “tree of life” from

4, folder 106, Margaret Nygard Papers, 1965-2004, #5232, Southern Historical Collection, Louis Round Wilson Special Collections Library, University of North Carolina at Chapel Hill (hereafter cited as Nygard Papers).

Norse mythology. Yggdrasil served as the base of operations for the early years of the ERA and the effort to organize Eno River State Park (ESP). Initially, the efforts of the Nygards and the ERA were viewed by City of Durham officials and other opponents as misguided. The ERA also undermined itself by virtue of the inexperience of its members in political processes. Eventually, Margaret Nygard and the ERA learned to navigate local politics and organized a sophisticated educational campaign that highlighted natural and historic assets of the Eno River Valley, gaining the support of the local press in the process. The effort also benefitted from other factors, including increased awareness and activism associated with environmental issues in the late 1960s and early 1970s, the proximity to major universities, and a political climate in North Carolina that was both sympathetic to expanding an underwhelming state park system and adaptation to federal legislation, such as the establishment of the Environmental Protection Agency. By the end of the 1980s, Margaret Nygard was hailed as a pragmatic visionary who laid the groundwork for a greenbelt of federal and local reserves that stretched nearly forty miles around the Raleigh metropolitan area.¹⁶

The success of the Eno River State Park effort profited from the timing of a proposed reservoir. As noted earlier, the 1960s was a decade of growing ecological awareness, particularly regarding pollution issues and grassroots activism, that expanded environmentalism beyond overt concern with wilderness preservation. Despite this, the wilderness sentiment remained a forceful component of popular environmentalism. In

¹⁶Anderson, 455-56; "A Woman Who Guards Wilderness: Margaret Nygard is the Guiding Force in Preserving North Carolina's Eno River Valley," *The Christian Science Monitor*, March 7, 1989, accessed February 3, 2016, <http://www.csmonitor.com/1989/0307/dgard.html>; Elizabeth Shestack, "Life Stories: Holger Nygard, A Protector of Ancient Lore and the Eno," *Raleigh News and Observer*, June 28, 2015, accessed February 5, 2016, <http://www.newsobserver.com/news/local/counties/durham-county/article25709464.html>.

advocating for an Eno River State Park, the ERA appealed to both romanticized views of wilderness associated with pre-World War II preservation and “newer” concerns in its organizational aims. Correspondence from area residents to the ERA often illustrated a similar “classic” preservationist attitude wrapped around concerns over pollution and development. The ERA also tapped into the growing historic preservation movement contextualized by passage of the National Historic Preservation Act of 1966.

The confluence of wilderness preservation, historic preservation, and ecological concerns was embodied in Article Two of the Eno River Association Constitution, “The Aims”, which stated:

The Eno as a free-flowing stream is a unique natural asset and magnificent scenic resource in the Research Triangle region. It is remarkable for its flora and fauna, its historical riches, its value as an area for scientific research, its scenery and its proximity to a large urban population. The Association wishes to maintain the Eno and its environs as a wild and scenic river valley in a growing urban area. It recognizes that at this time there is a fortunate and extraordinary opportunity to preserve the Eno for future generations in its ecological, aesthetic and natural dimensions. The Association believes that any alteration of the river valley should be toward the perpetuation of its unique wilderness condition and the public enjoyment of it. The Association’s largest concern covers the entire length and watershed of the Eno River, since this is an ecological unit. The Association will work in co-operation with other local, state, and national conservation groups to preserve the environment.”¹⁷

While the statement of aims repeatedly touches upon the notion of the Eno River valley as a “wild and scenic” river valley it is also apparent the group does not adhere to a strict view of “pristine” wilderness. The river valley is praised as scenic but also valued for its history,

¹⁷ Copy of the Eno River Association Constitution, box 4, folder 107, Nygard Papers.

potential for scientific research, and as a recreational outlet for a growing urban area. The ERA articulates a desire to maintain the river valley for utilization.

Although, the statement of aims contains an aspect of boosterism with its trumpeting of attractive features regarding the Eno River, it also reflects the layered perspectives of various supporters of the ERA. The ERA urged those opposed to the City of Durham reservoir plan to write the Research Triangle Planning Commission (RTPC), which invited suggestions from area residents for planning in the region. This correspondence often possessed a sense of the Eno River as a wilderness, first and foremost, that provided refuge from the hustle and bustle of the rapidly urbanizing Research Triangle while also revealing support for “saving” the Eno River that extended beyond the RT itself.

For example, a letter to the RTPC from a resident of Mount Airy – a small town roughly 135 miles northwest of Raleigh, best known as the hometown of Andy Griffith and model for the Town of Mayberry from the popular television program, *The Andy Griffith Show* – noted the beauty of the Eno River valley from an historic perspective. The writer of the letter, Alma M. Sparger, noted her brother had purchased land overlooking the river many years before specifically for aesthetic reasons. The farmland itself lacked utilitarian value due to rockiness, but the “beauty of the river, and the breeze in the summer compensated for everything else.” Alma Sparger also extended an argument steeped in private property concerns and sentimentally based preservation, observing that her family had been forced to sell much of the land before the Nygards purchased the remaining acreage. To lose this land to a reservoir,

according to Ms. Sparger, threatened an unfortunate loss of money for the Nygards and destruction of a piece of her personal heritage.¹⁸

Another letter lent support from a nonresident of the RT who had visited the area from Chicago. A professor of English at Chicago State College, James Friend, who “explored” the area around the Eno River while attending a symposium at Duke University, expounded on the “Eno wilderness [as a] refuge from the hustle and bustle of city life I have been accustomed to for so many years. In our age of mechanical and systematic movements the feeling of freedom which the wilderness instilled in me was an original and wonderful thing.”¹⁹ The idea and image of wilderness, and the importance of the Eno River as a vestige of this, was strong enough for some to even overcome concerns over the atomic bomb. One resident, Mrs. R.F. Roberts, wrote Margaret Nygard in 1969 regarding how the loss of wilderness compared to the threat of annihilation by atomic weapons. To Mrs. Roberts, the atomic bomb was much less frightening than a feared future world of “concrete and steel where trees no longer dot the landscape, birds are a rarity, wild flowers unknown, and wild animals extinct.”²⁰

The issue of pollution drew other supporters to efforts to establish protections for the Eno River. In September of 1972, a resident of Hillsborough, Carl W. Ramsey, wrote the North Carolina State Board of Water and Air Resources complaining of dead fish coupled with the presence of dark blue discoloration and a strong “sewage” odor discernible from over two hundred feet away along a stretch of the Eno River on his property. The property owner blamed a mining company that had recently begun open air operations near the river while he

¹⁸ Alma M. Sparger to James Rathburn, February 22, 1968, box 2, folder 43, Nygard Papers.

¹⁹ James Friend to Research Triangle Planning Commission, May 1, 1968, box 2, folder 43 Nygard Papers.

²⁰ Mrs. R.F. Roberts to Margaret Nygard, May 7, 1969, box 1, folder 22, Nygard Papers.

questioned the efficacy of testing done by the Wildlife Service on the river. According to Mr. Ramsey, the Wildlife Service conducted tests at a “considerable distance” above and below the spot where he noticed the discoloration which, in his view, cast serious doubt on official proclamations that the water in the Eno River was not being polluted.²¹

Carl Ramsey’s fish kill report was not unprecedented. In the early 1960s, the Nygard family was forced to briefly leave their riverside home due to odors emanating from rotting fish carcasses produced by a truck accident that had spilled chemicals into the river, an event recalled by one of the children as instigating activism by her parents.²² A letter from Margaret Nygard to the North Carolina Water and Air Resources Board in October, 1972 (shortly after Carl Ramsey’s letter) noted complaints of fish kills on the Eno River dating back at least two years. Nygard pointed to the insufficiency of Hillsborough’s water treatment plant combined with expanded industrial activity in the area as the culprits.²³

While this correspondence revealed a history of fish kills on the Eno River and the influence of these kills on local concerns for the river, it also showed the growing activism of Margaret Nygard beyond preserving private property. The issues with the Town of Hillsborough and water treatment also involved the interaction of federal legislation with local conditions. One aspect of this was reorganization and expansion of state-level legal actions regarding pollution in anticipation of pending federal legislation. In North Carolina, the Water and Air Resources Act of 1967 – coming just a few years before federal actions such as the

²¹ Carl W. Ramsey to James C. Wallace, North Carolina State Board of Water and Air Resources, September 4, 1972, box 2, folder 40, Nygard Papers.

²² Stetsack, “Life Stories: Holger Nygard.”

²³ Margaret Nygard to Darwin Coburn, Chief of Division of Water Quality, North Carolina Board of Water and Air Resources, October 3, 1972, box 2, folder 40, Nygard Papers.

establishment of the Environmental Protection Agency (EPA) in 1970 or passage of the Clean Water Act in 1972 – expanded upon the State Stream Sanitation Act of 1951, which provided a legal basis for later water pollution control programs and established classifications and standards for the state’s surface waters. The 1967 legislation expanded the responsibilities and duties of the existing Department and Board of Water Resources, renaming it the Department of Water and Air Resources. The new department extended programs aimed at water and air pollution.²⁴ In 1974, the EPA began consulting on the installation of a new water treatment plant in Hillsborough and its conformity to EPA guidelines on erosion and sediment control.

The Hillsborough water treatment plant also involved Section 106 of the National Historic Preservation Act of 1966, which mandated review of potential consequences of federal undertakings on historic properties. A Section 106 review was triggered by plans for the new treatment plant as it lay in the Hillsborough National Register Historic District. While the plant itself was not deemed problematic, the proposed sewer line was plotted along the Eno River with the potential for undermining the visual value of the river to the town. The presence of archaeological resources indicating residence along that stretch of the Eno River dating back to 6000 B.C.E., combined with the visual component of the historic district, led to mitigation actions. These included requiring the sewer line contractor to exercise great care in salvaging unearthed archaeological material and the utilization of EPA-approved erosion controls, such as cutting narrower swaths through trees.²⁵

²⁴ North Carolina Department of Environmental Quality, “A History of the N.C. Department of Environmental Quality”, accessed March 3, 2017, <http://deq.nc.gov/about/history-of-deq>.

²⁵ Thornton Mitchell to Harold B. Duhart, Project Manager, North Carolina State Section, Environmental Protection Agency, August 28, 1974, box 2, folder 41, Nygard Papers.

Margaret Nygard and the ERA contributed significantly to another Eno River related project that reflected a blend of historic preservation with a sense of wilderness protection, the reconstruction of an historic mill and establishment of a 360-acre park at West Point on the Eno, operated as a City of Durham public park. Ironically, the park was initially a counterproposal by Durham Mayor Wense Grabarek to the ERA call for establishment of a state park. The area became the center of further controversy in 1969 when a private company, Ervin Industries, announced plans for a several hundred-acre development including housing, shopping centers, and office space, all near the Eno River. This was also the site of an historic grist mill that had operated continuously from the 1770s to the early 1940s.

The ERA halted the development plans by pointing out Ervin Industries' use of federal funds for the project and calling for an Environmental Impact Statement. In the ensuing back and forth, Ervin Industries agreed to sell part of its tract in 1978, which was combined with other land owned by the City of Durham to form the West Point on the Eno, which opened as a park replete with an operational grist mill. The historic mill, which collapsed in 1973 but retained an intact foundation, was reconstructed using photographs of the mill before its decline and salvaged parts from grist mills in the surrounding region.²⁶ The park benefitted from the combined efforts of private and public involvement, including the establishment of Friends of the West Point, Inc. by the City of Durham and groups such as the Kiwanis Club. These collaborations included a striking turn of events for developer I. Harding Hughes, who designed the reservoir dam that instigated the ERA protest. While he lost the opportunity to

²⁶ Anderson, *Durham County*, 457; Jean Anderson and Margaret Nygard, "The Story of West Point on the Eno", *ENO Journal* 3, no. 1, (1975), accessed March 13, 2016, <http://www.enoriver.org/store/journals/story/>. Today, West Point on the Eno encompasses 404 acres and includes three historic buildings.

build that particular dam, Hughes was tapped to build at West Point on the Eno a millpond and water diversion system for the reconstructed mill.²⁷

A pamphlet produced for the opening of West Point on the Eno reflected the “historic wilderness” concept the ERA applied to the Eno River proposal. The pamphlet celebrated the restoration of the historic mill and noted its location among “40 acres of rolling hills at the northern edge of the present City of Durham...adjoined by more than 360 acres of natural city wilderness parkland.” The entry further observed that visitors to West Point on the Eno could enjoy “many...recreational pleasures in an historical or wilderness setting.”²⁸ For her part, Margaret Nygard seemed initially less inclined to view the area as a wilderness than did the City of Durham, at one point advising an acquaintance not to be “fooled” by the City of Durham’s “idle” use of the term wilderness in reference to the tract.²⁹ She was, however, adamant that the development of proposals such as river crossings and walkways should adapt to river contours and utilize old road beds along the banks to reflect a “natural” effect and preserve areas associated with a 1750s-era land grant that encompassed the historic community of West Point.³⁰

The increasing activism of Margaret Nygard on behalf of projects such as the Eno River State Park and West Point on the Eno benefitted also from the presence of three major research universities in the immediate area – Duke University, North Carolina State University, and the University of North Carolina at Chapel Hill – and academic contacts outside the region.

²⁷ Anderson, *Durham County*, 458.

²⁸ Friends of West Point, Inc., “West Point on the Eno”, box 1, folder 3, Nygard Papers.

²⁹ Margaret Nygard to Dr. Frederick Bernheim, (undated), box 2, folder 43, Nygard Papers.

³⁰ Friends of West Point, Inc., “West Point on the Eno”, box 1, folder 3, Nygard Papers.

Her husband's position at Duke University provided the ERA with the direct support of several professors and access to such technical advice as assessments of geologic or botanic assets of the Eno River. Meanwhile, student organizations, particularly the Environmentally Conscious Organization of Students (ECOS) at Duke University, supported the ERA in terms of time volunteered and publicity. Conversely, this association of the Eno River and other local waterways with the Research Triangle's major universities produced critiques and accusations of "ivory tower" academics impeding economic growth.

Both Nygards were academics who relocated to the RT for employment. Holger Nygard gained a full professorship at Duke University in 1963, where he remained until his retirement in 1989, a run that included a thirteen-year stint as the Director of English Graduate Studies. Margaret also taught English and worked at Durham Technical Community College when the City of Durham announced its plans to dam the Eno River. The academic connection was not limited to the Nygards but extended also to associates at various institutions, several of whom were also connected by ownership of property threatened by the planned reservoir.

Abundant academic connections, particularly in the early years of the ERA, were evident in Margaret Nygard's description of an organized hike along the Eno River in the late 1960s, which was a common tactic of the ERA to garner publicity and support. Nygard noted a particular hike that attracted better than 450 people, including a large contingent from the Urban Planning Department at the University of North Carolina, as well as "doctors, professors, preachers, students, scout leaders, garden club members, conservationists, botanists,

archivists, and *a lot of plain ordinary folk*” (emphasis added).³¹ Nygard was likely attempting to reflect a broad appeal amongst various social groups, but her list demonstrated that the early ERA attracted heavy support from professionals and academics.

A prominent Duke University supporter of the ERA was Dr. Frederick Bernheim, one of the original faculty members of the Duke University Hospital and School of Medicine. Dr. Bernheim taught pharmacology at the school from 1930 until the mid-1970s, and his research into the living chemistry of tuberculosis contributed to the development of drugs to combat the disease.³² Bernheim’s initial involvement with the ERA stemmed from his ownership of property threatened by the City of Durham’s reservoir plans and a desire to preserve the Eno River Valley as a gesture of civic improvement. Further, he served as an early president of the ERA and composed letters recruiting other faculty members and local representatives to support the proposed Eno River State Park.³³ When the ERA gained support of the Nature Conservancy’s State Parks Committee to begin land acquisition in 1972, Dr. Bernheim donated the first ninety acres. Margaret Nygard regarded this as pivotal by providing a physical presence that made the Eno River State Park concept “more than words – it made it real.”³⁴

Duke alumni and contacts at other universities also played a role. For example, Margaret Nygard enlisted Harry Pearson, a journalist and Duke University graduate, for advice concerning publicity for the Eno River. Pearson had gained notoriety as an instrumental force in

³¹ Margaret Nygard, “The Hike Along the Eno River”, newspaper clipping (unnamed newspaper), March 24, 1969, box 3, folder 92, Nygard Papers.

³² Frank Ryan, *Tuberculosis: The Greatest Story Never Told – The Search for the Cure and the New Global Threat* (London (U.K.): Swift Publishers, Ltd., 1992), 128-30.

³³ Dr. Frederick Bernheim to Dr. Roger F. Anderson, February 15, 1968, box 2, folder 43, Nygard Papers; Margaret Nygard to Frederick Bernheim (undated), box 2, folder 43, Nygard Papers.

³⁴ “The First North Carolina Land Trust is Born”, Eno River Association, accessed March 22, 2016, <http://www.enoriver.org/who-we-are/history-of-the-era/>.

the campaign to designate the Buffalo River in Arkansas a national river in 1972, the first such designation in the United State. Nygard was advised to do this by a member of the Duke University English Department faculty, Lou Budd.³⁵ Faculty from other institutions, such as the University of North Carolina-Charlotte and North Carolina State University, lent their arguments to state and local officials concerning the desirability of an Eno River State Park.

Russell Hope Dobbins, who worked as a visiting professor at UNC-Charlotte in the late 1950s, wrote City of Durham Mayor Wense Grabarek shortly after the onset of the Eno River controversy. While Dobbins articulated common sentiments about the beauty and grandeur of the Eno River valley, he also made a pointed reference to the value of the Eno River as a “pull factor” for nonnatives. Dobbins argued that halting the reservoir plans would “be maintaining the beauty of the area, not just for the residents, but for the academic and professional people who are looking for a nice place to come and live.”³⁶ Another proponent of the Eno River park concept with an academic background was Fred L. Beyer, Jr., the Earth Science Program developer for the North Carolina Department of Public Instruction. In 1971, Beyer wrote then Superintendent of North Carolina State Parks Director Thomas C. Ellis that the locale of the Eno River made it easily accessible for students and ideal for individualized and group study, thus establishing the proposed park as an educational asset for North Carolina and the Research Triangle.³⁷

The support of professors from various institutions of higher learning was augmented by student groups, particularly the Environmentally Conscious Organization of Students (ECOS),

³⁵ Margaret Nygard to Harry Pearson (undated), box 3, folder 91, Nygard Papers.

³⁶ Russell Hope Robbins to Wense Grabarek, February 11, 1967, box 1, folder 22, Nygard Papers.

³⁷ Fred L. Beyer, Jr. to Thomas C. Ellis, January 4, 1971, box 1, folder 22, Nygard Papers.

also known as the Environmental Alliance. Formed in 1969 at Duke University, within three years ECOS established chapters in Chapel Hill, Raleigh, and Rocky Mount. ECOS epitomized the interaction of student protest and environmentalism that emerged in the 1960s. Various historians have linked New Left university campus groups with the growth of environmentalism by noting increased protests focusing on the role of industry in environmental hazards such as forest defoliation in the Vietnam War and public outcry concerning the massive 1969 Santa Barbara oil spill off the coast of southern California. The initial Earth Day activities of 1970 often represent the apex of student activity in these historical narratives, followed by both the rapid decline of the New Left and increased federal actions throughout the 1970s.³⁸

The rhetoric in ECOS's institutional documents and newsletters reflects the pollution concerns and societal critiques associated with student protest of the period. The preamble to the group's constitution and bylaws explicitly noted an "inextricable connection" between population growth – another environmental concern highlighted by Paul Ehrlich's 1968 book *The Population Bomb* – and environmental decline. This viewpoint was reiterated the following year when ECOS drew up articles of incorporation and articulated an avowed purpose of educating the public on these issues via seminars and research programs. ECOS stated it would seek "alternative" – but legal – means to undermine the existing industrial order and provide a more ecologically sensitive and stable society for the future.³⁹ Meanwhile, the group's newsletter largely consisted of a collection of articles gleaned from other sources tied to

³⁸ Rome, "Give Earth a Chance", 543-6; Kline, *First Along the River*, 87-100; Gottlieb, *Forcing the Spring*, 134-40.

³⁹ Environmentally Conscious Organization of Students (ECOS), Constitution and Bylaws and Articles of Incorporation, box 1, folder "Articles of Incorporation: 1970," David M. Rubenstein Rare Book and Manuscript Library, Duke University, ECOS Records, 1969-2001 (hereafter cited as ECOS Records).

contemporary ecological issues, such as transcripts of Congressional hearings criticizing plans for nuclear energy or bibliographic lists of suggested reading material on ecological matters. Occasionally, the newsletter included write-ups on localized issues, particularly on the controversy surrounding plans for the New Hope Dam and Reservoir (later known as the B. Jordan Everett Dam and Reservoir).⁴⁰

Much of this rhetoric – as well as publicity minded actions such as organizing teach-ins as part of the 1970 Earth Day activities or promoting charitable bicycle relays – fit the characterization of many contemporary student actions regarding ecological awareness. It included a focus on publicity, education, and activism rather than a policy oriented approach. On the other hand, ECOS was not as far removed from “old guard” perspectives, such as wilderness, or national organizations, such as the Sierra Club, as some historians have alluded to when discussing activism of student and “alternative” groups, such as Students for a Democratic Society or Greenpeace. ECOS actually reflected a blend of older and newer concerns.⁴¹

ECOS incorporated this hybrid approach in both their institutional framework and their activism. Article I of the ECOS bylaws describes the group’s purported function and policies as an “appreciation of scenic, historic, open space, wilderness, outdoor and urban recreation resources, and...protection of total environmental quality, through a program of coordinated action and education.”⁴² Early in its existence, ECOS focused on issues related to the Duke

⁴⁰ ECOS, “Environmental Bulletin”, box 1, folder “Printed Matter, Newsletter, c. 1970”, ECOS Records.

⁴¹ See Kline, 96-103 or Gottlieb, 140-8 for discussions on aspects of distrust between older conservation groups, such as the Wilderness Society, Sierra Club, or the Izaak Walton League and the activism of the 1960s.

⁴² ECOS, Constitution and Bylaws, box 1, folder “Constitution and Bylaws”, ECOS Records.

