

DAM CRAZY WITH WILD CONSEQUENCES: ARTIFICIAL LAKES AND NATURAL  
RIVERS IN THE AMERICAN SOUTH, 1845-1990

by

CHRISTOPHER JOHN MANGANIELLO

(Under the Direction of Paul S. Sutter)

ABSTRACT

This dissertation is about water and power in the American South between 1890 and 1990. Corporate monopolies, state agents, and citizens clashed over the answer to a basic question: Who was best equipped to manage natural resources equitably and stimulate economic growth? Corporate and state representatives understood the direct relationships between rivers, energy production, and political economy. Between 1890 and 1930, New South corporate capitalists and transnational engineers laid claim to water resources to fuel industrial and urban development. Regional planners created the Tennessee Valley Authority to counterbalance commercial monopolies. After 1945, Congress rejected New Deal liberalism and turned the Army Corps of Engineers into the Sunbelt's go-to water management agency. Powerful institutions built levees, dams, and reservoirs throughout these periods to solve old "water problems," generate energy, and consolidate power. In doing so, these organizations took part in an ongoing social, racial, and ecological discourse about the cultural benefits and natural functions of these new hybrid environments.

The environmental challenges were substantial. Scholars have documented the region's historic water problems associated with flooding, navigation, and erosion. The industrial and

agricultural South, however, has been equally influenced by a less well known water problem: water scarcity. Corporate and state responses to multiple, dramatic droughts shaped the southeast's watersheds and modernization. There are no natural lakes in the Piedmont and Blue Ridge South, yet major and modest reservoirs dot the land from Virginia to Alabama. Investigating the corporate and state institutions responsible for building the region's extensive reservoir system illuminates how boosters, engineers, and conservationists attempted to resolve water problems, and the social conflict and environmental questions those solutions sparked. Furthermore, this dissertation enriches New South to Sunbelt scholarship by integrating critical factors – water resources, political power, and energy production – into existing narratives.

Southerners have toiled for over a century to make use of and control water. But for all the corporate, state, and citizen investment, the flooding and droughts continue to threaten communities, damage economies, and shape river valleys. The American South has much to share with, and learn from, other regions grappling with what are clearly national water problems.

**INDEX WORDS:** Southern States, New South, Sunbelt, Piedmont, Environmental conditions, Floods, Drought, Rivers, Savannah River Valley, Georgia, South Carolina, Water supply, Hydroelectricity, Energy, Dams, Reservoirs, Lakes, J. Strom Thurmond Dam and Lake at Clarks Hill, Richard B. Russell Dam and Lake, Hartwell Dam and Lake, Environmental policy, Water resources development policy, Environmentalism, Textile industry, Recreation, Georgia Power Company, Southern Company, Duke Energy, United States Army Corps of Engineers, Chattooga Wild and Scenic River

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## LIST OF ABBREVIATIONS

- ACE United States Army Corps of Engineers  
AEC Atomic Energy Commission  
AWC Alma Toevs Walker, University of Georgia Libraries, Hargrett Rare Book and Manuscript Library, Athens  
CFM Carl F. Miller, River Basin Survey Collection, Smithsonian Institution, National Anthropological Archives, Suitland, Md.  
EOP Eugene P. Odum Papers, Institute of Ecology, Hargrett Rare Book and Manuscript Library, University of Georgia, Athens, Ga.  
FPC Federal Power Commission  
FWS United States Fish and Wildlife Service  
GAA Georgia Archives, Morrow, Georgia  
GNAC Georgia Natural Areas Council  
GPO United States Government Printing Office, Washington, D.C.  
JEC John Ewing Colhoun Papers, Southern Historical Collection, Manuscripts Department, University of North Carolina, Chapel Hill, N.C.  
JMP James A. Mackay Papers, Special Collections Department, Robert W. Woodruff Library, Emory University, Atlanta, Ga.  
LMC Lester S. Moody Collection, Augusta History Museum, Augusta, Georgia  
NAS National Archives Southeast, Morrow, Georgia  
NAII National Archives II, College Park, Maryland  
NMAH National Museum of American History, Washington, D.C.  
NPS National Park Service  
OJP Olin DeWitt Talmadge Johnston Papers, South Carolina Political Collections, The University of South Carolina, Columbia, S.C.  
RG Record Group (National Archives)  
RRC Richard B. Russell, Jr. Collection, RRL  
RRL Richard B. Russell Library for Political Research and Studies, University of Georgia Libraries, Athens, Georgia  
RWC Robert L. Williford Richard B. Russell Dam and Lake Project Files, RRL  
SCS Soil Conservation Service  
SI Smithsonian Institution, Washington, D.C.  
SIRU Record Unit, Smithsonian Institution Archives, Washington, D.