University campus, such as counteracting pollution from campus service vehicles, and outreach activities such as educating “Durham housewives” on the problem of water pollution.⁴³ ECOS also reached out to the Sierra Club via correspondence to the national office announcing the group’s formation and support for wilderness preservation as a means to protect areas of North Carolina from “desecration by an industrialist-progressive segment of citizens who feel a great compulsion to improve the financial wealth of the state and area at the cost of conservation ecology.”⁴⁴ Conversely, the Joseph LeConte Chapter of the Sierra Club, pledged support for ECOS when it became involved in protest against the New Hope Reservoir project.⁴⁵

ECOS formed a working relationship with the Eno River Association to support the establishment of Eno River State Park and protest projects such as the New Hope Reservoir and proposed commercial developments in the area. For example, ECOS organized an “Eno Action Committee of ECOS” to provide time, energy, and expertise in publicity. Among these efforts was the utilization of funds from one of the annual bicycle charities to support the ERA, and production of a book, The Eno River Controversy, highlighting the acquisition of land by a private company, Ervin Industries, that was originally approved by the City of Durham as park land for the Eno River park.⁴⁶ The two groups also came together on issues beyond the Eno River State Park and New Hope Reservoir, including protest against proposals to build an expressway between Durham and Chapel Hill and develop amusement park-style amenities at

⁴³ Jeanette Lucas to Martha Wayda, undated, box 1, folder “Correspondence”, ECOS Records; Charles B. Huestis to Roy Young, February 24, 1970, box 1, folder “Correspondence”, ECOS Records.

⁴⁴ Jeanette Lucas to Richard Leonard, Sierra Club Foundation President, July 1, 1970, folder “Correspondence”, ECOS Records.

⁴⁵ Sierra Club, Joseph LeConte Chapter (South Carolina) to Roger Wells, October 13, 1970, box 1, folder “New Hope Dam”, ECOS Records.

⁴⁶ Minutes of the Council of the Whole (Durham, February, 1971), box 1, folder “Eno River Park, 1970-71”, ECOS Records.

Umstead State Park in Raleigh .⁴⁷ These interactions between ECOS, the Sierra Club, and Eno River Association reflect a more cooperative relationship between 1960s-era student activism and “classic” conservation issues than some historians suggest existed.

While the cooperation of universities and grassroots activism illustrated by the relationship between ECOS, Margaret Nygard, the ERA, and professors in support of an Eno River park, and other conservationist policies was often positive, it had certain drawbacks. The most pointed criticism from residents of the area related to efforts to halt highway construction or expansion of industry deemed threatening to the Eno River. For these critics, such efforts amounted to elitist perspectives that threatened economic growth in the area. A letter to the editor of a local newspaper by a construction worker denouncing groups such as ECOS and ERA reflected this view. The letter noted his “dismay” at the objections to a proposed highway project, and what he saw as a disturbing expansion of “ecological groups” across the nation who aimed to “stop progress.” In his view, the protests around the RT were the work of “outside agitators” who were “pushy and aggressive” with quick criticisms but no solutions.⁴⁸

Objections by conservation groups and local universities to the siting of industrial factories in the area drew mixed reactions from local news outlets. When a corporation involved with waste disposal research, Fiber Industries, proposed a plant in the RT and purchased property in the area in 1966, the move was initially publicly supported by the University of North Carolina. By 1969, the university – bolstered by groups such as ERA – articulated concerns about potential environmental degradation as part of growing calls to halt

⁴⁷ Environmentally Conscious Organization of Students, “East-West Expressway”, box 2, folder 49, Nygard Papers.

⁴⁸ R. Dillard Teer, Letter to the Editor (clipping from unknown newspaper), box 2, folder 49, Nygard Papers.

construction. The increasingly heated debate over construction led one local publication to chastise both sides for vague rhetoric while expressly warning conservationists that “the liberals had better begin learning to talk to the people; the combination of highly rational arguments and personal arrogance will never win against a well-organized case by business.”⁴⁹ Despite this admonition, the company canceled the planned development shortly thereafter, adding to a similar pullout by Texas Gulf Sulphur two years earlier. The *Durham Morning Herald* commented somewhat positively, “Fortunately, we are becoming more environment-conscious,” but also counterbalanced this with the observation that not all development can be blocked, which heightened the importance of land use planning.⁵⁰ Another criticism that surfaced during this debate surrounded calls by Duke University and the University of North Carolina to enact strict water quality laws to protect creeks in the area, especially the New Hope Creek, because they were critical to research. This position was rebuked by some as an unnecessary hindrance to development that bore the appearance of “an effort by a bunch of professors to build themselves a laboratory at someone else’s expense.”⁵¹

Despite early criticisms of “liberal” obstructionism, the support for an Eno River State Park reaped the benefits of both the committed efforts of groups such as the ERA and ECOS, and fortuitous timing. The late 1960s were a period of increased environmental awareness and 1970 witnessed both the nationally observed Earth Day and, on the state level, the proclamation of the “Year of the Environment” by North Carolina Governor Robert W. Scott.

⁴⁹ “Boon to Economy – Threat to Environment? Fiber Industries Brabble”, *The North Carolina Anvil*, July, 19, 1969.

⁵⁰ “Plant Drops Site in Orange”, *Raleigh News and Observer*, August 5, 1969; “New Phase in Development War”, *Durham Morning Herald*, August 8, 1969.

⁵¹ “The Complicated Search for a ‘Research Label’”, *The Charlotte Observer*, September 3, 1969; “Duke and UNC Seeking New Status for Stream”, *The Durham Sun*, August 11, 1969.

While pollution and broad concepts of “ecology” were central to these efforts, they also raised awareness of citizens to efforts to “save” the Eno River. For Margaret Nygard, the campaign to preserve the river valley brought “enthusiasm to our community, rather than division, in the form of hiking, music, wildflowers, and a sense of history.”⁵² While this sentiment reflected a romanticized notion for the success of the Eno River, particularly the sense that it provided a point of unity in a turbulent period of American social history, the project also profited from other actions and findings.

Among these revelations was the availability of another reservoir location located near the Eno River when the Nello Teer Company announced its quarry would be mined out by the year 2000 and utilized as a larger reservoir by the City of Durham that would cost less than the originally proposed Eno River project. While this provided an alternative reservoir locale, it did not change the fact that the City of Durham had already acquired land for the project at considerable tax payer cost. This situation was mitigated when the State of North Carolina offered to purchase the land, which allowed the City of Durham to simultaneously recoup the money and appear magnanimous.⁵³ This action by North Carolina was itself contextualized by the condition of the state parks system at a time when urban recreational opportunities were a focus of North Carolina and national agendas.

On the national level, the push for establishment of national parks nearer to population centers became a focus of the National Park Service during the directorship of George Hartzog, who headed the bureau from 1964 to 1972. Although “urban” federal parks existed prior to

⁵² Margaret Nygard to Arthur Godfrey, November 12, 1969, box 1, folder 22, Nygard Papers.

⁵³ Anderson, *Durham County*, 455-6.

this, such as historic units in Washington, D.C., Hartzog oversaw the first concentrated effort to develop national parks easily accessible to city dwellers. Supporters of this development program envisioned urban “green spaces” as crucial to counteract perceived social issues of the 1960s and 1970s, although critics argued that such entities diluted national park standards. Despite the condemnation of urban national parks by some, the NPS added more than seventy new units during Hartzog’s tenure and witnessed the doubling of attendance at national parks and historic areas, highlighted by the simultaneous establishment of Golden Gate National Recreation Area (San Francisco) and Gateway National Recreation Area (New York City) in 1972.⁵⁴

These developments on the national level dovetailed with efforts in North Carolina to address what was increasingly perceived, by the end of the 1960s, as a substandard state parks system, particularly given demographic changes underway in the state and Research Triangle. Following World War II, North Carolina experienced relatively rapid population growth consistent with the so-called Sunbelt Phenomenon, usually defined as the lower third of the United States from California to Texas to Florida, including parts of states such as North Carolina. The economic and demographic changes for the geographic area are often viewed as a combination of the growth of industries such as oil, military defense contracting, and retirement communities. Further, amenities such as low taxes, affordable housing, a temperate

⁵⁴ Sarah J. Morath, “A Park for Everyone: The National Park Service in Urban America”, *Natural Resources Journal*, Vol., 56 (Winter 2016), 1-21, accessed April 20, 2016, http://lawschool.unm.edu/nrj/volumes/56/1/NRJ_56_1_Morath.pdf; Alfred J. Runte, *National Parks: The American Experience*, 2nd ed., Rev (Lincoln: University of Nebraska Press, 1987), 224-9.

climate, and business friendly state and local legislatures influenced a sizeable migration out of the Northeast and Midwest into the South and Southwest.

In 1974, the General Assembly approved an initial appropriation of more than \$13 million, followed by smaller outlays over the next six years, that doubled the system by adding eight state parks and six state recreation areas. This represented a major step for a system that received no money from the General Assembly between 1916 and 1969, instead relying exclusively on federal expenditures and private donations. This contributed to the state ranking last in the United States in state park acreage per person at the close of the 1960s. The growth of the 1970s stalled when allocations from the federal Land and Water Conservation Fund (LWCF) dipped sharply at the end of the decade. The LWCF was established in 1964 by Congress, using invested earnings from offshore oil and gas leasing to provide financial support at the state and federal level. On the state level, the LWCF endows grants and matching funds for acquisition and development of outdoor recreation areas. The decline in LWCF appropriations led to decreased layouts approved by the General Assembly and an inability to institute recommendations put forth by a State Parks Study Commission completed in 1979.⁵⁵ The direct, negative consequence for North Carolina state parks resulting from the decrease in LWCF allotments evinced how irresolute the support of the General Assembly for state parks was in terms of financial commitment.

The Eno River Association astutely incorporated rhetoric in support of an Eno River State Park that specifically characterized the proposed unit as a potential salve for both the dearth of

⁵⁵ "A Way to 'Catch Up' in Parks", *Durham Morning Herald*, February 24, 1974; Ney C. Landrum, editor, *Histories of the Southeastern State Park Systems*, Association of Southeastern State Park Directors, 1992, 112-17.

recreation and the overall lack of state park units easily accessible to urban residents. In a letter to U.S. Congressman Nick Galifianakis of North Carolina, Margaret Nygard argued the “wilderness along the Eno River...could happily support a state park” while also meeting Secretary of the Interior Walter Hickel’s call for greater emphasis on urban national parks.⁵⁶ The *Durham Sun* noted in 1970 that the original, 10,000-acre proposal by the Nygards, conceived as linear park protecting some twenty miles of the Eno River, represented a “new concept in that North Carolina has no state parks which are “green belts” in urban areas”.⁵⁷

Nygard also wisely invoked population growth as a factor when seeking support for the Eno River proposal. In a letter to North Carolina State Representative Ron Taylor in November, 1970, Margaret Nygard observed that the North Carolina State Parks Commission was examining the feasibility of connecting the proposed Eno park to recreation lands attached to the New Hope Dam and Reservoir (later renamed the Jordan B. Everett Dam and Reservoir). In describing this action, Nygard noted the State Parks Commission sought to create a “green crescent [in an] area destined to be thickly populated by 2020 according to our regional planners.” This level of expected growth, according to Nygard, made preserving the Eno River a priority as its wild and historic character faced mounting demographic pressure in the near future.⁵⁸ The argument that protection of the Eno River was vital due to development pressures associated with rapid urbanization proved a powerful one. When formally announcing the

⁵⁶ Margaret Nygard to Nick Galifianakis (undated), box 1, folder 22, Nygard Papers.

⁵⁷ “A State ‘Green Belt’ Park on the Eno”, *Durham Sun*, May 4, 1970.

⁵⁸ Margaret Nygard to Ron Taylor, November 17, 1970, box 1, folder 22, Nygard Papers.

inception of the Eno River State Park in 1973, North Carolina Governor James Holshouser commented the park “will serve as a green buffer against continued urban sprawl.”⁵⁹

The establishment of the Eno River State Park presaged the development of several riverfront parks for recreation and conservation purposes in the Research Triangle, particularly for residents of Durham and Orange Counties. The successful drive to implement the park was buttressed by the creation of the first land trust partnership in North Carolina, when the Eno River Association formed an alliance with the Nature Conservancy in 1972. This established a model for similar ventures across the state. By the early 2000s, the Nature Conservancy counted nearly forty organizations across North Carolina as conservation partner, including the ERA, Triangle Land Conservancy, and Triangle Greenways Council in the RT itself.⁶⁰ Meanwhile, ERSP – itself named a Regional State Park of the Year for 2015 by the North Carolina Division of Parks and Recreation - became part of a conglomerate of parks in Orange and Durham Counties that includes West Point on the Eno City Park, Old Farm Park, Little River Regional Park, and Penny’s Bend.⁶¹

The success of the Eno River State Park in combining recreational opportunities, historic preservation, and conservation reflects its importance to the residents of the RT area of North Carolina, which has become the “thickly populated” crescent alluded to by Margaret Nygard in the early 1970s. The process of its establishment included many aspects of civic environmentalism discussed by Hal Rothman in relation to the Golden Gate National Recreation

⁵⁹ Margaret Nygard and Don Cox, “The State of the Eno”, box 4, folder 106, Nygard Papers.

⁶⁰ “Our Partners: North Carolina”, The Nature Conservancy, accessed May 1, 2016, <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/northcarolina/partners/index.htm>.

⁶¹ “The First North Carolina Land Trust is Born”, Eno River Association, accessed May 3, 2016, <http://www.enoriver.org/who-we-are/history-of-the-era/>.

Area, albeit on the state level. The centrality of politics and wide ranging partnerships among numerous public and private organizations to both GGNRA and ERSP broadly illustrates how the processes of conservation and recreation shifted markedly during the 1960s and 1970s. The context of the ERSP's establishment, including the efforts of Margret Nygard and students and faculty at the universities in the region – particularly the Environmentally Conscious Organization of Students at Duke University – also provide an example of the intersection of two powerful currents of change during the 1960s regarding environmentalism and conservation. These were the efforts of women and student protest. Lastly, noting how these efforts aligned with changes occurring in both the RT and the North Carolina state parks system itself at the close of the 1960s provides additional context and reflects how changes to environmentalism did not occur in a vacuum but were part and parcel of state and local politics.

CHAPTER IV

RESERVOIRS OF CHANGE: JORDAN LAKE AND FALLS LAKE STATE RECREATION AREAS

In the recently published monograph, *Southern Water, Southern Power*, Christopher Manganiello notes the “surprising” similarities between Western and Southern approaches to water utilization, including multi state “water wars” over access, construction of artificial energy structures and the relationship between water-rich, population poor hinterlands and urban cores that are heavily populated but water poor. These relationships have resulted in political battles between private corporations, public institutions and citizens over management of water and other natural resources in a way that provides equitable access and stimulates economic growth.¹ Manganiello discusses the Savannah River Valley of Georgia to explore the geographic, political, and cultural motivations for construction of dams and reservoirs in the U.S. South, particularly in the twentieth century. He also examines how decisions “informed by energy needs and water insecurity influenced physical and political landscapes.”² According to Manganiello, the South’s infatuation with dams and reservoirs, characterized by the presence of numerous mammoth structures creating artificial lakes stretching upwards of twenty miles,

¹ Christopher Manganiello, *Southern Water, Southern Power: How the Politics of Cheap Energy and Water Scarcity Shaped a Region* (Chapel Hill: University of North Carolina Press, 2015).

² *Ibid.*, 20.

was driven more by politics and short sighted economic planning than a sober assessment of resource issues, particularly in terms of water security.¹

Manganiello focuses primarily on what he terms the “water-energy nexus,” or the production of hydroelectric power and flood control, while touching upon related issues such as recreation and access to drinking water. In the Raleigh metropolitan area of North Carolina, construction of two large reservoirs in the 1960s and 1970s – Jordan Lake and Falls Lake – and their designation as units of the North Carolina state parks system provides an opportunity to expand upon the observations of Manganiello concerning the water-energy nexus and its consequences for local politics and land management, particularly in terms of conflating access to recreation with reliable water sources. Questions of water quality at Jordan Lake and Falls Lake are bound up in politics (local, state, and national), balancing economic and ecological concerns, and the role of the reservoirs as attractive recreational outlets.

In 2009, the North Carolina General Assembly enacted legislation, known as the Jordan Lake Rules, aimed at reducing levels of phosphorous and nitrogen in Jordan Lake, which provides drinking water for several communities in the Research Triangle (RT). The legislation sought to accomplish this by reducing runoff into the Haw River and other waters that feed Jordan Lake, a reservoir created by the B. Everett Jordan Dam, constructed by the U.S. Army Corps of Engineers in the 1970s. Two years later the General Assembly enacted legislation that

¹ Manganiello notes that over the past thirty years journalist Marc Reisner was one of the few to note these similarities. See Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water*, Rev. and Updated (New York: Penguin Books, 1993), 307-23. Other discussions of water and the West include Donald J. Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy, 1848-1902* (Albuquerque: University of New Mexico Press, 1992) and *Water and American Government: The Reclamation Bureau, National Water Policy, and the West, 1902-1935*, (Berkeley: University of California Press, 2002); Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1985).

sought to reduce nitrogen and phosphorous in nearby Falls Lake, the primary drinking supply for Raleigh (the state capital) and also an Army Corps of Engineers reservoir project completed in the early 1980s. The two reservoirs are also heavily utilized recreation areas as components of the North Carolina state parks system, known respectively as the Jordan Lake State Recreation Area and Falls Lake State Recreation Area.

Both sets of legislation raised strident protest from communities inside and outside the Research Triangle concerning the cost and responsibility of cleanup. The statutes required local governments to foot the cost of retrofitting their existing wastewater treatment facilities and improving storm water controls to meet the standards set in the Jordan Lake and Falls Lake legislation. The City of Greensboro, located roughly sixty miles upstream from Jordan Lake, almost immediately passed a resolution opposing the Jordan Lake Rules, arguing the proposed waste water management improvements would cost the city over \$75 million. The city also questioned the evidence that upstream communities contributed to pollution in the reservoir.² Other communities within the RT, such as the Counties of Durham, Iredell, Surry, and Yadkin, and the City of Durham, also protested the new rules. The City of Durham alone estimated a cost between \$330 million and \$600 million to its taxpayers (and over \$2 billion throughout the watershed) to retrofit developments.³ The County of Durham also argued that the Falls Lake legislation – still in the proposal stage at the time – unfairly placed an economic burden on the county by requiring it to follow stringent rules aimed at cleaning up a reservoir used exclusively

² Amanda Lehmert and Mark Binker, "The Inside Scoop: City Opposes New Jordan Lake Rules," *Greensboro News & Record*, January 12, 2009.

³ Jim Wise, "Others Oppose New Jordan Lake Rules," *Raleigh News & Observer*, February 7, 2009.

by the City of Raleigh.⁴ Conversely, supporters of the legislation, especially with regards to Falls Lake, accused counties and municipalities in the RT of pushing state lawmakers to weaken the legislation in exchange for greater cooperation in implementation.⁵

The fight over the legislative measures designed to reduce phosphorous and nitrogen in Jordan Lake and Falls Lake continues to intensify. In November, 2015 the Upper Neuse River Basin Association (UNRBA) – an entity comprised of fifteen municipalities in the northern Piedmont of North Carolina tasked by the 2011 legislation with assisting in the implementation of guidelines for Falls Lake – voted to support delays in the original deadlines for nutrient reduction. The 2011 legislation called for tiered reduction deadlines. A forty percent reduction in phosphorous and twenty percent reduction in nitrogen was to be achieved by 2021 and, following that, an additional 77 percent reduction in phosphorous and 40 percent reduction in nitrogen by 2036. The UNRBA hopes to have those dates pushed back to 2026 and 2041, respectively, in a state review slated to take place in 2017.⁶

Meanwhile, the Jordan Lake Rules, designed to reduce runoff, were suspended by the General Assembly in 2013, in favor of allowing an experimental project utilizing thirty-six solar powered, floating water mixers, known as SolarBees, to break up algae blooms in the reservoir. This project received criticism for failing to reduce nutrients in the reservoir and other issues, such as interference from the SolarBees when winter storms in late 2014 and early 2015 caused

⁴ Ray Gronberg, "County Asks State to Limit Falls Role," *Durham Herald-Sun*, August 4, 2009.

⁵ Dan Riechers, "Who's Responsible for the Falls Lake Mess?" *Indyweek* (Raleigh-Cary, Durham-Chapel Hill), May 4, 2011, accessed October 3, 2016, <http://www.indyweek.com/indyweek/whos-responsible-for-the-falls-lake-mess/Content?oid=2441223>.

⁶ Paul A. Specht, "Raleigh, Others Want Falls Lake Cleanup Deadlines Pushed Back," *Raleigh News & Observer*, November 27, 2015, accessed September 20, 2016, <http://www.newsobserver.com/news/local/counties/wake-county/raleigh-report-blog/article46778300.html>.

some of the 850-pound mixers to break loose from their anchors and float into open water. Such incidents have led to criticisms that the General Assembly is more concerned with appeasing real estate developers and other municipal officials than addressing pollution issues tied to the region's drinking water.⁷ One argument contends that the controversy over Jordan Lake and Falls Lake emanates from recent political shifts in North Carolina which placed the governorship and General Assembly under Republican control. Others point to outdated riparian rights laws in North Carolina that allow private individuals great latitude concerning use, even when it negatively impacts public water systems.⁸

While these arguments highlight factors in the current uproar over the cleanup of Jordan Lake and Falls Lake, if one traces these conflicts to the period of construction of these reservoirs from the 1960s into the early 1980s, it becomes apparent that factors such as recent politics and old laws are aspects of long running debates concerning water utilization in the Research Triangle. During that time municipalities sought not only sources of drinking water for a rapidly growing population but also sources of recreation and the availability of desirable property as "pull" factors to stimulate economic growth.

Examining the development of Jordan Lake and Falls Lake, and the ensuing debates over water quality, also highlights the interaction of dams and environmentalism in the U.S. South. The role of dams in the emergence of the American Environmental Movement, particularly in terms of

⁷ Editorial Board, "Stop Mixing, Start Fixing Jordan Lake," *Raleigh News & Observer*, November 28, 2015, accessed September 18, 2016, <http://www.newsobserver.com/opinion/editorials/article46986235.html>; Andrew Kenney, "SolarBees Go Rogue on Jordan Lake," *Raleigh News & Observer*, February 9, 2015, accessed September 20, 2016, <http://www.newsobserver.com/news/local/article10268564.html>.

⁸ Bruce Henderson, "Old Law Limits North Carolina Cities Seeking New Water Options," *The Charlotte Observer*, November 15, 2015, accessed September 20, 2016, <http://www.charlotteobserver.com/news/special-reports/water-and-drought/article44798814.html>. This article points out that North Carolina and Alabama are the only two Southeastern states who still utilize colonial-era riparian rights laws.

denouncement of their construction, often focuses on events in the U.S. West. The battle over the damming of Hetch Hetchy Valley in Yosemite National Park (California) in the early-twentieth century is often regarded as a seminal moment in an emergent environmental consciousness among some Americans. Opponents of the dam, associated with John Muir, articulated vigorous defenses for preserving the Hetch Hetch Valley against what they viewed as myopic natural resource development, albeit in a losing cause.⁹ Dams in the United States West also play a prominent role in the narrative of the forceful rise of environmentalism in the United States following World War II and how this movement latched upon quality of life issues - such as access to outdoor recreation – and wilderness preservation as its foci. Historians Hal Rothman and Roderick Nash have argued that controversies over projects such as Glen Canyon Dam (Arizona) and Echo Park Dam (Utah) in the 1950s and 1960s heavily influenced the direction of the burgeoning environmental movement in the United States.¹⁰

⁹ John W. Simpson, *Dam!: Water, Power, Politics and Preservation in Hetch Hetchy and Yosemite National Park* (New York: Pantheon Books, 2005); Robert W. Righter, *The Battle Over Hetch Hetchy: America's Most Controversial Dam and the Birth of Modern Environmentalism* (New York: Oxford University Press, 2006). Both works discuss the oft-overlooked component of public versus private power production associated with the damming of the valley and how the private Pacific Gas and Electric Company positioned itself to enjoy a virtual monopoly on provision of power to San Francisco.

¹⁰ Roderick Nash, *Wilderness and the American Mind*, Third Edition (New Haven: Yale University Press, 1982); Hal Rothman, *The Greening of a Nation? American Environmentalism in the United States Since 1945* (Fort Worth: Harcourt Brace College Publishers, 1998). See Jeff Crane, "Protesting Monuments to Progress: A Comparative Study of Protests against Four Dams, 1838-1955," *Oregon Historical Quarterly* 103, no. 3 (Fall, 2002), 294-319 for a discussion of protesting dams evolving from localized concern in the 1830s to growing involvement of state agencies and regional protests in the early 1900s to national concerns by the 1950s. While his analysis does include a dam in Maine it does not look at any dams in the U.S. South. Recently, some monographs have questioned the primacy placed on the Echo Park episode while calling for greater attention to the role of suburban sprawl and suburbanites in the growth of the twentieth century American environmental movement. See Adam Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York: Cambridge University Press, 2001); Christopher C. Sellers, *Crabgrass Crucible: Suburban Nature and the Rise of Environmentalism in Twentieth-Century America* (Chapel Hill: University of North Carolina Press, 2012).

A larger map is available at the park office.

FACILITY AVAILABLE	RECREATION AREAS											
	1A New Hope Overlook	2A Ebaneser	3A Foglar Point	4A Crowsouth Campground	5A Bellevue Creek	6A Sealorn	7A Parkers Creek	8A Vista Point	9A White Oak	10B Discards Marina	11C Farrington Point	12D Pier's Ridge
Boat Ramp	●	●	●	●	●	●	●	●	●	●	●	●
Boat Rentals												
Camping - Group												
Camping - Tent	●		●	●	●	●	●	●	●	●	●	●
Camping - RV												
Dump Station												
Fishing	●	●	●	●	●	●	●	●	●	●	●	●
Hot Showers												
Parking	●	●	●	●	●	●	●	●	●	●	●	●
Picnic	●	●	●	●	●	●	●	●	●	●	●	●
Public Telephone	●	●	●	●	●	●	●	●	●	●	●	●
Restrooms	●	●	●	●	●	●	●	●	●	●	●	●
Swimming	●	●	●	●	●	●	●	●	●	●	●	●
Trails	●	●	●	●	●	●	●	●	●	●	●	●

● For Campers Only
● 24-Hour Access
A Parks and Recreation Concessionaire
C NC Wildlife Resources Commission
D U.S. Army Corps of Engineers

LEGEND	
	Dam
	Hospital Emergency Dial 911
	Navigational Buoy
	NC Forest Resources
	Park Office
	Roads
	Reservoir
	New Hope Gamelands
	Parkland, Non-Gamelands
	Other Public Lands

JORDAN LAKE STATE RECREATION AREA

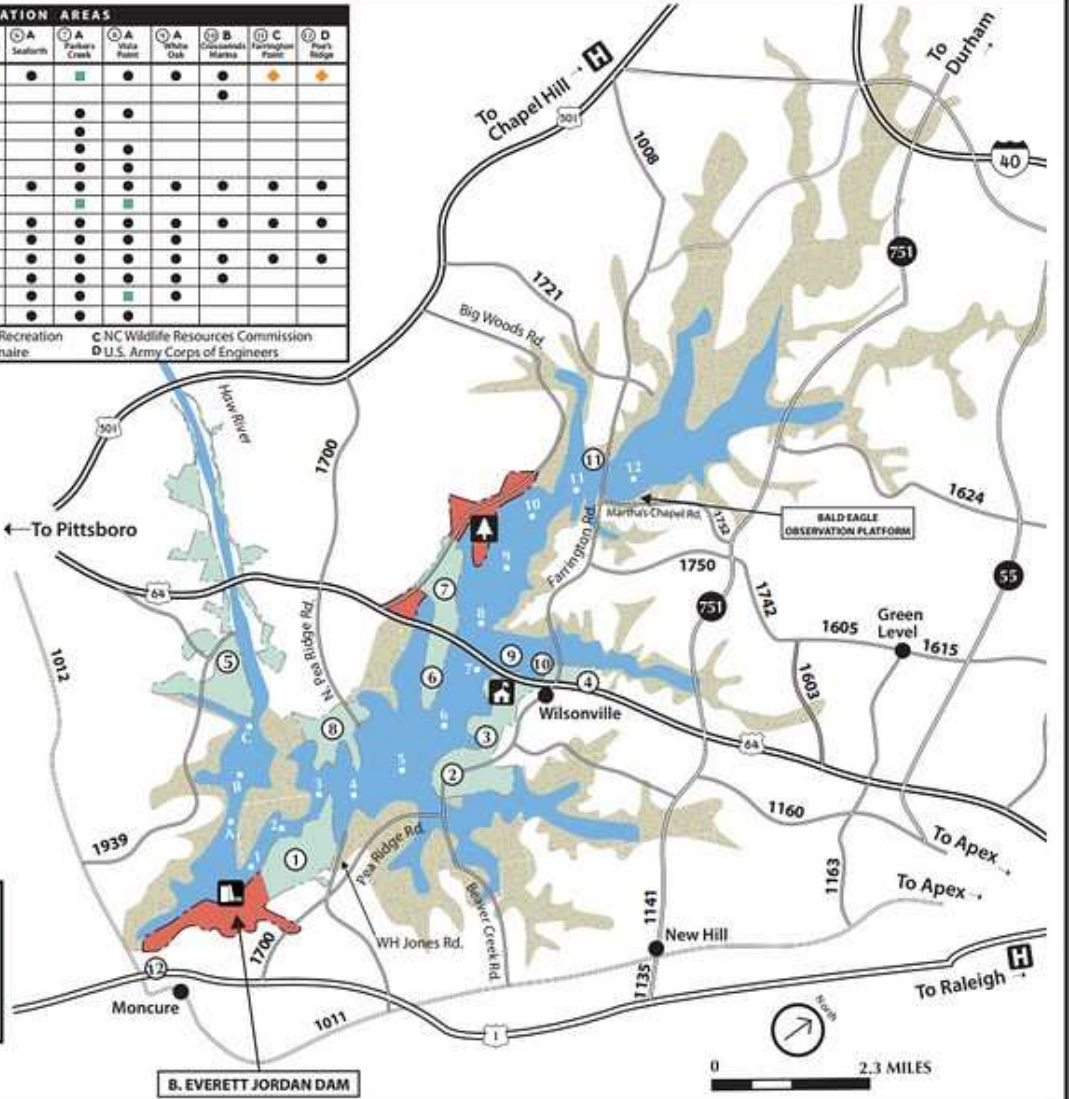
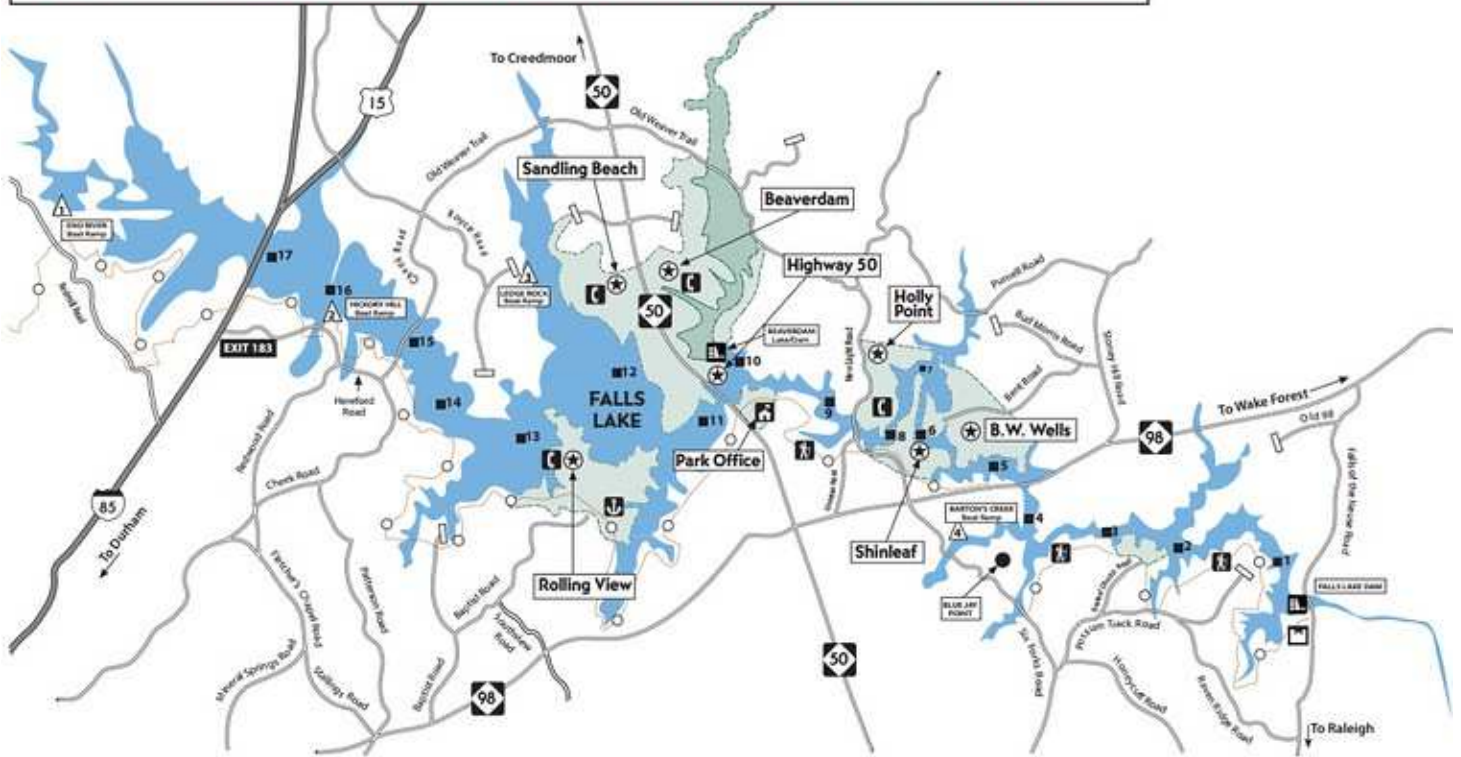


Figure 7. "Jordan Lake State Recreation Area Map" (digital map) North Carolina State Park Maps, accessed April 3, 2017, <http://www.dwhike.com/Maps-Vault/State-Park-System-Maps/North-Carolina-State-Park-Maps/>.

FALLS LAKE STATE RECREATION AREA



Recreation Areas	FACILITIES												
	Park Office	Public Telephone	Wildlife Boat Ramps	Fire Tower	Lodge Rack	Marina	U.S. Army Corps of Engineers Office	Wake County Park—Blue Jay Point	Emergency Dial 911	State Park Land	Recreation Area	Boundary	Beaverdam Lake (gas motors prohibited)
Park Office	*												
Beaverdam													
Rolling View													
Sandling Beach													
Highway 50 Boat Launch													
*B.W. Wells (gas motors prohibited)													
*Shinleaf (gas motors prohibited)													
*Holly Point (gas motors prohibited)													

LEGEND

- Beaverdam Lake (gas motors prohibited)
- Boundary
- Dam
- Falls Lake
- Marina
- Trail
- Mountains-to-Sea Trail
- Park Office
- Public Telephone
- Road
- Recreation Area
- State Park Land
- U.S. Army Corps of Engineers Office
- Wake County Park—Blue Jay Point
- Wildlife Boat Ramps (*Open 24 hours)
- Fire Tower
- Lodge Rack
- Hickory Hill
- Barberry Creek



Figure 8. "Falls Lake State Recreation Area Map" (digital map) North Carolina State Park Maps, accessed April 3, 2017, <http://www.dwhike.com/Maps-Vault/State-Park-System-Maps/North-Carolina-State-Park-Maps>.



Figure 9. "Map of Raleigh and Surrounding Areas" (digital map) Triangle Map, accessed April 3, 2017, <http://raleighhomesonline.com/triangle-map/>. This map shows the relation of "Falls Lake State Park" and "Jordan Lake" (as well as Umstead State Park) to Raleigh, although the map mislabels the actual status of Jordan and Falls Lake State Recreation Areas. Eno River State Park is not pictured but what would be to the north and northwest of Durham and linking into the Falls Lake area.

Before beginning this examination, it is important to understand the historic centrality of dams to the South in terms of economic development, water management, and federal intervention as a means of grasping the shift in priorities represented by the development of Jordan Lake and Falls Lake. Prior to the Civil War, dams in the U.S. South were often small, diversion structures built to supply power to individual grist mills and saw mills. These mills were prevalent in the Piedmont areas of the region and were an important component of the rural agricultural economy. Dams also provided a means to utilize the small, fast flowing streams typical of the Piedmont areas of the U.S. South. Following the Civil War, the region embarked upon a mission of industrial development referred to as the New South, punctuated by efforts to produce hydroelectric power, often underwritten by private power and industrial companies. The development of long distance, high voltage, alternating current power transmission engendered a rash of private, hydroelectric dam construction. Major dams were constructed by private power companies - such as the Eastern Tennessee Power Company and Georgia Railway and Power Company – and aluminum companies across the U.S. South in the first third of the twentieth century.¹¹

The era of privately financed construction of large dam and reservoir projects in the U.S. South faded in the 1930s, replaced by the growth of federal spending on flood control and river basin development projects. The Tennessee Valley Authority (TVA), established in 1933 as part of early New Deal legislation, represented a massive, regional entity engaged in an array of activities, including the construction of hydroelectric dams, and navigation and flood control

¹¹D.C. Jackson, "Dams" in *The New Encyclopedia of Southern Culture, Volume Eight: Environment*, ed. Martin Melosi (Chapel Hill: University of North Carolina Press, 2007), 45-7. See also George B. Tindall, *The Emergence of the New South, 1913-1945* (Baton Rouge: Louisiana State University Press, 1967), 71-79.

projects within the Tennessee River Basin. While the TVA provided widespread benefits such as providing electricity to rural inhabitants and effective flood control, its projects also attracted criticism for environmental damage and the forced relocation of people and entire communities.¹² Today, the TVA describes itself as a corporate agency of the United States that derives nearly all its revenue from sales of electric power to residential and business customers. It is also involved in water and land management, navigation and flood control, and job creation throughout the seven-state region it serves.¹³

The establishment of the TVA represented a major interstate management apparatus, but it was far from the first federal foray into water management in the U.S. South. The region began jostling for federal funds in the 1870s, following an influx of newly elected Congressional representatives from “Redeemed” states who also possessed a keen interest in flood control. Their efforts contributed to passage of the first attempts by the federal government to enact flood control measures on American rivers, particularly the Mississippi River. While early efforts proved haphazard, the federal commitment to flood control expanded over the next half-century, culminating in the Rivers and Harbors Act of 1925, which established new parameters for flood control planning. A central element of this reorganization was the decision to provide the U.S. Army Corps of Engineers broad latitude in comprehensive river basin planning and development.¹⁴

¹² Richard Lowitt, “Tennessee Valley Authority” in *The New Encyclopedia of Southern Culture, Volume Eight: Environment*, ed. Martin Melosi (Chapel Hill: University of North Carolina Press, 2007), 154-9.

¹³ “About TVA”, Tennessee Valley Authority, accessed October 12, 2015 <https://www.tva.gov/About-TVA>.

¹⁴ Albert Cowdrey, *This Land, This South: An Environmental History*, Rev. (Lexington: University Press of Kentucky, 1996), 120-4 and 142-5.

Despite this broadened purview, the Army Corps of Engineers remained somewhat leery of large multi-purpose dams until after World War II, generally preferring to engage in river navigation projects to stimulate economic growth. One consequence of this increased institutional exposure to public works projects was the forced interaction of Army Corps officers with corporate executives dedicated to “New South,” laissez-faire economic growth. This relationship provided the basis for the Army Corps to emerge as the primary water and power broker between corporations and state institutions in the Sunbelt after 1945, as the region broadly rejected TVA-model projects. Despite continued support among Democrats and economic boosters, by the 1960s a broad pushback against federally sponsored multi-purpose dams and public energy projects emerged among conservationists, political conservatives, and Sunbelt corporations. This included growing criticism of the Army Corps of Engineers regarding land acquisition tactics and water quality issues.¹⁵

The emergence of recreation as a priority of multi-purpose dam construction was officially advanced with passage of the Flood Control Act of 1944, which identified recreation as a priority along with energy, water supply, and flood control. Army Corps of Engineers projects in the South after 1945 reflected this prioritization of recreation. Reservoir development in southern valleys increasingly became the focus of ire for groups opposed to the schemes of New South capitalists and New Deal liberalism, especially in the rural areas targeted by such measures. By the 1970s, tensions over development of water projects in southern river valleys escalated, as Sunbelt commercial boosters, influenced by both the rhetoric of economic development and growing emphasis on wilderness preservation tied to the mainstream

¹⁵ Manganiello, 14-20 and 90-91.

environmental movement, were increasingly torn between flooding valleys for economic development while “saving” others as a means to balance recreation and protection of scenic and wild rivers.¹⁶ These elements coalesced in the conflicts that emerged in the 1960s and 1970s concerning the construction of the Jordan Lake and Falls Lake reservoirs that were overseen by the South Atlantic Division of the Army Corps of Engineers.

The South Atlantic Division (SAD) was established in 1888, when the Secretary of War ordered a reorganization of the Army Corps of Engineers, although it did not receive the official moniker of the South Atlantic Division until 1929. Currently, the Corps is divided into nine administrative, regional subdivisions comprised of a total of forty-two geographically related districts, with each named after the city that hosts the district office, often a major port or harbor. The South Atlantic Division is comprised of five districts – Charleston (South Carolina), Jacksonville, Mobile, Savannah, and Wilmington.¹⁷ The Corps is a historically decentralized agency with greater emphasis placed on the district level rather than the divisional or national level. In the 1950s and 1960s, the focus of SAD was ostensibly navigation projects – dredging, harbor deepening, and channel and lock construction. However, as the Corps became increasingly involved with the construction of multi-purpose dams, recreation emerged as a major component of Corps projects in the South Atlantic Division, as well as elements of water management, hydroelectric power and wildlife management. For example, seven of the seventeen large dam projects involving SAD between the early-1950s and early-1980s featured

¹⁶ Ibid., 101-14 and 160-4.

¹⁷ Ralph Bailey, Jr., Dr. Paul E. Brockington, Charles F. Philips, Jr., and F. Patricia Stallings Brockington and Associates, Inc., *History of the South Atlantic Division of the U.S. Army Corps of Engineers, 1945-2011*, Sponsored and Distributed by U.S. Army Corps of Engineers, South Atlantic Division, 2012, 1-6, accessed September 22, 2016, http://www.sad.usace.army.mil/Portals/60/docs/history/SAD_History_small.pdf.

recreation. Four of these projects were almost exclusively tied to recreation and water and wildlife management while having nothing to do with navigation or hydroelectric power.

The interaction of the Corps with water management increased after passage of the Clean Water Act in 1972, which greatly expanded and reorganized the Federal Water Pollution Control Act of 1948. The Clean Water Act placed regulation of all U.S. waters, except those tied to agriculture, under the purview of the Corps, including wetlands on private property. This expansion increasingly involved the South Atlantic Division in matters of water and wildlife management, and in the case of the Florida Everglades, environmental restoration. In North Carolina, three large multi-purpose dam projects were authorized and constructed during the 1960s and 1970s - Jordan Lake, Falls Lake, and the W. Kerr Scott Dam and Reservoir. All were tied exclusively to matters of recreation, water quality, flood control and wildlife management, with no consideration of navigation or hydroelectric power production.¹⁸

Jordan Lake State Recreation Area comprises nine access areas scattered around the shoreline of a 14,000-acre reservoir, known as Jordan Lake, created by the B. Everett Jordan Dam at the confluence of the Haw and New Hope Rivers in the New Hope River Valley. The dam was constructed, and continues to be managed, by the Army Corps of Engineers. The surrounding areas are subleased to various state and local agencies. The lake is surrounded by nearly 33,000 acres of land overseen by various agencies, including the Army Corps of Engineers, North Carolina Department of Parks and Recreation, North Carolina Wildlife Resources Commission, and North Carolina Division of Forest Resources. The dam and lake are located near the geographic center of North Carolina with the main body of the lake almost

¹⁸ Ibid., 85-129.

entirely within Chatham County, while the upper reaches of the lake extend into Durham, Orange, and Wake Counties.

This area of the New Hope River Valley was analyzed as a possible reservoir site as early as 1905, although at that time the site was deemed unsuitable for a large reservoir.¹⁹ In 1938, Congress approved a preliminary plan for a dam at the site as part of the General Comprehensive Plan for Flood Control and Allied Purposes that was an element of the Flood Control Act approved on June 28, 1938.²⁰ Popular support for construction of a dam increased significantly following widespread flooding associated with an intense tropical storm in 1945, particularly in Fayetteville where flooding caused over \$4.7 million in damage. The event led Congress to order the Army Corps of Engineers (ACOE) to undertake a comprehensive study the following year.²¹ Upon completion of the report, the ACOE concluded that construction of a dam and reservoir was both feasible and necessary for flood control and the regulation of water quality and flow along the Cape Fear River. This decision set off a series of debates before construction of the New Hope Reservoir was approved in 1963. The name was changed to B. Everett Jordan Dam and Lake in 1973 to honor a former United Senator from North Carolina who was the most vociferous supporter of the plan.²²

¹⁹ Bret Grabe, "A History of B. Everett Jordan Lake" (honors essay, Department of History, University of North Carolina-Chapel Hill, 1991).

²⁰ "B. Everett Jordan Dam and Lake, Master Plan Update," 2008, United States Army Corps of Engineers, Wilmington District, accessed October 2, 2016, http://www.saw.usace.army.mil/Portals/59/docs/recreation/Master%20Plan/BEJ%20FINAL%20UPDATE%20October%202008_Willett.pdf.

²¹ Angela Spivey, "The Lake that Almost Wasn't", *Carolina Public Health* (Fall, 2007), accessed October 18, 2015, <http://sph.unc.edu/the-lake-that-almost-wasnt/>.

²² *Ibid.*, 13 and Grabe, 2-3.

As originally planned, the New Hope Reservoir was the first step in a comprehensive water resource development plan for the entire Cape Fear River Basin, including the New Hope Valley. Upon its approval in 1963, the New Hope Reservoir proceeded under the cooperative efforts of state and federal agencies, but it also produced indignation among Chatham County residents and local representatives. They argued that the presence of several thousand small farm reservoirs could accomplish flood control without loss of thousands of acres of land and the relocation of residents inherent in the ACOE proposal. Another critic was U.S. Representative Harold D. Cooley, whose district included several areas within the proposed project. Cooley supported an alternative plan put forth by the North Carolina Soil Conservation Service, which called for construction of 212 smaller dams and offered the same aspects of flood control, irrigation, and recreation without requiring relocation of people.²³

In 1971, the Conservation Council of North Carolina (CCNC) filed suit to halt further development of the reservoir site arguing that the Army Corps had failed to comply with the National Environmental Policy Act of 1969 (NEPA). NEPA legislation mandated the authorship of Environmental Impact Statements (EIS) for major federal actions that included significant environmental impact. This legislation represented a culmination of growing public interaction with federal projects, including those undertaken by the ACOE. For example, the Clarks Hill Dam and Lake (today known as the J. Strom Thurmond Dam and Lake), begun in 1953 on the Savannah River at Augusta, Georgia, represented the first large, recreational ACOE project in the South Atlantic Division to receive significant public input. Citizen concern over potential safety hazards and the threat of malaria tied to ACOE plans to merely “top off” trees in the

²³ Grabe, 15-21.

deluged area of the reservoir led to an agreement that the Corps would entirely remove vegetation from the impacted area.²⁴ Thus, by the time of NEPA, a nearly two-decade history of growing degrees of public influence upon the direction of ACOE projects in the area already existed.

The Corps completed the initial EIS for Jordan Lake, still known as the New Hope Reservoir, in 1971 while arguing that the process of land acquisition and planning was too far along to realistically halt the project. The Corps also blamed pollution levels on municipal and industrial discharging of raw sewage upstream from the project, citing a *Raleigh News and Observer* report in 1971 that at least 46 municipalities and industries dumped into the Haw River and New Hope Creek. Upon completion of the EIS, opposition to the Jordan Lake project intensified as critics charged the Corps with simply rehashing old information and using 1950s-era environmental standards, which led the Corps to complete a supplement to the EIS in 1976. Water quality engineers and scientists at the area's major research universities – Duke University, North Carolina State University, and the University of North Carolina-Chapel Hill – all voiced concern that the combination of impounding water in the New Hope Creek portion of the reservoir for long time periods, high nutrient levels, and shallow depth equated to questionable water quality for recreation, much less drinking. Many of these water experts concurred with one writer's view that if one looked for the absolute worst place to build a dam in North Carolina, the Jordan Lake site fit the bill.²⁵

²⁴ Bailey, et al., 109-112.

²⁵ P. Aarne Vesilind and Alastair S. Gunn, *Engineering, Ethics, and the Environment* (New York: Cambridge University Press, 1998), 173.

Despite these reservations concerning water quality, the project proceeded following a federal court ruling in 1978. In 1981, the gates were officially lowered and the filling of the reservoir began, a process not completed until 1983. As early as 1982, reports surfaced of decreasing water quality at Jordan Lake, and reports of algae blooms emerged the following year. In addition, the classification of Jordan Lake as nutrient sensitive waters by the North Carolina Environmental Management Commission further stoked fears that the worst predictions concerning water quality at the reservoir were coming to pass.²⁶ While these concerns instigated additional testing, officials pronounced the water clean despite persistent issues with algae and findings of diseased fish in the waters of the reservoir. Officials also expressed desire for greater local cooperation for rules on curbing development in the watershed and guidelines for undertaking the significant costs of upgrading water treatment facilities.²⁷ Reports of questionable water quality did little to deter demand for access to Jordan Lake as visitors overwhelmed facilities, and municipalities dug in over battles for access to the water and potential clean up responsibilities. By the late 1980s, officials seemed locked into a pattern of acknowledging issues with Jordan Lake while making little headway on devising a plan to address them.²⁸

²⁶ "Water Quality Dropping at Jordan," *Raleigh News and Observer*, September 10, 1982; "Concern Grows Over Viability of Jordan for Drinking Water," *Raleigh News and Observer*, October 23, 1983; "More Algae Found in Jordan, Falls", *Raleigh News and Observer*, January 18, 1983; "Strict Sewage Limits Recommended to Help Clean Up Falls, Jordan Lakes," *Raleigh News and Observer*, February 27, 1987.

²⁷ "Panel Backs Jordan Lake as Drinking Water Source," *Raleigh News and Observer*, January 17, 1986; "Some Jordan Lake Fish Diseased but Water Still Safe, Officials Say," *Raleigh News and Observer*, October 9, 1986.

²⁸ "Ouch! Jordan Lake is Overcrowded, Boaters Say," *Raleigh News and Observer*, January 25, 1982; "Jordan Lake's Huge Crowds Force Early Closing of Ramps," *Raleigh News and Observer*, January 24, 1986; "Record Crowds Tax State Facilities at Jordan Lake," *Raleigh News and Observer*, January 30, 1986; "Panel Suggests Water Allocation Limit," *Raleigh News and Observer*, April 15, 1986; "Panel Plans Forum on Requests to Tap Jordan Lake", *Raleigh News and Observer*, December 11, 1986; "Panel Makes No Progress on Jordan Water Rules," *Raleigh News and Observer*, January 9, 1987; "Jordan Lake Study Sought on Joint Treatment Plants," *Raleigh News and Observer*, January 11, 1987; "Jordan Lake

Falls Lake State Recreation Area resembles Jordan Lake State Recreation Area in terms of origin, construction, and utilization. The Falls Lake State Recreation Area centers upon the Falls Lake Dam and Reservoir completed by the Army Corps of Engineers between 1978 and 1981. Falls Lake Reservoir retains approximately 12,600 acres of water and is surrounded by a little over 25,000 acres of land. Much of the land is leased by the Corps to the State of North Carolina. Day-to-day operations are distributed among several agencies, including the North Carolina Division of Parks and Recreation and North Carolina Wildlife Resources Commission. Additionally, several local agencies cooperate with state and federal agencies, such as the City of Raleigh, Wake County, and the North Carolina Botanical Garden Foundation. According to a 2013 update to the original Master Plan, the Corps anticipates future development at the site to necessitate additional partners in the management of operation of the area.²⁹

The dam is located on the Neuse River roughly twenty-two miles downstream from the its formation at the confluence of the Eno and Flat Rivers, about ten miles north of downtown Raleigh. The lake created by the dam is named for the Falls community, the remnants of which constitute the oldest continuously existing trading post in Wake County, dating to the early 1700s. Various dams were built at the site, beginning with small structures for milling purposes during the colonial era and a granite structure constructed in 1899, which replaced a wooden dam built at an unknown time. However, the impact of these dams in terms of scale pales in

Water Fight Called Unlikely This Year," *Raleigh News and Observer*, November 25, 1989.

²⁹ U.S. Army Corps of Engineers, Wilmington District, "Falls Lake Master Plan, Neuse River Basin, Update, May, 2013", U.S. Army Corps of Engineer, accessed October 7, 2016, <http://www.saw.usace.army.mil/Portals/59/docs/recreation/fallslake/Images/Falls%20Lake%20Master%20Plan%20JUNE%2021%202013%20FINAL.pdf>.

comparison to the Falls Lake project, which ultimately resulted in the loss of nearly 40,000 acres of land via federal eminent domain proceedings and the displacement of nearly 200 families.³⁰

The site was first analyzed as the possible locale for a flood control project by the Corps of Engineers in the early 1930s, but the impetus for the current structure stemmed from studies undertaken by the Corps between 1958 and 1964, partially instigated by droughts in the 1950s. Afterwards, the Corps focused on both flood control and the establishment of a water source for the rapidly growing Raleigh metropolitan area. Construction of the dam was authorized by Congress in 1965 under the Flood Control Act of 1965 and the Rivers and Harbors Act of 1965. The dam was the initial project in a comprehensive water management plan for the Neuse River Basin. However, the expansion of U.S. involvement in the Vietnam War delayed the onset of planning and construction. Additional authorization for the development of public recreational facilities at flood control, power, and navigation projects emanated from sections of the Flood Control Act of 1944, Flood Control Act of 1954, and the Land and Water Conservation Fund Act of 1965.³¹

Falls Lake produced its own share of protest, which featured parallels with the furor over Jordan Lake, but also variances. Falls Lake mirrored Jordan Lake in that the Army Corps initially proposed a multiple dam project that was scaled back over time, but still resulted in the displacement of families, utilization of federal eminent domain, and created deeply divided opinions among citizens regarding Army Corps tactics relative to land acquisition. The Falls Lake project also engendered localized protest that proved consequential in the direction of North

³⁰ Janet Steddum, *The Battle for Falls Lake* (Raleigh: [Lulu.com], 2007), 36-38 and 77.

³¹ Corps of Engineers, Falls Lake Update.

Carolina politics as voter unhappiness led to the defeat of U.S. Senator B. Everett Jordan in the Democratic primary of 1972, the biggest supporter of the soon-to-be-renamed Jordan Lake project and water projects in general. Jordan's usurper, former U.S. Congressman Nick Galifianakis, then lost to Jesse Helms in the general election later that year. Helms, who served for thirty years in the U.S. Senate while garnering a reputation as one of the most conservative members of Congress, opposed the Falls Lake project on the grounds it represented too large a federal expenditure and that alternate water supplies existed.³²

Development of Falls Lake produced similar critiques to Jordan Lake regarding the potential for poor quality water. It also faced delays in construction, though no NEPA lawsuit was filed against the Falls Lake project as was the case with the Jordan Lake dam. One difference between the two projects stemmed from the fact that Falls Lake was viewed as a localized water source and recreation outlet for Raleigh almost from the start, and some planners plainly viewed it as an urban park playing a role similar to that of Central Park in New York. At the opening of Falls Lake in 1983, North Carolina Governor Jim Hunt explicitly referred to the reservoir and surrounding area as boon for the entire Research Triangle in terms of creating a "pull" factor in terms of recreation. Yet, he also voiced concern for the potential for urban sprawl.³³ On the other hand, Jordan Lake's genesis stemmed from efforts to control flooding on the Cape Fear River, while its value as a water and recreation source for Raleigh metropolitan area emerged over time.³⁴

³² Steddum, 96-7.

³³ "Falls Lake Results Let Leaders Glow in Pride" and "Many Visitors Expected at Falls Lake," *Raleigh News and Observer*, May 1, 1983.

³⁴ This is not to say that the centrality of water supply to Jordan Lake isn't crucial, but even as Jordan Lake was nearing completion in the early 1980s some continued to advocate its role in controlling the Cape Fear River, sometimes in zealous terms. For example, an editorial by *Raleigh News and Observer* columnist Lois Byrd – a

Another aspect of Falls Lake spurring protest stemmed directly from efforts of real estate developers, with the support of the Wake County Planning Board (WCPB), to subdivide the land in the Falls Lake watershed. Within days of Falls Lake's opening ceremony on May 1, 1983, the *Raleigh News and Observer* published the first in a series of critiques of the WCPB for its "develop anywhere and everywhere" approach once the Falls Lake Dam and Reservoir was approved. On May 4 and May 7, editorials appeared castigating the WCPB for not adequately studying water related issues before approving subdivisions, with particular concern for the number of private wastewater treatment plants being greenlighted.³⁵

In the following weeks, the *Raleigh News and Observer* continued to press the issue of development in the Falls Lake watershed. The publication reminded readers that in the late 1960s, Mecklenburg County (about 120 miles southwest from Wake County and home to Charlotte, the state's most populous city) was forced to hang fifty-five gallon barrels filled with deodorant off bridges to mask the odor of streams around Charlotte, which had resulted from a similar failure to properly vet water development projects. Although Charlotte's water situation was much better in 1983, the newspaper used this example as a call for greater attention to the issues of sewage treatment and urban and agricultural runoff. It also called for a study into possible mitigating processes, such as smaller streets and driveways, utilization of grass

longtime supporter of Jordan Lake – in 1981 described the importance of the dam in doing "battle" with the Cape Fear River and the need to "convert" the Cape Fear to serve the people of North Carolina. Lois Byrd, "Too Soft a Sell for the Cape Fear," *Raleigh News and Observer*, July 4, 1981. Even in the 2010s, locals all along the Cape Fear River note the construction of Jordan Lake Dam and Reservoir as a turning point for their relationship with the river due to the greatly reduced threat of massive flooding. See Philip Gerard, *Down the Wild Cape Fear: A River Journey Through the Heart of North Carolina* (Chapel Hill: University of North Carolina Press, 2013).

³⁵ "Editorial: Falls Lake: A Foul Future?" *Raleigh News and Observer*, May 4, 1983; "Editorial: Fallout at Falls Lake," *Raleigh News and Observer*, May 7, 1983.

walkways and curved ditches rather than gutters and concrete sidewalks, and legislation requiring wooded buffers around streams.³⁶

Further articles explicitly rebuked the WCPB for its willingness to allow private wastewater treatment plants, noting the propensity of such plants to rely on part-time staff, a situation worsened by backlogs in the North Carolina Division of Environmental Management that equated to inconsistent inspections of wastewater plants. Following this, the *News and Observer* pointed explicitly to the struggles of Fairfax County, Virginia, just outside Washington, D.C., when, in the 1960s, it faced similar circumstances of rapid population growth and real estate development in the watershed of the Occoquan River Reservoir. The *News and Observer* noted striking similarities between the Raleigh metropolitan area and Fairfax County, including similar topographies where the land surrounding the reservoirs sloped toward the water exacerbating runoff issues, and the slow response of local officials to respond to red flags concerning water pollution.

By the early 1980s, Fairfax County decided potential revenue lost to development restrictions in the Occoquan watershed was cheaper than extensive cleanup and upgrades to waste water treatment plants. So, it began to institute policies designed to balance development densities. Some of the Occoquan Basin Study recommendations supported by the *News and Observer* included requiring larger lot sizes for residential developments and utilization of regulations to encourage development in certain areas. According to the *News and Observer*, planning of the Raleigh metropolitan area needed to pay heed to such examples and not waste an opportunity to develop effective strategies to balance water quality and

³⁶ "Sewage, Runoff Pose Dilemma in Falls Lake Area," *Raleigh News and Observer*, May 10, 1983.

development in the Falls Lake watershed before being forced by necessity into expensive technological fixes and restrictive development models.³⁷

The reaction of the Wake County Planning Board was ambivalence. During the months of August and September of 1983, the WCPB instituted regulations regarding development in the Falls Lake watershed based on recommendations by the resource conservation staff of the Triangle J Council of Governments, a regional planning body for the Research Triangle area. These included a maximum of ten percent of impervious, hard surfaces on lots (to reduce runoff) and fifty-foot wooded buffers on each side of flowing streams. Simultaneously, the WCPB hastily approved several new subdivisions within the watershed that allowed developers to sidestep looming regulations by “voluntarily” implementing water quality measures such as buffers. The WCPB defended these actions on several grounds. It observed that, despite some algae blooms on Falls Lake, the subdivisions were greenlighted before regulations were considered. It was too soon, the Board further argued, to conclude that the reservoir and watershed required overly stringent regulations, and that it would be “irresponsible” on their part to delay development based on inconclusive science.³⁸ Within a few years, regulations regarding subdivisions in the Falls Lake watershed, such as requiring lot sizes of one acre per residence, were established. A ban on phosphate detergents in the watershed and upgrades to municipal water plants by the end of the decade produced dramatically lower levels of

³⁷ “Va. Reservoir Offers Lesson About Protecting Falls Lake,” *Raleigh News and Observer*, May 29, 1983; “Editorial: Lake Protection Vital,” *Raleigh News and Observer*, June 22, 1983. For more extensive descriptions of the implementation of the Occoquan Basin Study and continued maintenance of the Occoquan watershed see, Occoquan Watershed Monitoring Library, accessed February 24, 2016, <http://www.owml.vt.edu/aboutowml/about.html>.

³⁸ “Experts Warn Against Overreaction to Algae Test,” *Raleigh News and Observer*, August 1, 1983; “Editorial: High Falls Lake Risk (Subdivisions in Watershed),” *Raleigh News and Observer*, August 5, 1983; “Hearing Participants Back Strict Water Ratings at Lakes,” *Raleigh News and Observer*, August 11, 1983.

nutrients, and a 1990 study by the Triangle J Council of Governments showed levels of toxic metals and pesticides to be well below federal standards.³⁹

Thus, by the end of the 1980s, Falls Lake seemed on slightly better footing regarding efforts to address water quality concerns than did Jordan Lake, though neither was viewed as having entirely rectified concerns. Falls Lake was forced to close one of its beaches for a month in 1990 when swimmers contracted a dysentery-like disease, though this was linked to improper drainage at beach shower facilities rather than algae growth or naturally occurring bacteria. As for Jordan Lake, many older locals refused to fish in a body of water they viewed as filthy. People in some localities, particularly Chatham County, complained that the costs associated with tapping Jordan Lake water – including water intake upgrades and application fees – were hurting rural communities.⁴⁰

Despite the enactment of regulations and numerous discussions about water quality regarding both reservoirs, many of the same issues remained at the forefront into the 1990s. Urban and agricultural runoff remained central concerns, as did the specter of a rapid population growth in the Research Triangle, which scientists and environmentalists feared would overwhelm the region. These fears were not assuaged by the actions of the Wake County Planning Board, which seemed to take to heart the assertion by R. Paul Wilms, a representative of the North Carolina Homebuilders Association, that “It is a myth that as controls on development become more stringent water quality gets better.” By the early 1990s, the WCPB had approved 130 subdivisions within its portion of the Falls Lake watershed. It also annexed

³⁹ “Raleigh Thirst, Growth Collide,” *Raleigh News and Observer*, January 5, 1992.

⁴⁰ Grabe, 57-60.

zoning control from the City of Raleigh over an additional 2000 acres of watershed property in 1992, and amended restrictions on lot sizes to allow two homes per acre rather than one home per acre. The City of Raleigh voiced rising concerns that increased development would require the installation of sewer lines, which would only encourage more development. As the *News and Observer* noted, the irony of the debates over how to manage water quality in the Falls Lake and Jordan Lake watersheds stemmed from the presence of the lakes themselves, which attracted developers and recreation seekers.⁴¹

Part of this attraction stemmed from the reputation the reservoirs earned as centers of wildlife protection and recreational access. As noted earlier, Jordan Lake and Falls Lake proved extremely popular as recreational destinations, especially for boating, when they opened in 1983, despite nearly fifteen years of litigation and public protest concerning water quality. The presence of algae blooms in both lakes soon after the reservoirs filled, and the unexplained bass die-off at Jordan Lake, seemingly did little to deter visitation. Some of this may be explained by the relative dearth of outdoor recreational facilities in the Research Triangle prior to the completion of Falls Lake and Jordan Lake. Until that time, the nearest large public reservoir was Kerr Lake State Recreation area, roughly fifty miles to the north on the North Carolina-Virginia border. It was popular as an overnight camping destination but less attractive for daytrips. Thus, by the early 1990s both areas received large numbers of visitors with Falls

⁴¹ "Lake Stance Shifts; Planners Oppose Tougher Rules," *Raleigh News and Observer*, August 8, 1991; "Raleigh Thirst, Growth Collide," *Raleigh News and Observer*, January 5, 1992; "Editorial: Out of Bounds at Falls Lake," *Raleigh News and Observer*, September 18, 1992.

Lake receiving nearly 2.4 million visits in 1991, attracting fishers, hunters, boaters, campers, and swimmers.⁴²

The importance of the recreational potential of the reservoirs was a major component of governmental support at the state and local levels. North Carolina Governor Jim Hunt praised the “quality of life” contribution to the region provided by Falls Lake at its opening in 1983. Hunt extended this praise to both Falls Lake and Jordan Lake when he noted the “unusual wealth” of outdoor recreation provided by the U.S. Army Corps of Engineers, which oversaw the development and management of both reservoirs and thousands of acres of surrounding land. In their desire to increase recreational opportunities, state officials pushed the Army Corps to condemn more land than it originally suggested. The hoped-for outcome of this maneuvering was that the federal government would bear the brunt of costs and local opposition, while state and local politicians could tout their contributions to recreation while avoiding controversy.⁴³

The management of the reservoirs and surrounding land benefitted from Corps ownership, although much of the land is subleased to state and local entities such as the North Carolina Department of Natural Resources (Division of Parks and Recreation, Division of Forest Resources, and Wildlife Resources Commission), Wake County, and the City of Raleigh. The

⁴² “Raleigh Thirst, Growth Collide.” In 2015, both Falls Lake and Jordan Lake continue to be among the most heavily visited areas in the North Carolina state parks system with Jordan Lake being the most visited site at just over 1.6 million (Falls Lake was noted as one of six state park sites to receive over one million visits) of a record-breaking total of 17.3 million visits to all state parks combined, an 11% increase over 2014. See “Attendance at North Carolina State Parks Sets Record; 17.3 Million Visitors in 2015”, North Carolina Division of Parks & Recreation, accessed March 11, 2016, <http://www.ncparks.gov/newsroom/media-releases/attendance-north-carolina-state-parks-sets-record-173-million-visitors-2015>. This is compared to around eight million combined visits in 1989. These smaller numbers at Falls Lake and Jordan Lake likely reflect the larger number of units within the state parks system and development of other recreational areas in the area such as greenways.

⁴³ Steddum, 76.

Corps received criticism for ignoring red flags concerning the viability of the Jordan Lake and Falls Lake sites as reservoirs and its land acquisition tactics, but in response cited its obligations under laws such as the authorizing legislation, NEPA, and the Historic Preservation Act when rebuffing real estate developers.⁴⁴ The management of Falls Lake and Jordan Lake under the aegis of fish and wildlife protection, coupled with continuing development in the Research Triangle, increasingly contributed to a sense that the two areas were sites of respite in an increasingly urbanizing area of North Carolina.

By the mid-1990s, Falls Lake and Jordan Lake enjoyed reputations as prime fishing spots despite continued concerns over managing the reservoirs as sources of clean drinking water. For crappie, largemouth bass, and catfish they were considered among the best lakes in North Carolina. Today, the notoriety of bass fishing on the two lakes is such that they are featured destinations of a major regional bass fishing circuit, Piedmont Bass Classics, with Jordan Lake the site of the 2016 championship.⁴⁵ The areas also were noted for thriving populations of wildlife, especially birds such as wild turkey and blue heron.⁴⁶ The reintroduction of bald eagles at both reservoirs in 1983, part of a release of 29 juvenile bald eagles across the state, was viewed as a significant success. Bald eagles were placed on endangered lists in forty-three states in 1978, providing increased legal protections and instigating government and private breeding programs.

⁴⁴ Ibid, 77-8; Jordan Lake Master Plan; Falls Lake Master Plan.

⁴⁵ "Welcome to the 2017 Piedmont Bass Classics Tournament," Piedmont Bass Classics, accessed March 3, 2016, <http://piedmontbassclassics.com/>.

⁴⁶ "Raleigh Thirst, Growth Collide," *Raleigh News and Observer*, January 5, 1992; "Falls, Jordan, Harris are State's Top Lakes," *Durham Herald-Sun*, August 27, 1996.

The North Carolina eagles were part of a larger program managed by the Sutton Aviation Research Center in Bartlesville, Oklahoma starting in 1983. This project sought to repopulate bald eagles in Southern states, including Alabama, Georgia, and Mississippi. The center received eggs from Florida and hatched them in Oklahoma. The eaglets were then shipped to participating states once they were eight weeks old. By 1992, the program had released 139 bald eagles in North Carolina, Alabama, Mississippi and Georgia, and 90 in Oklahoma. Georgia and Alabama reported promising results in 1991 surveys of their bald eagle populations leading the Sutton Aviation Research Center to be cautiously optimistic about the overall success of the project, though they warned it could take six more years to fully gauge the results.

By 2004, the bald eagle population in North Carolina was viewed as in positive recovery mode. In 2015, there were at least 192 bald eagle nesting sites across North Carolina, including fifteen at Jordan Lake alone. This recovery of the bald eagle population was greatly attributed to the development of manmade lakes in North Carolina, which provided suitable habitat, as lakes were surrounded by trees and full of fish. David Allen, supervisor of the wildlife diversity program for North Carolina's Wildlife Resources Commission, noted that the area around Jordan Lake was specifically targeted for actions such as thinning trees around large pines to attract bald eagles. The eagles also coalesced around the dam itself as it dumped water into the Haw River for what Allen termed "easy fishing", since the process of releasing water seemed to either daze or kill fish.⁴⁷

⁴⁷ "Eagle Space Studied at Jordan Lake," *Raleigh News and Observer*, September 9, 1986; "Lake's Boaters, Eagles Try to Live in Harmony," *Raleigh News and Observer*, June 6, 1990; "Bald Eagle Effort Increases Bird's Population in South; Okla. Center Hatching Eggs Taken from Fla.," *The Atlanta Journal and Constitution*, January 13, 1992; "As

Despite the increasingly positive views of Jordan and Falls Lake as sources of recreation and locales of wildlife, the issues over drinking water continued to exhibit short-sightedness. Ongoing, rapid population growth and development in the Research Triangle merely intensified the struggle between efforts to maximize development while providing plentiful, clean water. The potential volatility of the situation – and the precariousness of the water supply itself – was vividly illustrated by events in the mid-2000s. In 2005, the “Drinking Water Reservoir Protection Act”, which may be viewed as a precursor to the Jordan Lake Rules of 2009, was introduced in the North Carolina General Assembly. It called foremost for improved monitoring and management of pollution in Jordan Lake and Falls Lake. The proposed bill met with immediate opposition from municipalities such as the City of Durham, which argued the required improvement to water treatment facilities and runoff regulations would unduly harm economic growth in the city and introduce stiff property tax increases. Assistant City Manager Ted Vorhees, in wording nearly identical to that of the Wake County Planning Board in 1983, argued “We just think it’s too much, too soon without the science.”⁴⁸

At the same time, the Southeast was entering its worst drought in a hundred years. In late 2005, the *Christian Science Monitor* detailed severe water shortages in North Carolina and the efforts to enforce water conservation, including \$1000 fines in the City of Raleigh for excessive consumption, among the highest such penalties on the East Coast. The article noted that the drought in North Carolina reflected both the precariousness of the water supply in the

Eagles Return, Spirits Soar,” *Durham Herald-Sun*, July 4, 2004; “Bald Eagle Population Soars in the Triangle,” *Raleigh News and Observer*, February 14, 2015, accessed October 11, 2016, <http://www.newsobserver.com/news/local/counties/wake-county/article10867616.html>.

⁴⁸ “Drinking Water Bill Draws Opposition in Durham,” *Raleigh News and Observer*, May 3, 2005.

area and the potential for water wars east of the Mississippi River on par with those in the U.S. West. Although the year had been marked by major storms, the situation was such in areas characterized by rapid construction, land annexations, and new immigration – which the Research Triangle epitomized – that a mere “blip in the weather can turn into a time for rain dances.”⁴⁹

The depth of the water supply issue and the looming problems ahead were highlighted by the *Raleigh News and Observer* in early 2006. An editorial in September of that year bemoaned the fact that a few tropical storms in the spring led to local officials quickly losing interest in water conservation and water resource development. The paper noted a recent report by the Blue Ribbon Committee on the Future of Wake County that determined the need for water through the year 2030 at 148.7 million gallons a day. With a reserve capacity of 151.5 million gallons a day, a razor thin margin existed for a region experiencing population growth of three to four percent per year. The article observed that home construction in the Falls Lake watershed rivaled commercial development in terms of runoff, and that the area’s water supply issues were causing some companies to bypass Raleigh for other municipalities. The editorial concluded that Wake County needed to prioritize development of a new reservoir on the Little River to meet growing demand and avoid the “draconian” regulations on water use instituted the year before.⁵⁰

⁴⁹ “In Central North Carolina, There’s Little Water Anywhere,” *Christian Science Monitor*, November 23, 2005, accessed October 13, 2016, <http://www.csmonitor.com/2005/1123/p02s02-ussc.html>.

⁵⁰ “Editorial: Wake’s Water Hole: Wake County’s Rapid Growth Calls for Ramping up Work on the Little River Reservoir and Confronting What Happens Next,” *Raleigh News and Observer*, September 23, 2006.

The brief respite provided by the tropical storms of early 2006 faded, and by the end of 2007, the drought intensified to the point that major metropolitan areas, including Raleigh and Atlanta, had less than three months water on hand. Governor Michael F. Easley warned that North Carolina was on the verge of a state of emergency, while municipalities enacted tough regulations on water consumption backed up by high fines and even termination of water services. Publications outside the South commented on the dire water circumstances and how it had “shocked” the region into rapid implementation of conservation measures. In North Carolina, the drought awakened many to just how little power the governor had over water regulations unless a state of emergency was called and the reality that even in a state of emergency, the state had no practical plan in place. The opportunity seemed ideal for the consideration of new water conservation plans. Yet, some feared momentum being lost almost immediately after the drought eased in early 2008, reflecting both the unwillingness of local legislators to grapple with the contentious issue unless forced to and the influence of real estate developers upon local politics.⁵¹

Despite the enactment of legislation between 2009 and 2011 designed to address the water quality at Falls Lake and Jordan Lake, fears of a lost opportunity seemed realized given the acrimonious debate the rules produced. Tellingly, much of the debate concerned economic costs in terms of cleanup and perceived “lost” revenue due to development regulations, not a genuine reassessment of water management. Political machinations seemed to move further away from a regulatory approach with the election of Pat McCrory as governor of North Carolina

⁵¹ “Drought Stricken South Facing Tough Choices,” *The New York Times*, October 16, 2007, accessed October 16, 2016, <http://www.nytimes.com/2007/10/16/us/16drought.html>; “Editorial: Idea Pipeline: New Water-Conservation Plans Deserve Quick Action,” *The Fayetteville Observer*, March 13, 2008.

in 2012, as Durham officials wasted little time appealing to the new administration for reconsideration of the Falls Lake regulations, which were barely two years old.⁵² The suspension of current Falls Lake and Jordan Lake regulations, and the growing calls to delay scheduled implementation of future regulations, reflects a turn away from regulatory concerns in favor of economic growth, a somewhat predictable shift given the history of the reservoirs.

What does the ongoing debate over management of the Jordan Lake and Falls Lake reservoirs reveal about the history, and possible future, of the Raleigh metropolitan area and its water? First, the decisions to develop both the reservoirs and watersheds associated with Jordan Lake and Falls Lake in the manner that proceeded reinforced Christopher Mangianello's conclusion that energy and water *choices* contribute heavily to the South's ongoing struggle with water supply and access. As observed by Mangianello, the cyclical high and low pressure systems that determine rainfall patterns cannot be influenced legislatively and must be approached as more than temporary inconveniences to be overcome.⁵³

In terms of the relationship between the Research Triangle and Jordan Lake and Falls Lake, it is apparent that while regional decision makers may have harbored good intentions concerning economic growth and recreational access when pursuing development of the reservoirs, they were shortsighted about the potential problems, perhaps willingly so. The actions of the Wake County Planning Board in the early 1980s, while claiming sympathy towards development regulations, took only timid steps towards acting on these concerns. This

⁵² "City may Seek McCrory's Help on Falls Lake Rules," *Durham Herald-Sun*, March 7, 2013, accessed October 16, 2016, http://www.heraldsun.com/news/local_news/city-may-seek-mccrory-s-help-on-falls-lake-rules/article_694b1bd9-9580-5f9a-aa81-447f5870d37b.html.

⁵³ Mangianello, 198.

indicated a willingness to subvert hard decisions on water, particularly if they were perceived as potentially harmful to development. The articulation of rhetoric and rationales in the 2010s opposing development regulations that were nearly identical to those of thirty years earlier reflects the continued pattern of shortsighted reactions to immediate weather circumstances rather than long term planning aimed at developing water resources.

The second significant conclusion is that state and local politicians continue to focus on issues of water supply to meet demands for a rapidly growing population rather than addressing development issues negatively impacting water quality. The regulatory delays put in place in 2013 revealed local governments in the Research Triangle as far more willing to fight perceived imbalances in responsibility for cleanup costs or lost advantages in economic development than arriving at cooperative solutions to water quality and management. These political altercations, however, mirror similar divides in the area's inhabitants. While construction of Falls Lake and Jordan Lake certainly attracted vocal opposition in the 1970s, the reality is that many people supported their construction for various reasons, including flood control, recreation, economic growth, and property rights.

The looming battle over plans by Wake County and the City of Raleigh to develop a new reservoir on the Little River beginning in 2020 reveals how little these debates have changed and how dire Raleigh's water situation is. In 2007, the City of Raleigh began the process to gain federal approval to dam the Little River while proposing rezoning ordinances in the proposed watershed, which imposed development restrictions on over 3700 property owners. The rezoning plan garnered accusations from one property owner that "We're not in America anymore. The way I feel about it, it feels like a communist country; everybody telling you what

you are going to do with your land; when, where, and what.”⁵⁴ While this statement reflects a deep level of ignorance concerning past efforts to provide water to the region and an exaggerated reaction to a proposed rezoning ordinance, the speaker was not alone in their rejection of the reservoir. Environmental groups vowed to fight the proposed project and, in 2010, the Little River was named by American Rivers, a water conservation watchdog group, to its list of the five most endangered rivers in the United States. This resulted in part from a campaign designed to draw attention to an upcoming decision by the Army Corps of Engineers on the environmental soundness of the plan.⁵⁵

As of 2012, the City of Raleigh was still in the process of researching the viability of the Little River plan, having spent upwards of \$6 million since 2007 on research alone, and acquiring title to all the land to be inundated. The details of the Little River Reservoir plan reveal the complex issues facing the region’s water supply. While the Little River Reservoir was projected to cost \$263 million, dependent on construction costs in 2020, it was slated to extend Raleigh’s water supply for merely ten years. According to a Water Resource Assessment Plan compiled by the city in 2012, Raleigh faced the prospect of running out of water in twenty years at current consumption rates if no new water source is located. Even more concerning, the city projected that in sixty years its water needs would double compared to current consumptions. Critics have countered that Raleigh is abhorrently wasteful with its water and should focus on exploring efficient water utilization procedures rather than simply seeking new sources.⁵⁶

⁵⁴ “Tapping Little River Could Dampen Property Values”, WRAL, accessed March 11, 2016, last modified November 15, 2007, <http://www.wral.com/news/local/story/2051015/>.

⁵⁵ “Dam Opponents Ready for a Fight: Proposed Dam is Still 10 Years Off,” *Eastern Wake News*, June 9, 2010.

⁵⁶ Dan Riechers, “New Reservoir May be ‘Inevitable’ for Raleigh,” *Raleigh Public Record*, October 19, 2012, accessed March 12, 2016, <http://raleighpublicrecord.org/news/2012/10/19/new-reservoir-may-be-inevitable-for-raleigh/>; “Protecting the Little River, NC; Sustainable Water Supply Vs. New Reservoir”, American Rivers, accessed

Given the contours of the development versus water quality and conservation debate in the Research Triangle over the past thirty years – and the current political climate – it seems unlikely to expect sweeping reforms concerning water utilization. Rather, one would expect the pattern of the past thirty years to continue the politicization of the issue, usually slanted in favor of developmental concerns interrupted occasionally by the immediacy of drought. Eventually, the region’s water demands will likely force greater levels of cooperation among localities concerning water management, cleanup costs, and development but it will have been a choice arrived at by painful means.

March 12, 2016, <http://www.americanrivers.org/initiative/water-supply/projects/protecting-the-little-river-nc-sustainable-water-supply-vs-new-reservoir/>.

CHAPTER V

DUKE FOREST

In the early 1990s, an article in the journal *Forest & Conservation History* examined the historical roots of urban forests – a broad concept that, at its most basic, refers to any swath of forested land in an urban setting. The term applies from individual stands of trees to tracts of several thousand acres. The commentary noted their growing importance to urban planners, residents, and scholars, along with the tendency to view the Industrial Revolution as the progenitor of urban forestry. While the importance of the Industrial Revolution, and the rapid urbanization that accompanied it, to “modern” views on forested areas in cities, particularly their role in public health concerns, was not discounted, the author argued these values were heavily influenced by cultural and political symbolism tied to urban landscapes dating back to the 1600s.¹

The significance of urban forests and issues concerning their management have increased in the United States since the publication of that article. In 2010, a report on

¹ Henry W. Lawrence, “The Neoclassical Origins of Modern Urban Forests,” *Forest & Conservation History* 37, no. 1 (Jan., 1993), 26-36.

America's urban forests sponsored by the United States Department of Agriculture (USDA), which houses the United States Forest Service (USFS), noted that approximately 3.1 percent of land in the coterminous United States (the lower forty-eight states, excluding Alaska and Hawaii) was classified as urban, yet nearly 80 percent of the population – more than 220 million people – resided on urban land. As discussed in the report, forested areas in urban settings provide critical services beyond aesthetic values, including reduced energy use, water quality, and habitat for wildlife while providing a link in the overarching “green infrastructure” of the nation. Management of urban forests also entailed factors such as insects, disease, climate change, development, and other social and political factors that were likely to become more pronounced in the future as urban expansion continues.¹

The link of urban forests to urban parks is a strong one, although the term “urban park,” like “urban forest,” is a broad one that includes conditions of size, management, and utilization that have varied over time. In the late eighteenth century, urban parks in the United States were little more than squares or commons. During the nineteenth century, perceptions about the role of urban parks shifted, particularly as designed refuges from the effects of industrialization and urbanization and as pleasuring grounds. The most ubiquitous American example of this was Central Park in New York City, designed by the landscape architects Frederick Law Olmsted and Calvert Vaux in the 1850s. Central Park reflected more than simply the design and establishment of a large wooded expanse that reflected idealization of a “disappearing” countryside for the enjoyment of New York City residents. Scholars have also

¹ David J. Nowak, et al., “Sustaining America's Urban Trees and Forests: General Technical Report, NRS-62,” United States Department of Agriculture, Forest Service, Northern Research Station, June 2010, accessed May 22, 2016, http://www.fs.fed.us/openspace/fote/reports/nrs-62_sustaining_americas_urban.pdf.

discussed social, economic, and political considerations tied to Central Park including its interaction with democracy, the role of property values, and social conflicts over the “proper” use of the park, which continued into the twentieth and twenty-first centuries.²

Two significant elements in the development of urban parks and urban forests in the United States since World War II are the diversification of expectations and how politics and public perception contribute to their establishment and management. As observed in a recent monograph on urban parks and public space, such areas face greater threats from patterns of design and management that exclude certain social groups than those stemming from disuse or underuse of these areas.³ Other scholars have argued that neither urban expansion (or its more negative connotation, urban sprawl) nor historic preservation provide the tools for democratic politics due to collective bouts of amnesia or nostalgia regarding place. The social significance of a place is “forgotten” when it is replaced in the name of economic growth while heavy handed nostalgia informs the preservation of other places. As Margaret Farrar argued, “Places and place memory – from buildings to battlegrounds to designated “wilderness” areas – become commodities to be consumed,” reflected by the tendency to set aside areas deemed

² Roy Rosenzweig and Elizabeth Blackmar, *The Park and the People: A History of Central Park*, Ithaca (New York: Cornell University Press, 1998) provides an in-depth social history of Central Park. Other discussions on the history of Central Park and issues of historic preservation and management include Sara Cedar Miller, *Central Park, An American Masterpiece: A Comprehensive History of the Nation’s First Urban Park* (New York: Harry N. Abrams, Publisher, 2003) or Ian Firth and Marianne Cramer, “A Case Study in Ecosystems and Preservation: Lessons Learned from New York’s Central Park,” *ATP Bulletin* 30, no.1, “Landscape Preservation Comes of Age,” (1999), 15-20. For discussions of other elements tied to urban landscapes and residential use, including the use of cemeteries and the role of social interactions among economic classes in nineteenth century America see Aaron Sachs, “American Arcadia: Mount Auburn Cemetery and the Nineteenth-Century Landscape Tradition,” *Environmental History* 15, no.2 (Apr., 2010), 206-35; David M. Bluestone, “From Promenade to Park: The Gregarious Origins of Brooklyn’s Park Movement,” *American Quarterly* 39, no. 4 (Winter, 1987), 529-50.

³ Setha Low, Dana Taplin, and Suzanne Scheld, *Rethinking Urban Parks: Public Space & Cultural Diversity* (Austin: University of Texas Press, 2005). An interesting take on this concept concerning the utilization of sidewalks is Anastasia Loukaitou-Siders and Reina Ehrenfeucht, *Sidewalks: Conflict and Negotiation over Public Space* (Cambridge, Massachusetts: MIT Press, 2009).

attractive to tourism. In the case of forested urban areas, the idea of “pristine wilderness,” untouched by human development, continues to play an outsized role in the designation of areas as worthy of preservation.⁴ However, these perspectives are not entirely new or even unique to the so-called Western world. Yi-Fu Tuan has discussed both the variability of cultural perceptions of the environment, tied to factors such as experience and symbolism, as well as the long standing human tendency to idealize certain settings throughout history, including the seashore, valley, island, and forest.⁵

An urban forest that provides the opportunity to examine the growing significance of these influences and the shifting challenges they present is Duke Forest. The forest is owned and managed by Duke University and consists of just over 7000 acres of forested and open lands in Durham, Orange, and Alamance Counties, making it one of the largest privately owned tracts of forested land in the Research Triangle region of North Carolina. The acreage is spread across six noncontiguous divisions of varying size – Durham (Durham County), Korstian (Orange County), Edeburn (Orange County), Blackwood (Orange County), Hillsboro (Orange County), and Dailey (Alamance County). The Duke Forest tracts contain a near complete cross section of woodland vegetation found in the Upper Coastal Plain and Lower Piedmont of the southeastern United States, including loblolly and short leaf pine forests, interspersed with stretches of hardwood forests of oak-hickory, poplar, and red oak among its more than 900 plant species. The composite forest also provides habitat for better than thirty species of mammals, twenty-

⁴ Margaret E. Farrar, “Amnesia, Nostalgia, and the Politics of Place Memory,” *Political Research Quarterly* 64, no. 4, (Dec., 2011), 723-35.

⁵ Yi-Fu Tuan, *Topophilia: A Study of Environmental Perception, Attitudes, and Values* (New York: Columbia University Press, 1974).

four amphibian species, thirty species of reptiles, and 180 breeding bird species. The topography of Duke Forest is quintessential North Carolina Piedmont, with rolling terrain that varies between 300 feet and 760 feet above sea level.⁶

Duke Forest has been managed for scientific research and teaching purposes since 1931, but this was not the original intent behind acquisition of the property. In 1924, James B. Duke provided a \$40 million endowment for the establishment of a university around the existing Trinity College.⁷ This largesse resulted in the establishment of Duke University, while Trinity College became the men's undergraduate college, today known as the Trinity College of Arts and Sciences. As part of this expansion, James Duke sought to acquire land for access roads to both Duke University and a potential water power site. He also envisioned a bucolic setting for

⁶ Ida Phillips Lynch, *The Duke Forest at 75: A Resource for All Seasons* (Durham: Office of the Duke Forest, Duke University, 2006), 8-9; "Duke Forest", Duke University Nicholas School of the Environment, accessed May 20, 2016, <http://dukeforest.duke.edu/>.

⁷ Trinity College began as Brown's Schoolhouse in Randolph County, North Carolina in 1838. The school was renamed Trinity College in 1859 and moved to Durham in 1892.

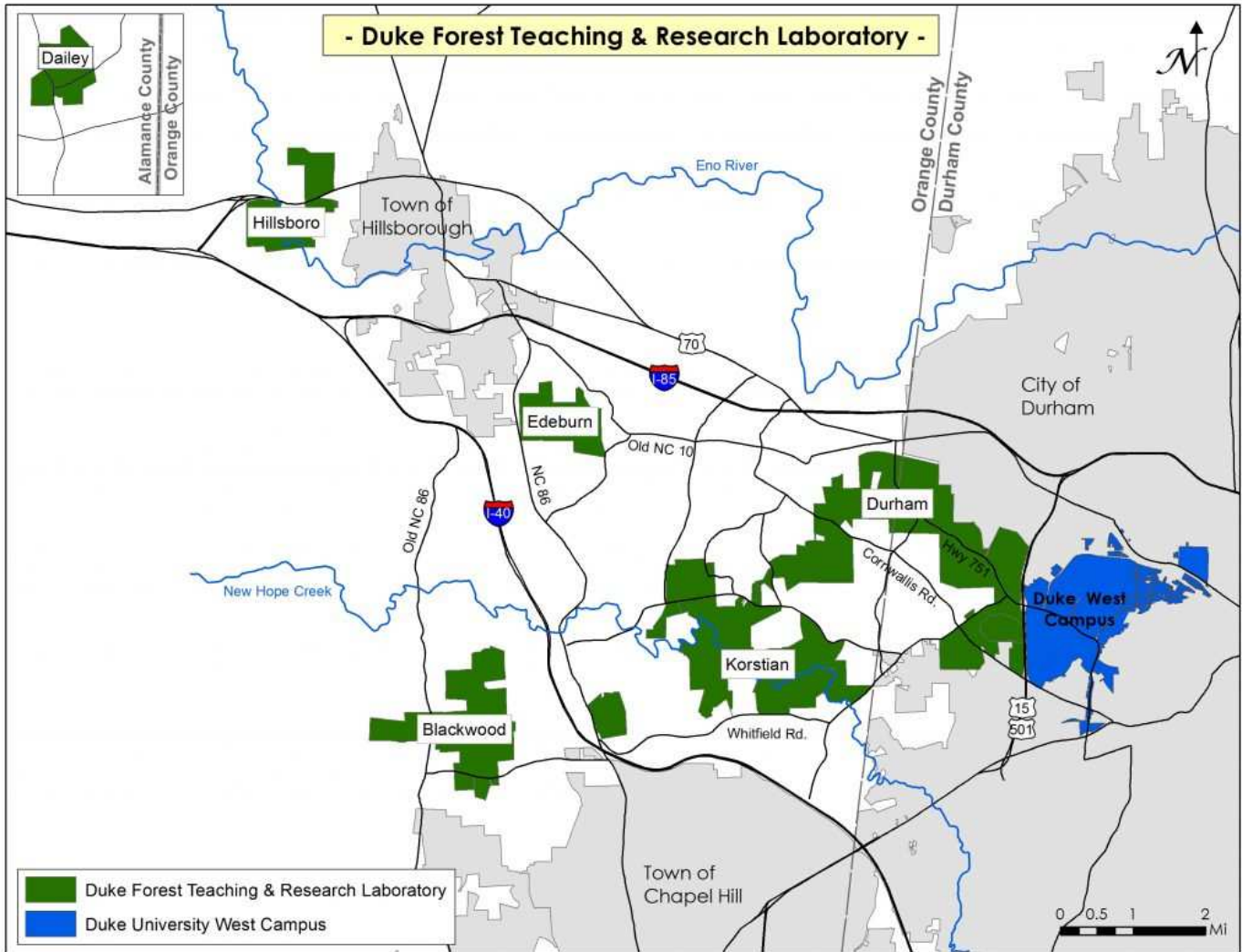


Figure 10. "Duke Forest Map" (digital map) "Explore Duke Forest", accessed April 3, 2017, <http://blogs.nicholas.duke.edu/submerged/2017-resolution-explore-duke-forest/>.

housing intended to attract faculty. Early attempts at land acquisition were frustrated when word spread that James Duke was seeking to purchase property in the area, causing a spike in prices and Duke threatening relocation of the university to Charlotte. This fulmination was mitigated when university president William Preston Few “rediscovered” land west of campus composed primarily of denuded agricultural lands that he had previously frequented for diversionary walks. By 1929, Duke University had acquired nearly 5000 acres of land, but budgetary shortfalls nixed the notion of a faculty residential area entirely subsidized by the university. However, the university did offer outright sale of lots at relatively small cost during the 1930s.⁸

In 1931, Duke University hired Dr. Clarence F. Korstian, a senior silviculturist with the United States Forest Service who received a doctorate in forestry from Yale University five years prior, to manage the forest and establish a forestry school. This decision was informed by idealistic and practical impulses. On the one hand, the university wanted to avoid paying property taxes owed on the land if it was not utilized as an educational resource. But President Few was also genuinely committed to the idea of Duke University as a positive force in the Durham community and viewed the acreage as an opportunity to rehabilitate overworked farmland and provide a practical research tool in the relatively new field of forestry, a potentially valuable enhancement of the university’s academic mission. In 1930, the year before the arrival of Dr. Korstian, the university began reforestation efforts with the planting of 1200, one-year-old Asian chestnut trees (likely Chinese chestnuts, *Castanea mollissima*),

⁸ Robert F. Durden, *The Launching of Duke University, 1924-1949* (Durham: Duke University Press, 1993), 420-27; Phillips, *Duke Forest at 75*, 20-29.

considered as resistant to the blight then ravaging the American chestnut (*Castanea dentata*).⁹ This effort was followed by the planting of 42 acres of abandoned agricultural fields with over 30,000 trees slated for timber production.¹⁰

The arrival of Clarence Korstian at Duke University in 1931, and his approach to establishing a forestry school and managing Duke Forest itself, reflected the condition of much of the farmland in the area and the influence of Korstian's forestry education. At the time of Korstian's arrival, Duke Forest covered roughly 4600 acres of mixed pine and hardwood forest and both active and abandoned farmland, with cotton and corn rows still discernible in some places. The area had been largely lumbered out with only scattered stands of virgin timber in bottom lands and wetlands not suitable for agricultural or logging activity. Poor farming techniques contributed to loss of soil vitality and severe erosion, coupled with the worsening effects of the Great Depression, led to the abandonment of farms or tax delinquency.¹¹ The issue of denuded and abandoned farmland was so common in the region that in the mid-1930s

⁹ The chestnut blight that destroyed the American chestnut was a fungal disease first noticed at the New York Zoological Park in 1904 and probably introduced via Asian nursery stock. Within fifty years the blight destroyed the American chestnut, killing an estimated 3.5 billion trees and erasing a vital social, agricultural, and economic resource for Appalachian mountain communities. As of 2010, the American chestnut is essentially extinct beyond a few pre-blight survivors or, more common, chestnut trees that sprout from the roots of downed trees but perish within a decade or so. Groups such as the American Chestnut Foundation continue to engage in efforts to restore the American chestnut, including research tied to hybrids of American chestnut and Chinese chestnut. For the effects of the demise of the American chestnut on Appalachian mountain communities, see Ralph H. Lutts, "Like Manna from God: The American Chestnut Trade in Southwestern Virginia" in *Environmental History and the American South: A Reader*, eds. Paul S. Sutter and Christopher Manganiello (Athens: The University of Georgia Press, 2009), 247-80. Up-to-date news on efforts to restore the American chestnut may be found at The American Chestnut Foundation, accessed May 22, 2016, <http://www.acf.org/>. For a specific article on research into hybrid chestnuts see, Ferris Jabr, "A New Generation of American Chestnut Trees May Redefine America's Forests", *Scientific American*, (March 1, 2014), accessed March 1, 2016, <http://www.scientificamerican.com/article/chestnut-forest-a-new-generation-of-american-chestnut-trees-may-redefine-americas-forests/>.

¹⁰ Durden, 427-8.

¹¹ Phillips, 27-49.

the federal government acquired nearly 5000 acres of such land for use as the Crabtree Creek Recreation Demonstration Area, later to become William B. Umstead State Park.

From an academic perspective, Korstian envisioned a graduate level forestry program, which was officially established at Duke University in 1938. Modeled after those at Harvard and Yale, it focused on activities such as inventory and mapping. At the time of Korstian's hiring no strong forestry program was available at a Southern university, with most of the nation's forestry schools located in the northeastern and northwestern regions. This was despite the fact the first forestry school in North America was established near Asheville, North Carolina in 1898 on George Vanderbilt's Biltmore Estate and the South had emerged as an important region for timber production. Korstian viewed Duke Forest as serving the future forestry school in the same capacity the hospital, Duke University Medical Center, served the medical school. The forest would engage in the harvesting and sale of timber.¹²

Korstian's views on management of the forest as both educational and utilitarian resource echoed the dominant theme of conservation prior to World War II, an emphasis on science and technology to promote "efficient" use of limited resources, ranging from water and forests to grass and soils.¹³ Korstian viewed the basic management tenets of Duke Forest as geared towards research and education by providing a space for both student study and the demonstration of practical forestry. This notion of practicality extended to Korstian's view that Duke Forest be economically self-sustaining via the harvesting and sale of timber products.¹⁴

¹² Phillips, 51-2.

¹³ The notion of late nineteenth and early twentieth century conservation as the efficient use of natural resources – and countered by a preservationist impulse that advocated the removal of areas from production – is most commonly associated with Samuel P. Hayes, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1920* (Cambridge, Massachusetts: Harvard University Press, 1959).

¹⁴ Lynch, 89-93.

Korstian explicitly articulated this vision of an economically productive demonstration forest and forestry school in a bulletin written in 1935, three years before the official opening of the Duke School of Forestry. After beginning with a brief description of the physical layout of the land that comprised Duke Forest, Korstian noted the entity was managed as a “going forestry business with detailed records of all operations, receipts, and expenditures”, allowing “students and forest-land owners [to] see the actual results of investigation and applied forestry techniques.”¹⁵ Despite the prevalence of low grade pine in the area, Korstian argued that the centrality of tobacco production and the “wage earning population” to Durham meant such wood would be in demand for fuel and drying of tobacco leaves. He further opined that Duke Forest could expect to adequately meet demand for small and medium pulp woods for the foreseeable future by practicing adequate fire control and managing the forest in terms of “self-perpetuating crops.” This management approach was enhanced, in his view, by Duke University’s central geographic location in the state and its proximity to major highways.¹⁶

Although Dr. Korstian and his associates viewed Duke Forest as potentially paying for itself via timber sales, they did not equate this to an exclusively for-profit enterprise. Korstian expressed the shared view amongst himself and contemporaries that any income derived from Duke Forest should provide funding for education, research, and demonstration purposes only. This stance was buttressed by Korstian’s opinion that hauling costs would limit the size of the market Duke Forest serviced. This negated the potential for large profits, although future income could be derived from sale of hardwood grown through nutrient restoration and other

¹⁵ Clarence F. Korstian, Director and William Maughan, Assistant Director, *Duke University Forestry Bulletin No. 1, The Duke Forest: A Demonstration and Research Laboratory*, (Durham: June, 1935), 10.

¹⁶ *Ibid.*, 11 and 64-6.

forestry management techniques.¹⁷ Korstian's estimation did not anticipate changes to paper production tied to the research of Charles Herty and others in the late 1920s and early 1930s that transformed the field by developing processes for the utilization of pine in the production of high grade paper. This innovation fundamentally altered the Southern economy.¹⁸ While the scientific development of paper production from cheap pulp woods such as pine led to a flood of paper companies to the South, it did not particularly alter Duke Forest's place in the economic chain. Companies such as Weyerhaeuser and Champion Fiber Company purchased millions of acres of lands in the South and privately managed these forests as the "self-perpetuating" crops described by Korstian.

In his 1935 report, Dr. Korstian remarked on another aspect of Duke Forest that became increasingly prevalent to its management when the Raleigh-Durham-Chapel Hill area experienced rapid growth beginning in the late 1950s – its popularity as a recreation outlet. Although recreation was not paramount to the acquisition of land or management of Duke Forest, it proved a popular recreation site among residents of the area. Korstian noted the "extensive" use of the forest by local residents, students, and university faculty. Five picnic sites – each with a receptacle for trash, a stone fireplace for cooking, and stores of firewood replenished each week – along with trails for walking and horseback riding drew between 3500 and 4000 annual visitors in the 1932-33 and 1933-34 fiscal years. These figures eclipsed 15,000 by 1938 while the New Hope Division (today known as the Korstian Division) housed a Boy Scout camp and cabin for the Women's Athletic Association of Duke University's Women's

¹⁷ Ibid.

¹⁸ See Thomas D. Clark, *The Greening of the South: The Recovery of Land and Forest* (Lexington: The University Press of Kentucky, 1984) for a description of this process, especially the chapter "Charles Herty's Legacy", 102-113.

College. Other areas of Duke Forest were utilized by groups such as the Durham City Hiking Club and local biological clubs.¹⁹ Many amenities in Duke Forest, including roads, bridges, and recreational improvements, were built by a Civilian Conservation Corps unit housed there for 17 months from mid-1933 to late 1934.²⁰

Although Duke Forest was envisioned as an educational and demonstration forest, Dr. Korstian supported its utilization as a recreational outlet despite some negative consequences for wildlife associated with illegal hunting and the propensity of some nearby residents to allow their dogs to run loose. From Dr. Korstian's perspective, the interaction of residents, students, and faculty with Duke Forest was to be encouraged for two reasons. First, he recognized the growing importance of recreation in American social life and, by extension, forest management. He also considered recreation a major component in raising awareness among the public concerning the care and use of American forests to promote farsighted management of forest resources. This sentiment was neatly summarized in a single statement by Korstian: "Such use is encouraged in recognition of the important place which recreation is rapidly assuming in properly coordinated forest management."²¹

The views expressed by Korstian reflected a growing prevalence in the 1930s of the philosophy that recreation was a vital component of conservation, which included human and natural resources. The embodiment of this connection was the work of the Civilian Conservation Corps (CCC) on the nation's forests, parks, and farms which included efforts aimed at landscape rehabilitation as well as construction of recreational amenities. Neil Maher

¹⁹ Ibid., 69-70 and Lynch, 59-61.

²⁰ Durden, 428.

²¹ Korstian, 68-9.

examined these bonds in his monograph, *Nature's New Deal*, which argued that the CCC represented a key link between the conservation efforts of the Progressive Era and the rapid growth in the "modern" environmental movement in the United States following World War II. For Maher, the CCC accomplished this in two ways: expanding the national debate on conservation beyond mere efficient use of natural resources to include human health (particularly the role of outdoor recreation); and, publicizing its projects via national media, which provided a means to broaden the conservation movement via increased interaction between the general public and professional conservationists from scientific and government programs.²²

The expression of these views by Dr. Korstian in relation to Duke Forest add another layer to Maher's analysis given Duke Forest's status as a university-owned tract that ostensibly served as an outdoor laboratory for forestry students, rather than a park or farm land. Despite this status, Korstian not only accepted, but encouraged, recreational use of Duke Forest. This encouragement shows how widespread the views on conservation, recreation, and public health described by Maher were. This mentality also meshed with the high-minded mission of Duke University, including a sense of community building that the university was eager to instill. From the 1930s until the 1960s, the conflation of scientific research and recreation at Duke Forest seemingly co-existed in a happy medium. The site was large enough to allow scientific experimentation in areas not frequented by outdoor enthusiasts while the number of visitors remained low enough to allow effective control.

²² Neil Maher, *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (New York: Oxford University Press, 2008), 10-11 and 161-4.

This situation changed during the 1960s, a decade described by various historians as one in which the American environmental movement seemingly exploded into the national consciousness, driven by pollution concerns and culminating with the Earth Day programs of 1970.²³ Simultaneously, the Raleigh-Durham area experienced demographic and economic changes tied to development of the region as a center for research based industry. The Research Triangle Park (RTP), a roughly 5000-acre entity established in the late 1950s and designed to develop working relationships between the area's research universities and technology oriented industry, epitomized this trend. RTP struggled to attract occupants during the first few years of its existence due in part to lingering racial attitudes and statewide economic policies, which both inhibited efforts to attract companies from outside the state. By the end of the 1960s, however, state politicians and business leaders had laid the groundwork for a more attractive social and business environment. This spawned a major shift in North Carolina's economy tied to development of RTP and similar technology parks in the Raleigh and Charlotte metropolitan areas.²⁴ The influx of people into the Raleigh-Durham-Chapel Hill area, combined with increasing demand for outdoor recreation in general in North Carolina, altered the development of recreational opportunities and land management in the area that extended to the management and utilization of Duke Forest.

²³ The general view that the 1960s were a time of broad, grassroots environmental activism is articulated in various histories on the American environmental movement. For recent examples see Benjamin Kline, *First Along the River: A Brief History of the U.S. Environmental Movement*, 4th Edition (Lanham, Maryland: Rowman & Littlefield Publishers, Inc. 2011); Samuel P. Hays, *A History of Environmental Politics since 1945* (Pittsburgh: University of Pittsburgh Press, 2000). For a specific look at how 1960s environmentalism reflected the concerns of middle class women, college students, and revitalized liberals see Adam Rome, "Give Earth a Chance: The Environmental Movement and the Sixties", *The Journal of American History* 90, no. 2 (Sept., 2003), 524-54.

²⁴ Milton Ready, *The Tar Heel State: A History of North Carolina* (Columbia, South Carolina: University of South Carolina Press, 2005), 370-3.

The economic and demographic shifts in North Carolina generally, and the Raleigh-Durham area specifically, contributed to a prioritization of outdoor recreation amongst citizens and government officials in the first half of the 1960s. This was a response to the perceived dearth of outdoor recreation opportunities in the state amidst national efforts to promote recreation. In 1963, an article in the *Raleigh News and Observer* encouraged North Carolina farmers to view recreation as a profitable “crop” that was part of the \$20 billion a year recreation industry. R.M. Dailey, state conservationist for the Soil and Conservation Service (SCS) noted “Every day more and more families are turning to the countryside for the recreation they cannot find in the large metropolitan areas.” In this vein, the Food and Agriculture Act of 1962 included provisions for federal assistance to develop non-federal rural farmland as recreational outlets, usually in the form of tax credits or loans, if the individual land owner took the initiative.²⁵

The push for outdoor recreation included the notion that such activity was both a potential economic boon and part of the growing acceptance of the role of outdoor recreation in a broader conservation plan. The same year that North Carolina farmers were being urged to consider the economic potential of developing farmland for recreation, Governor Terry Sanford, citing a recent State Recreation Commission (SRC) report, argued for more recreation opportunities and the need to develop a long-term plan to address recreation needs. The SRC report noted that demand for outdoor recreation was expected to increase between four- and

²⁵ “Sell Recreation as New ‘Crop’, Farmers Urged,” *Raleigh News and Observer*, February 4, 1963. The expenditure on outdoor recreation in the United States has grown significantly since the early 1960s, from an estimated \$20 billion per year to more than \$650 billion spent in 2011. For these figures see “The Outdoor Recreation Economy”, Outdoor Industry Association, accessed June 10, 2016, https://www.asla.org/uploadedFiles/CMS/Government_Affairs/Federal_Government_Affairs/OIA_OutdoorRecEconomyReport2012.pdf.

ten-fold by 1980.²⁶ The Soil and Conservation Service estimated North Carolina would require the development of roughly 23 million acres of land to meet this demand while the National Park Service urged “vigorous action” in North Carolina to preserve “unspoiled natural playgrounds” along the coast and in the Piedmont region of the state.²⁷ The dire state of outdoor recreation opportunities was highlighted further in 1968 when a SRC intern, Randy Gregory, authored a report on the need for recreation for migrant workers so they might have “something to do besides getting drunk, gambling, and having sex with just anyone.” Generalizing language aside, Gregory saw little hope for expanded recreational opportunities for migrant workers because, among other things, many communities in North Carolina didn’t provide such opportunities for local citizens much less temporary residents who did not vote in state and local elections.²⁸

The state park system reflected the dearth of outdoor recreation amenities in North Carolina during the 1960s, and fears among conservationists and state and local government officials that the state faced what the State Recreation Commission termed a “pitifully inadequate” future.²⁹ These concerns proved prescient as the decade unfolded. In 1963, when Governor Sanford cited the SRC report, North Carolina’s state park system consisted of sixteen units totaling roughly 50,000 acres in a state with a population of better than 4.5 million and an area of over 50,000 square miles. The neighboring states of Virginia, South Carolina, and Tennessee were comparable, at the time, in several respects, including acreage, number of

²⁶ “Governor Wants Recreation Plan,” *Raleigh News and Observer*, March 16, 1963.

²⁷ “Sell Recreation as New ‘Crop’”; “More Land Urged for Tar Heel Use,” *Raleigh News and Observer*, October 4, 1964; “Conservationist Sees Need for Recreation,” *Raleigh News and Observer*, May 8, 1966.

²⁸ “Migrant Workers Need Recreation But Find Little,” *Raleigh News and Observer*, September 8, 1968.

²⁹ “Governor Wants Recreation Plan.”

units, and ratio of parks to people.³⁰ Until the early 1960s, these states also shared similar development histories, including expansion via federal largesse in the 1930s and a reliance on private donations of land. However, by the end of the decade these neighboring states greatly increased their budget allotments for state parks and established state-level administrative programs for land acquisition and capital improvements.³¹ For example, in 1969 the State of South Carolina appropriated \$10 million for its state parks, a figure that surpassed North Carolina's total for the previous fifty-seven years combined.³²

Meanwhile, the North Carolina General Assembly continued its pattern of unwillingness to fund land acquisition in any form with an occasional allocation for capital improvements in existing state parks, but these were infrequent and small. While the state did confer increased recognition of management of state parks during the 1950s – such as the creation of a Division of State Parks and the adoption of official management principles – the overall system had developed little since the establishment of Mt. Mitchell State Park. Further, what advancement had occurred stemmed largely from federal programs, such as demonstrational recreation projects in the 1930s that were turned over to the state. This pattern continued into the 1960s when North Carolina purchased several tracts of land for state parks with funds provided by the federal Land and Water Conservation Fund established in 1965. As late as 1970, more than 80

³⁰ In 1963, Virginia had twenty state park units totaling about 29,500 acres. South Carolina had 31 units totaling about 49,000 acres. Tennessee had 22 units at just over 66,000 acres. These statistics from Landrum, *Histories of the Southeastern State Parks System*. Virginia, Tennessee, and North Carolina are comparable in terms of size and all three had similar populations in the early 1960s (Tennessee at about 3.5 million and Virginia just under 4 million). South Carolina was the smallest of the group in terms of size and population (about 2.4 million in 1963). See "American Fact Finder", accessed March 10, 2017, <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

³¹ Landrum, *Histories of the Southeastern State Parks Systems*.

³² "A Way to 'Catch Up' in Parks," *Durham Morning Herald*, February 24, 1974.

percent of the state park system's total acreage, which stood at just over 70,000 acres, came from gifts by private donors.³³

The dim portrait of North Carolina's outdoor recreation extended to the Raleigh-Durham-Chapel Hill metropolitan area. While the area had parks such as Brookside Park (now Lions Park) and Pullen Park, both established in Raleigh around the turn of the twentieth century, these were amusement-themed parks with carousels, bowling alleys, and swings located in downtown areas. Larger entities comprised of forested tracts and wildlife habitat did not emerge until the 1930s, when Duke Forest materialized and the National Park Service established Crabtree Creek Recreational Demonstration Area, which later became Crabtree State Park (renamed William B. Umstead State Park in the 1950s). Duke Forest and Umstead State Park were essentially the only outdoor recreation options until the early 1980s, when the Army Corps of Engineers completed work on two massive reservoirs that served as the basis for the Jordan Lake and Falls Lake State Recreation Areas. Indeed, the area lacked county parks until the late 1980s when Wake County, home to Raleigh, established Lake Crabtree County Park in 1989. Neighboring Orange County was without county parks until the opening of the Blackwood Farm County Park in 2001.

The post-World War Two shift in American environmentalism from overt focus on wilderness and management of natural resources to more holistic concerns such as pollution and "quality of life" issues, including access to clean air and water, combined with the spike in demand for outdoor recreation in the Raleigh-Durham area that accompanied rapid population

³³ Ney C. Landrum, editor, *Histories of the Southeastern State Park Systems* (Association of Southeastern State Park Directors, 1992), 108-12.

growth and demographic change that began in the 1960s, meant changes for Duke Forest. Academically, Duke Forest broadened its curriculum after the 1960s, from a traditional forestry program committed largely to inventory and mapping to wider environmental issues such as studying acid rain and hardwood seed dispersal. By the early 1980s, Duke Forest also began analyzing the issue of urban-rural interface, the spaces where urban areas give way to the countryside, often resulting in clashes over resource utilization. Duke Forest was ideally situated for research given the rapid development of the area beginning in the 1960s. This situation was referred to in a 1981 study by Duke Forest Resource Manager Judson Edeburn as altering the original demonstration forest and educational objectives laid out in the 1930s.³⁴

An example of experimentation carried out on Duke Forest regarding urban-rural interface was the Free Air Carbon Dioxide Enrichment (FACE) open-air study begun in the mid-1990s, itself part of a larger global study begun in the 1980s, with stations in Australia, China, and Italy, among others.³⁵ FACE experiments sought to simulate forest growth in the carbon dioxide enriched levels expected in the earth's atmosphere by 2050, and to test hypotheses that trees would grow faster and absorb higher rates of carbon dioxide. The FACE experiments involved construction of tower rings around selected stands of trees that exposed the trees to heightened levels of carbon dioxide. By the early 2000s, data collected at Duke Forest and Oak

³⁴ Judson D. Edeburn, Duke Forest Resource Manager, *Management of the Duke Forest* (School of Forestry and Environmental Studies, Duke University, Durham, 1981), 28-9.

³⁵ In the United States, FACE experiments were funded by the Department of Energy with stations in several states, including North Carolina (Duke Forest), Tennessee (Oak Ridge National Laboratory), and New York (Brookhaven National Laboratory). Globally, and in the United States, the total number of FACE sites varied due to closing of stations, often due to funding issues. The majority of FACE experiments were concluded by the early 2010s. See Richard J. Norby and Donald R. Zak, "Ecological Lessons From Free-Air CO₂ Enrichment (FACE) Experiments", *Annual Review of Ecology, Evolution, and Systematics* 42 (Dec., 2011), accessed June 12, 2016, <http://www.annualreviews.org/eprint/wJxDadSqMz2VupKBxZay/full/10.1146/annurev-ecolsys-102209-144647>.

Ridge National Laboratory (Tennessee) related to pine forests and conditions in the southeastern United States indicated elevated growth levels among plants exposed to high levels of carbon dioxide. Results were less promising, however, regarding the ability of these plants and trees to fully absorb carbon dioxide levels expected by 2050.³⁶

The 1980s witnessed an episode that revealed how significant Duke Forest was to the surrounding population in terms of recreation and perceptions of quality of life in the region. However, it also revealed misunderstandings amongst the public and government officials concerning Duke Forest, including the role of scientific research on the site and the history and size of the forest itself. In 1986, Duke University commissioned the Urban Land Institute (ULI) - a non-profit institution formed in 1936 in Washington, D.C. composed of land developers, builders, architects, city planners, investors, planning and renewal agencies, and financial institutions – to prepare a study on possible development strategies for Duke Forest. The ULI report discussed the strong public affinity for Duke Forest while highlighting the “historic opportunity” before Duke University to capitalize on the value of the land and its place within the Research Triangle community, including the potential for highly profitable land sales. The ULI report also discussed which areas of Duke Forest were best suited for commercial and residential development while criticizing Duke University for a disjointed approach to management of its various land holdings.³⁷

³⁶ “Duke Open-Air Experiment Results Could Deflate Hopes That Forests Can Alleviate Global Warming,” *Duke Today*, February 16, 2004, accessed June 12, 2016, https://today.duke.edu/2004/02/results_0204.html; “Forestry Carbon Dioxide Projects to Shut Down,” *Nature: International Weekly Journal of Science* 18 (November, 2008), accessed June 12, 2016, <http://www.nature.com/news/2008/081118/full/456289a.html>.

³⁷ Urban Land Institute, “Duke University, Durham, North Carolina: An Evaluation of Land Use Development Strategies for Duke University,” 1986, box 1, folder “Land Resources Committee, Academic Subcommittee, IA Minutes, 1987, September 2 – December 13, A92-49.4”, Land Resources Committee Records, 1983-1992, David M. Rubenstein Rare Book & Manuscript Library, Duke University (hereafter cited as LRC Records).

While the ULI report was largely an assessment of the *potential* development of Duke Forest, when word reached the surrounding community, it produced a wave of protest amongst Duke University faculty, students, and alumni as well as residents of the area. Its intensity was not anticipated by Duke University officials. The depth of the reaction reflected uncertainty from university officials, and the ULI, regarding the place of Duke Forest in the surrounding community in terms of recreation, history, and conservation approaches. It also revealed the tenuousness of balancing development and conservation pressures. The recalcitrance of the situation became evident in the comments of a local real estate executive regarding the proposed development. Nick Tennyson, a Duke alumni and president of the Home Builders Association of Durham and Chapel Hill, noted that while he would be personally disappointed if Duke Forest was commercially developed, his professional perspective was that “Given the opportunity, I’m sure I’d be at the head of the line” regardless of personal affinity.³⁸

The place of Duke Forest in the recreational universe of the Research Triangle in the mid-1980s proved difficult to gauge officially. An open-door policy towards citizen utilization of the area had been maintained since its establishment in the early 1930s, but the university did not actively promote the area as such. Nor did it keep detailed records on attendance. While the RT area historically lacked large recreational destinations, the demographic surge initiated in the 1960s led to the establishment of the Jordan Lake and Falls Lake Reservoirs. Flood control and water quality provided the foundational motivations for each reservoir, but they also encompassed thousands of acres of land managed for recreation and wildlife habitat purposes.

³⁸ “Pressure Builds to Develop Parts of Duke Forest,” *Raleigh News and Observer*, April 5, 1987; “Weighing Options for a Forest,” *Raleigh News and Observer*, April 10, 1987.

Also, the long popular William B. Umstead State Park provided recreational amenities that from the 1930s to the 1960s amply served an area more rural than metropolitan in character. Indeed, in 1983, just four years before the public uproar over the ULI report, Duke Forest was featured in an article in the *Raleigh News and Observer* highlighting winter recreation opportunities in the RT. The article described Duke Forest as perhaps the “best kept . . . secret in recreation” with ample access routes, smallish crowds (although it was noted that the crowds were larger in summer), and a slew of tree species that had largely disappeared from the Piedmont landscape, including sweetgum, yellow poplar, maple, beech, and various species of oak.³⁹

Despite the elusiveness of hard numbers regarding visitation to Duke Forest, clearly the *idea* of Duke Forest occupied an esteemed spot in the regard of residents and local officials. Amidst the citizen clamor, and the claims of Duke University and ULI that the whole episode was an overblown reaction to what amounted to a think tank exercise, planners for both Orange County and the City of Durham asserted they assumed “indefinite preservation” of Duke Forest. Barry M. Jacobs, the Orange City Planning Board Chair and Duke alumni, remarked: “These kinds of resources [meaning Duke Forest] can’t be purchased” and expressed his own disappointment that the idea was even considered. Further, Orange County and the towns of Chapel Hill and Carboro agreed in 1986 to establish a 30,000-acre “buffer zone” around Duke Forest, including the heavily utilized Blackwood and Korstian Divisions. To regulate development in this zone, the three accepted restrictions such as not providing sewer lines to the buffer zone and two-acre minimums on residential lot sizes.

³⁹ “In Winter, You Can See Forest and the Trees,” *Raleigh News and Observer*, January 14, 1983.

Personal correspondence from area residents to newspapers and university officials – often written by individuals involved in education or the “knowledge industry” prevalent in the Research Triangle – frequently attached high-minded characteristics to Duke Forest that went beyond mere recreation. Willian Neely, a cartoonist and founder of the Save Duke Forest organization that emerged in the wake of the ULI report, stated that many RT residents viewed Duke Forest as a “birthright” and repeated an oft-held (and incorrect) view that the land making up the forest was acquired ambiguously by Duke University with no purpose in mind.⁴⁰ Other supporters of preserving Duke Forest inked letters that began with laudatory remarks on the scientific or recreational value of the area before expanding into more abstract arguments concerning patriotism, social conscience, or influence on future generations.

For example, Robert D. Sutter, an RT resident and Endangered Species Botanist for the State of North Carolina, penned correspondence to Duke University officials that opened with a statement of the scientific value of Duke Forest at a local and national level. He quickly diverged into commentary that conflated the preservation of Duke Forest with loftier goals. Sutter argued that Americans, as members of “one of the most advanced and prosperous nations have a greater responsibility with our greater knowledge and foresight. Protection of wilderness areas and habitat for endangered species doesn’t end on some mountain peak in the west . . . We must continually make statements that the protection of nature is valuable, viable, and correct. We have this opportunity with Duke Forest.”⁴¹ Martha Klopfer, Chair of the Board of

⁴⁰ “Duke Forest: It Holds Different Shades of Green for Admirers, Including One of Money,” *Durham Morning Herald*, June 21, 1987, box 1, folder “LRC AS, IV A-B, Community Response: News Articles and Testimony, A92-49.13”, LRC Records.

⁴¹ Robert D. Sutter to Dr. John Richards, Chair of the Academic Uses Subcommittee, Department of History, Duke University, February 6, 1988, box 1, folder “LRC AS, IV A-B, Community Response: News Articles and Testimony, A92-49.13”, LRC Records.

Directors for the esteemed Carolina Friends School in Durham – recognized in 1984 as an Exemplary School for elementary and secondary education by the U.S. Office of Education – maintained that Duke Forest was critical to the school as a teaching tool. Klopfer also contended that any change in the university’s policy towards management of Duke Forest could be expected to produce similar changes in land policies of the surrounding local governments. She concluded: “Any sacrifice of the integrity of that Forest would have profound effects on the attitudes of past and present students, as well as impacting future classes.”⁴²

Faculty and staff at Duke University chimed in with views that Duke Forest’s value lay in its ties to the history of the area and its attractiveness to potential faculty. Betty Young, a librarian on the East Campus of Duke University, praised the “excitement” of finding rare and unusual plants on hiking forays but also highlighted the presence of the past at Duke Forest. Young noted that not only was the forest a “treasure” bestowed by the university’s founder, James B. Duke, but also housed the remains of old mills and homesteads buried by time and foliage but awaiting rediscovery, a portal to the community’s past.⁴³ Dr. Michael Hecht of Duke University’s Biochemistry Department wrote university president Keith Brodle that he explicitly chose employment at Duke over other universities due to the opportunity to pursue research in the “semi-rural environment provided by Duke Forest.” Hecht continued, “As the areas around other universities become more and more crowded, the undeveloped nature of Duke Forest will become increasingly valuable in attracting faculty, researchers, and students to an academic environment with some breathing space.”⁴⁴

⁴² Martha Klopfer to Dr. John Richards, November 6, 1987, box 1, folder “Community Response”.

⁴³ Betty Young to Dr. John Richards, 2 June 1987, “Community Response”.

⁴⁴ Michael Hecht, PhD. to President Keith Brodle, Duke University, 10 October 1987, “Community Response”.

Much of this correspondence was addressed to Dr. John Richards, Chairman of the Academic Uses Subcommittee, itself part of the larger Land Resources Committee for Duke University, formed in response to the ULI report to assess management of university land holdings. The Land Resources Committee gathered information on Duke Forest including its history, place in the community mindset, and future management. The Academic Uses Subcommittee consisted of members from various disciplines within the university, including history, botany, and business, and others such as Judson Edeburn, Duke Forest Research Manager, and Harold "Pete" Steen, of the Forest History Society. Its charge was to explore additional academic utilization of Duke Forest beyond silvicultural research. The Land Resources Committee (LRC) and Academic Uses Subcommittee (AUS) released reports in 1988 with recommendations for future management of Duke Forest and an assessment of its perception within the population of the Research Triangle. Combined with minutes from several meetings of the LRC and AUS, a picture emerged of Duke Forest as an important entity in the shifting management of open space in the RT.

At a meeting on April 8, 1988, to discuss the groundwork for future management of Duke Forest, members of the LRC noted a need for greater institutional strength relative to the forest itself, including creation of an independent budget and protocol for addressing development on lands that bordered the forest. The meeting also revealed that only anecdotal data on recreational use existed, necessitating the need to establish a more organized system to track recreation. Further, the realities of growth in the Research Triangle and its influence on recreation and land management surfaced. The meeting participants discussed the reality that several municipalities in the region were expanding and the issues they faced. For example, the

municipality of Carborro was desperately seeking to develop its tax base but, for various reasons, was essentially confined to expansion and development to the west of the city, directly towards the Blackwood Division of Duke Forest. The town of Chapel Hill, meanwhile, was publicizing plans to annex land to the edge of the Durham Division of the forest and slightly beyond the boundary of the Korstian Division.⁴⁵

Essentially, the LRC and AUS sought to address the reality that development of the RT was proceeding and this would affect Duke Forest. The prevailing sentiment among committee members was that the best course of action, for both Duke University and Duke Forest, was a sensitive and thoughtful analysis that accepted the reality of development rather than insisting on an unrealistic vision of pristine woodlands. An additional goal concerned the development of greater diversity in the academic uses for Duke Forest to both improve the value of the forest to the surrounding community and to improve the standing of the School of Forestry, which, in the view of committee members, had slipped in the late 1970s and early 1980s. Several members identified the fundamental issue as an overreliance on timber production at Duke Forest, which had the dual effect of diverting research time and establishing a sense that Duke Forest was merely a School of Forestry resource rather than a university wide resource.⁴⁶

By the end of 1988, both the AUS and LRC submitted reports on the future utilization and management of Duke Forest. The thrust of these reports concluded that the value of Duke Forest as an academic resource lay in the size and stability of its land base, enhanced by

⁴⁵ Minutes, Land Resources Committee, April 8, 1988, box 1, folder "Land Resources Committee Minutes, 8 April 1988, A92-49.2", LRC Records.

⁴⁶ Ibid; Minutes, Land Resources Committee, February 1, 1988, box 1, folder "Land Resources Committee Minutes, 1 February 1988", LRC Records.

research baselines that extended back to the 1930s and measurements on various plots of land recorded by Clarence Korstian. To protect this, they recommended that no further residential development be permitted on existing Duke Forest land. The AUS called for identification of academic priorities, such as long term ecological studies and archaeological research, and suggested they be directed to specific areas of Duke Forest by taking advantage of its noncontiguous arrangement. Thus, some areas lent themselves to research based on their relative isolation while others, such as the Durham Division, were better suited for projects such as a proposed outdoor theater due to its proximity to campus and existing use as a recreational outlet. The AUS strongly discouraged a “facile” approach to land sales and land swaps. Specifically, the temptation of selling land near campus with high commercial value and replacing it with lower value land further from campus was decried for the loss of research baselines and opportunities.⁴⁷

The broader report by the LRC, released in December 1988, incorporated the observations of the AUS in its policy recommendations for management of Duke Forest. These included the observation that Duke University should not divest itself of Duke Forest land – and should actively seek further acquisition – but with the caveat that a more sophisticated management approach was necessary to balance research with necessary revenue-production and interaction with the surrounding communities. The LRC implored the university to utilize sensitivity to physical features such as wetlands, open spaces, and historic and archaeological resources in further management and acquisition. Other recommendations included the

⁴⁷ Land Resources Academic Subcommittee, “Academic Priorities Report for Duke Forest”, box 2, folder “Report of the Land Resources Academic Subcommittee, 31 May 1988”, LRC Records.

establishment of relationships with local and county governments on issues such as zoning, development of partnerships with private landowners in the area to develop buffer zones and other mitigating features, and authorship of recreation management plans that prevented public recreation from conflicting with the academic goals of forested areas owned by Duke University.⁴⁸

The LRC report also contained a section on community concerns that identified a paradoxical obstacle to implementation. The report acknowledged the public's "overwhelming sentiment" towards preservation of Duke Forest but noted that this was buttressed by various misunderstandings that were shared by government officials. These perceptual fallacies included confusion over what land constituted Duke Forest (the public falsely believed several forested areas in the RT were part of Duke Forest), a failure to appreciate the difference between commercial and academic development of Duke Forest land, and the notion that Duke Forest was comprised of pristine land when the reality was it was once heavily worked agricultural land.⁴⁹

The issue of perception versus reality regarding Duke Forest, and how public perception could potentially affect research, was discussed in detail at a LRC meeting in February. At that gathering, the general public's false impression of Duke Forest as untouched wilderness was noted as a potential impediment to scientific research. At one point in the meeting, it was noted the public would be "appalled" if they knew of some experimentation at Duke Forest,

⁴⁸ Land Resources Committee, "Report and Recommendations of the Land Resources Committee (Highly Confidential)", box 2, folder "Report and Recommendations of the Land Resources Committee (Highly Confidential) 9 December 1988", LRC Records.

⁴⁹ Ibid.

such as the purposeful introduction of destructive beetles to study negative effects on vegetation. Since several public officials also saw Duke Forest as pristine, it was feared that the autonomy of the university was threatened, particularly if local officials sought “protection” of areas in Duke Forest because the public viewed them as recreation areas rather than sources of scientific research. One LRC member argued that despite this misperception, the demographics of the RT were advantageous to the development of sensitive management plans because the area was comprised of a “sophisticated” and “educated” public, and not “a bunch of rednecks running around . . . in pick-up trucks with gun racks on them.”⁵⁰ This unflattering statement regarding certain segments of the population reflected poorly on the attitudes of some committee members, as it exemplified the elitism that academics often face accusations of and a facile compartmentalization of the area’s population as “educated” or “rednecks.”

A surprising contributing factor to the notion that Duke Forest was undervalued as an academic asset was the lack of excitement it generated among students and faculty in terms of conducting research. Apathy towards Duke Forest as a research site, despite the seemingly ideal arrangement of a large forested tract controlled by the university itself rather than a public entity, resulted from two causes. First, the proximity of Duke Forest to campus was often viewed negatively by students and faculty because it lacked the allure of doing research in far-away locales, such as South America or Africa. Second, the type of research undertaken at Duke Forest was viewed tepidly by many student and faculty researchers. One example was the perception that loblolly pine, the prevalent tree species on Duke Forest, was essentially a

⁵⁰Minutes of the LRC Academic Subcommittee, February 1, 1988, box 1, folder “LRC Academic Subcommittee, I.A., Minutes, 1988, January 15 – April 29”, LRC Records.

“weed tree”. While the loblolly pine forest provided value for its ability to provide relatively quick results – for example, systemic conclusions drawn from a 100- to 120-year study of a loblolly pine forest would equate to a 600- to 800-year study on a species such as Douglas fir – it represented “low class research” to many.⁵¹

The portrait of Duke Forest as a misunderstood recreational outlet and underappreciated research entity reflected the demographic and academic shifts occurring in the 1970s and 1980s in the Research Triangle and Duke University, which, in turn, altered the status and development of Duke Forest moving into the 1990s and 2000s. While the Urban Land Institute’s report did not produce widespread commercial development on Duke Forest or instigate a massive land sell-off as initially feared, it did force a re-examination of the utilization of Duke Forest in a rapidly changing setting, especially in terms of recreation and land management. A prime example of this shift is the interaction of Duke Forest with wildlife. Duke Forest was established as a working forestry laboratory that achieved a level of self-sufficiency via timber sales. By the time of the ULI episode, the ability of Duke Forest to pay its bills without converting wholly to timber sales was seriously questioned and the development *around* Duke Forest had, unintentionally, thrust it into a greater role as recreational outlet and wildlife habitat, a situation that deepened during the 1990s and beyond. The Triangle Land Conservancy, a non-profit agency formed in 1987 seeking to purchase undeveloped land in the RT for preservation purposes, estimated the amount of land lost to development in the RT increased over fifty per-cent between 1987 and 1997. Meanwhile, in the early 2000s, the North

⁵¹ Minutes of the LRC Academic Subcommittee, February 12, 1988, box 1, folder “LRC Academic Subcommittee, I.A. Minutes, 1988, January 15-April 29”, LRC Records.

Carolina Department of Environment and Natural Resources estimated the state lost roughly 277 acres of land per day to commercial development.⁵²

In this context, the status of Duke Forest as a recreational outlet and wildlife habitat expanded while research shifted to broader subjects. Closer analysis of recreational usage led to estimates of between 180,000 and 200,000 annual visitations to Duke Forest by the early 2000s, with average increases of thirty-seven per-cent a year.⁵³ Meanwhile, development planning begun in the early 1990s sought to link Duke Forest to Eno River State Park via wildlife corridors and low-impact hiking trails. This plan was part of a larger development model for greenways and open space preservation on the Research Triangle. The impetus for this plan extended back to agreements among county and local government officials in 1987 to develop a cooperative open space plan for the region. The New Hope Corridor Master Plan, released in 1993, also detailed utilization of land sources such as utility easements owned by Duke Power, rights of way owned by Southern Railroad, and rights of way associated with major thoroughfares in the area such as U.S. 70.⁵⁴ As of 2016, the New Hope Corridor Master Plan continued to function as a baseline for open space development, with the scheduled opening of the 75-acre Hollow Rock Access Area, itself part of the larger New Hope Preserve.⁵⁵

The management of Duke Forest itself has also shifted towards greater acknowledgement of preservation efforts and wildlife management while attempting to

⁵² Phillips, 11.

⁵³ Ibid., 102.

⁵⁴ Chapel Hill, North Carolina: Department of City and Regional Planning, "New Hope Corridor – Open Space Master Plan: Proposals for Linking Duke Forest and Eno River State Park," (University of North Carolina at Chapel Hill, April 19, 1993).

⁵⁵ "New Hope Preserve", New Hope Creek Corridor Advisory Committee, accessed June 16, 2016, www.newhopecreek.org/preserve/preserve.html.

address issues associated with this shift. Since the late 1980s, Duke University has sold off some tracts to entities such as Orange County or the Triangle Land Conservancy as part of broader open space management efforts. Duke University has also increased the amount of land designated for “non-manipulative” research, or research dedicated to observation that does not require altering vegetation or soils. While some areas were designated as such as far back as the 1950s – for example, the Henry J. Oosting Natural Area was set aside in 1959 by the Duke University Board of Trustees – such acreage has increased significantly since the late 1980s. The largest example was the inclusion of better than 1200 acres of Duke Forest land in the North Carolina registry of Natural Heritage Areas in 2004.⁵⁶

Another example of how regional development has prompted new management issues for Duke Forest is the effort to control the white-tailed deer population. Since licensed hunting is not allowed on Duke Forest and no other predators of white-tailed deer are present, the deer population in Duke Forest exploded during the 1990s and early 2000s, leading to widespread defoliation and disruption of experiments. By 2008, some estimates placed the density of the white-tailed deer population at eighty per square mile. In response, Duke Forest established annual controlled hunts to cull the deer population, especially on the heavily utilized Durham, Blackwood, and Korstian Divisions. These hunts are not open to the public and the selected divisions are closed for the duration of the hunts. Only limited groups selected by Duke Forest are permitted to harvest deer. Further, the types of weapons allowed are also controlled. In 2015, only bow and arrow hunting was allowed within the Durham and Korstian Divisions, while both bow and gun hunting were permissible in the Blackwood Division. Since 2008, the hunts

⁵⁶ Phillips, 12.

average seventy or more deer being taken per year. These hunts are supported by Duke Forest management as an effective tool while public dissatisfaction seems minimal.⁵⁷

Academically, the period that contextualized the ULI report and LRC response presaged a larger shift for both Duke Forest and Duke University's environmental programs. Duke Forest was part of the School of Forestry – officially established in 1938 – until 1974, when it was reorganized as Forestry and Environmental Studies. This reorganization symbolized a broadening of the school's research beyond traditional silviculture towards a more holistic, environmental management philosophy. For example, in 1991 the Forestry and Environmental Studies program merged with Duke University's Marine Laboratory under the umbrella of the School of the Environment. In 1995, the School of the Environment became the Nicholas School of the Environment, which it remains today, following a \$20-million gift by Boston-based business executive Peter M. Nicholas.⁵⁸

This evolution of the School of Forestry to the Nicholas School of the Environment extended to research projects on Duke Forest. As noted earlier, until the late 1960s Duke Forest almost exclusively trafficked in customary forestry studies related to trees – including species diversity, growth rates, and reforestation. As late as the early 1980s, a pair of archaeological studies undertaken in 1976 and 1977 as part of a joint Archaeology-Classical Studies introductory class appear to be the only interdisciplinary activities to occur on Duke Forest.⁵⁹

⁵⁷ Mark Schultz, "Brief: Hunt in Duke Forest to Cull Deer Population Seems Successful, Official Says," *Raleigh News & Observer*, January 3, 2009; Mark Schultz, "Duke Forest Hunt Takes 75 Deer," *The Chapel Hill News*, February 12, 2013; "Three Duke Forest Divisions to Close Weekdays for Hunting Season," *Duke Today*, September 24, 2015, accessed June 28, 2016, <https://today.duke.edu/2015/09/deerculling>.

⁵⁸ Phillips, 65.

⁵⁹ "A Preliminary Report on the 1976 Archaeological Season Conducted by the Department of Classical Studies in the Duke Forest" and "Preliminary Report of the 1977 Archaeological Season in Duke Forest", box 1, folder "Duke

Since the late 1980s, the pace of interdisciplinary activity on Duke Forest has increased and includes research conducted by other schools in the area, especially the University of North Carolina at Chapel Hill. More striking is the type of research conducted, which entails greater focus on topics such as soils, hardwood seed dispersal, and the effects of urban development on aspects such as stream quality or growth patterns relative to increased carbon dioxide exposure. This includes the FACE experiments discussed earlier. The earlier research done on Duke Forest, especially measurements carried out on sample plots set up by Clarence Korstian in the 1930s, now represents a major asset of Duke Forest – an accumulation of nearly 85 years of data that provides a crucial baseline for ongoing studies.⁶⁰

Another divisive issue related to Duke Forest remains the balancing act of Duke University regarding protection of the land versus development. In 1991, just a few years after the ULI episode, Duke University officials were shocked to discover a 1000-acre tract of land within Duke Forest topped an Orange County list of potential landfill sites. Although the landfill ultimately was not placed on that tract, the attitude of county officials was that Duke Forest was essentially no different than any other piece of land in the area. Orange County Commissioner Stephen Halkioitis voiced surprise at the outrage of Duke officials, concluding there “is nothing sacred about any site” and that community-wide interest trumped that of Duke University. Another member of the landfill search committee, geologist Daniel Textoris,

Forest, *Archaeology Reports, 1976, 1977*,” David M. Rubenstein Rare Book & Manuscript Library, John G. Younger Papers, 1976-2001.

⁶⁰ Phillips, 70-2 and “Duke Forest,” Duke University: Nicholas School of the Environment, accessed June 30, 2016, dukeforest.duke.edu.

stated flatly that he saw nothing special about Duke Forest and that, in his view, the research undertaken there could easily be replicated elsewhere.⁶¹

Issues concerning development on and around Duke Forest, and the precise role Duke University should play balancing its financial and community responsibilities in relation to Duke Forest, continued to flare. In 2005, a proposed sale of land to developers drew the ire of local residents, prompting a defense of university policy by John F. Burness, Senior Vice President for Public Affairs and Government Relations at Duke University. Burness argued that Duke University was acting well within its rights to sell land deemed non-essential to research, as per policy laid out by the Board of Trustees in the 1980s. Residents of the area, he remarked, needed to remember that Duke University held a “dual responsibility” as steward of Duke Forest and for generating revenue to maintain its academic mission.⁶² This argument did not satisfy some, who charged Duke University with a callous “open for business” attitude regarding its various land holdings in the area and questioned the legitimacy of the university using its tax-exempt status as an educational institution to bolster revenue generation.⁶³

The most recent development proposals reveal the continuing tenuousness that development pressures place upon Duke Forest, especially development on Duke’s campus. In 2014, proposals were put forth to level parts of two areas – Anderson Woods and Chapel Woods – for construction of, respectively, a massive Health and Wellness Center and expansion of the engineering building. Professors and staff from the biology department vociferously objected to the 70,000-square-foot health and wellness center, noting its construction involved

⁶¹ “Landfill Choice Shocks Duke Officials,” *Raleigh News and Observer*, July 26, 1991.

⁶² John F. Burness, “Duke has Dual Responsibility with Forest,” *The Durham Herald-Sun*, February 17, 2005.

⁶³ Tom Clark, “Duke Profiteers are Setting Poor Example,” *The Durham Herald-Sun*, March 10, 2005.

the removal of oak trees that were several hundred years old and that were central to teaching and research. Concerns were also expressed that the felling of these trees would expose a large area of the forest to additional light, throwing off the composition of the forest and negatively affecting ongoing experiments. The area in question had been eyed previously for development, including expanding the Nicholas School of the Environment, due to its centrality to existing and planned facilities on campus.⁶⁴

The outcry over these planned developments from students and faculty led to some alterations in the proposed building. Plans to expand the engineering building on Chapel Woods were nixed entirely, largely because they were still in the embryonic stage and could be easily cancelled. The Anderson Woods controversy produced a mixed result, since over \$2 million had been invested in design and planning for the site. Construction of the health and wellness center proceeded, but an agreement on mitigation, such as limiting construction to the fringe of the forest and permanently conserving the remaining acreage was reached. A student blog entry on the Nicholas School of the Environment website illustrated how the situation involving Duke Forest and development had changed – and remained the same – since the late 1980s. On the one hand, the blogger noted the huge quality of life contribution of Duke Forest to campus life, including providing habitat for singing birds and a striking backdrop for campus buildings. On the other hand, the student blogger echoed the observations of the Land Resources Committee of nearly thirty years earlier regarding the reality of preservation of Duke Forest amidst rapid development: “Duke is unrolling \$350 million in new building projects over the

⁶⁴ Laura Oleniacz, “Duke Faculty React to Proposal to Build New Health Center on ‘Anderson Woods’,” *The Durham Herald-Sun*, November 22, 2014, accessed April 12, 2016, http://www.heraldsun.com/archive/duke-faculty-react-to-proposal-to-build-new-health-center/article_7381f076-5c8f-5098-a742-7cbcefeece0.html.

next few years and there is no sign of construction slowing down. The *better* parts of Chapel and Anderson Woods will be spared for now, but it will take vigilance from students and faculty to ensure that *some* forests on campus are preserved...” (emphasis added).⁶⁵ Judging by the events of the past thirty years, the sentiment that vigilance will be required to simply keep the *best* parts of *some* forests is a clear-eyed one.

⁶⁵ Scott Winton, “Conserved: Forests on Duke’s Campus”, accessed June 30, 2016, last modified April 14, 2015, blogs.nicholas.duke.edu/birds/conserved-forests-on-dukes-campus/.

CHAPTER VI

CONCLUSION

In a recent study, Tycho de Boer examined communities around North Carolina's Green Swamp in their utilization of the area as a residence and source of economic survival. This involved the interaction of concepts such as community, capitalism, and wilderness.¹ Today, a 15,000-acre section of the Green Swamp is managed by the Nature Conservancy, which received much of the land from a pair of donations made by the Federal Paper Board Company, although other interests continue to eye the region for development. Historically, the region was the site of activities related to the turpentine and paper industries, including heavy timber extraction in the area, before gaining the attention of conservationists.

As de Boer notes, the very concepts of community, capitalism, and wilderness are difficult to assess, complicated further by the idea that individuals simultaneously identify with numerous communities (such as American, North Carolinian, Christian, rural, and so on). Also, he observed, communities are not monolithic, but hierarchical and influenced by internal and external forces. Thus, for communities near swamps and forests, the extraction of resources for

¹ Tycho de Boer, *Nature, Business, and Community in North Carolina's Green Swamp*, Gainesville, Florida: University Press of Florida, 2008.

livelihood, combined with how their shared lives are influenced by environmental changes stemming from this extraction, often produces conflict. In terms of the Green Swamp, de Boer sees “neither the environmentalist’s declension narrative of destructive exploitation nor the corporation’s triumphalist account of...development.” Thus, while physical changes to the Green Swamp might be a “lamentable loss” from an ecological perspective, local communities viewed the area as a significant cultural presence that remained “the swamp.”¹

One element of de Boer’s analysis entailed the establishment of Lake Waccamaw State Park near Green Swamp, which he perceived as an illustration of how conservation projects aimed at the “public interest”, such as state parks, entailed setting aside certain parts of the environment and managing them according to a particular vision of “proper use,” specifically the “leisurely enjoyment of nature.” As described by de Boer, this vision, relative to Lake Waccamaw State Park (LWSP), was not an example of unilateral actions by a state government bureaucracy attempting to impose its will on the citizenry but an episode in the conflicts between competing visions. In the case of LWSP, the centrality of private lumber companies to the conservation of the larger Green Swamp ecological area – largely in the form of land donations – and the fact that the North Carolina Department of Conservation and Development relied heavily on the cooperation of large landowners in the management of many state parks

¹ Ibid., 5.

meant the state government often deferred to the wishes of the lumber companies. Thus, at moments when the state government seemed to incorporate local knowledge into conservation policies in the area, it often reflected the desires of the business and social elites of the region.²

On the surface, the differences between LWSP and the various state parks in the Raleigh metropolitan area – and Duke Forest – outweigh any similarities. LWSP is located in a relatively sparsely populated area of the state and claims geologic significance by its relation to Lake Waccamaw, the largest Carolina Bay in North Carolina. Carolina Bays, of which there are perhaps 20,000 on the Atlantic Coastal Plain, are elliptical depressions almost uniformly oriented on a northwest/southeast axis. These range in size from a few acres to several thousand acres and most rely on rainfall for water supply. So, they are often shallow. The name derives from the presence of large numbers of sweet bay, loblolly bay, and swamp red bay trees around the edges.³ While Lake Waccamaw, a roughly 9000-acre Carolina Bay, receives water from the Green Swamp, it is nonetheless a very shallow body of water, perhaps no more than twenty feet at its deepest and averaging around seven-and-a-half feet for the entire lake.⁴ Conversely, none of the units discussed in this work – Umstead State Park, Eno River State Park, Jordan Lake State Recreation Area, Falls Lake State Recreation Area, or Duke Forest – feature anything as geologically significant and are often described as “typical” Piedmont topography.

² Ibid., 186-9.

³ The origin of Carolina Bays are not scientifically established and numerous theories exist, several of them offering provocative origins such as meteor showers or falling comets. The currently accepted formation theory argues that the wave motion of the receding ocean left standing pools of water that were elliptically shaped by prevailing winds. Today, about 900 Carolina Bays are deemed of significant size and about 80% of these are found in North Carolina.

⁴ <http://www.ncpedia.org/carolina-bays> Last Accessed 5 January 2017.

On another front, LWSP is bound up in the histories of the Green Swamp and surrounding areas, which are on the Coastal Plain of North Carolina. These areas were integral to the turpentine and lumbering industries in the nineteenth century before becoming centers of pulp wood production in the twentieth and twenty-first centuries. Many people continue to derive livelihoods, and identities, directly from their relationship with the land. Meanwhile, the state parks, and Duke Forest, discussed in this work lie in a heavily populated – and rapidly growing – urban and suburban areas populated by large numbers of white collar professionals and people working in service industries. This wide contextual disparity reflects both the difficulty and value of analysis of state parks – their connection to localized conditions and lack of a defined “standard” make them wildly variant. Yet, they can also provide insights into the history of a particular place by revealing what contributed to their initial establishment and how their ongoing management was altered by the changing needs of the surrounding communities.

In terms of the state parks and the privately managed Duke Forest, their establishment and management reflects how relationships with the land in the Raleigh metropolitan area were altered significantly beginning in the 1930s, when the availability of large amounts of denuded farmland provided the impetus for the establishment of both Crabtree Creek Recreational Demonstration Area – later Umstead State Park – and Duke Forest. The immediate popularity of both sites as recreational outlets reflects the fact that even before rapid urbanization following World War Two, the inhabitants of the area were not perplexed or indifferent to the notion of the land as a recreational outlet. Rather, they were enthusiastic about this prospect. Further, the fact that federal spending (USP) and scientific research (Duke

Forest) were central to the establishment of these areas also portended the importance of these factors to the development of the region from the 1940s forward.

The establishment of the other units in this study – Eno River State Park, Jordan Lake State Recreation Area, and Falls Lake State Recreation Area – reveal varying responses to the pace and form of urbanization and population growth in the Raleigh area. The demographic changes to the Raleigh area were more complex than merely more people inhabiting the area. The *type* of people relocating to the area was equally important, as the growth of the Research Triangle Park, combined with explicit efforts to attract companies in the technology and research and development fields, and the presence of premier research universities, attracted large numbers of college-educated, white collar professionals from outside the state and region. This rapid demographic change coincided with the emergence of a broad environmental movement in the United States, which contextualized the development of these projects. The origins of the Eno River, Jordan Lake, and Falls Lake parks can be linked to desires for improved flood control and access to drinking water that local government officials and real estate developers viewed as critical to the growth of the region. Ironically, protest of these projects due to fears of potential damage to the history and ecology of the area, coupled with skepticism regarding many of the claims of the Army Corps of Engineers regarding Jordan Lake and Falls Lake, were significant factors in their development.

Likewise, the utilization of various large, forested tracts reveals changes to the types of recreation being sought. Prior to World War Two, picnicking and short day hikes were the basic recreational activities, with some people visiting Crabtree Creek/Umstead State Park for camping. In terms of management, the focus was on simply rehabilitating the land and, in the

case of Duke Forest, providing the foundation for scientific research and providing basic recreational amenities. After the 1950s, concerns related to growth, be it efforts to promote further development or protect areas from said development, were central to questions of acquisition and management. Recreational concerns also changed during this time, both in terms of numbers of people and the activities engaged in. As the population of the region grew, the numbers of visitors to the state parks (and Duke Forest) increased rapidly, placing strain on resources. Additionally, activities such as mountain biking and horseback riding, reflect more intensive use while not being especially compatible to utilizing the same areas.

The desires of the region's inhabitants also affected development, often in unintended ways. For example, Eno River State Park was the result of property owners initially unhappy with the potential negative consequences of a proposed reservoir by the City of Durham. The success of these property owners in setting aside ERSP, however, stemmed from their ability to tap into a broad like-minded sentiment in the area for trying to set aside areas that reflected aesthetic sensibilities and efforts to "save" remnants of the historic relationship to the land in the area, especially in the form of mills. Likewise, calls to develop Umstead State Park as a Six Flags-style amusement park in the late 1960s were roundly rejected by the local citizenry.

Since the early 1980s, the continued growth of the Raleigh metropolitan area has left these reserved areas in a state akin to many of the national parks. Their widespread popularity makes it increasingly difficult to maintain the sites in the face of overuse. Further, as more people use these sites, they bring with them increasingly variant needs and desires. Thus, activities such as mountain biking and horseback riding have radically increased in popularity in recent years, but also give rise to new sets of issues, such as how to have these visitors share

trails and other resources. Increased visitation also increases pressures to provide amenities and services that other users may find extremely distasteful, including handrails and street signs placed in formerly secluded areas of Umstead State Park.

Ultimately, the arc of establishment and development of these areas from the 1930s to the present day illustrates that processes such as rapid urbanization and suburbanization should not be interpreted as purely negative assaults on pristine land. In a sense, if the Raleigh area had developed slower or if its development had been tied more to market forces, these areas may not even exist in the form of state parks but, instead, as housing developments or office parks. The decision to pursue the technology industry in the 1950s, itself shaped by the history of the area, was a major factor in the type of demographic change that occurred and provided a baseline of support for attempting to maintain these areas as places of respite and access to “nature” regardless of the element of cultural construction behind such concepts.

However, urbanization and suburbanization should not be viewed as misunderstood allies in the preservation and management of natural areas. The reality is that areas such as Umstead State Park and Duke Forest face continual development pressures despite their popularity. Sites such as Falls Lake and Jordan Lake that are owned by the federal government, but managed by state agencies, seem on more secure footing in terms of maintenance of their current configurations. Still, they must also deal with issues such as algae blooms and phosphorous content that are direct manifestations of development. As efforts proceed to acquire more areas for preservation – such as the ongoing Mark’s Creek project southeast of Raleigh –it is critical that the parties involved take a clear view of the historical development of the region and how this fits into evolving perspectives on land utilization and recreation.

However, given the history of both demographic change and land management in the region, the future seems to portend continued battles over issues such as clean-up of Jordan Lake and Falls Lake, and the extension of these battles into new areas as the City of Raleigh and the Research Triangle continue to expand into the hinterland of the Piedmont Crescent.

The difficulties presented by politics and ideology regarding land management and natural resources in the Raleigh area should not be overlooked. Although the RT region has a reputation as an area populated by well-educated, well-compensated individuals this does not translate to lock step agreement on policy nor to heightened sensitivity toward ecological concerns from local officials and residents, especially when realities such as clean-up costs are discussed. As de Boer observed, individuals often identify with multiple communities and these communities each have their own hierarchies and influences. Thus, a person may support regional efforts to implement policies to address algae blooms in Jordan Lake, yet still oppose local tax hikes necessary to address this by accepting arguments that their community is not to blame.

These political conflicts are exacerbated by ideological differences, particularly in terms of rural and urban perspectives. Although North Carolina's overall development pattern has been characterized by what one historian labeled "low-density urbanization" in the form of expanding medium-sized cities rather than the presence of a dominant "mega-city," there are conflicts.⁵ The minutes of the meetings of the Land Resources Committee during the 1980s-era controversy regarding proposed development on Duke Forest revealed that some local officials harbored deeply negative views towards other residents, who were derisively labeled as

⁵ Ready, *The Tar Heel State*, 373.

“rednecks.” In the 2000s and 2010s, efforts to address water quality issues at existing reservoirs and seek new water sources produces extreme ideological posturing, such as the view of one property owner that creeping “communism” lay behind a proposed re-zoning. The recent actions tied to the Mark’s Creek Initiative east of Raleigh also reflect ideological leanings as supporters often articulate a romanticized view of the region they are trying to protect, exemplified by language such as “time warp” to describe the area.

The analysis of the establishment and development of units of the state park system in the Raleigh metropolitan area, and Duke Forest, show the ability of state parks to act as “prisms” reflecting the economic, cultural, and environmental facets of a given area’s history. Yet, the significance of political and ideological stances should not be underestimated. A long-time local resident with an agricultural background and a recently arrived inhabitant with a college degree employed in the technology sector may each view state parks as important for recreation, or be aware of the history of the region’s water issues, yet find themselves at odds due to characterizations such as “redneck” or “elitist.” The ability of individuals to find common ground and undertake effective political action, regardless of partisan affiliation or cultural stereotyping, appears key to land management and natural resource utilization in the region. Unfortunately, the history of the region suggests that this will not happen except under extreme circumstances such as extended drought. Likewise, the influences of urban expansion on rural areas in the form of land acquisition, pollution, and resource utilization show no signs of abating, heightening the urgency to bridge the political and ideological divide often present between the two.

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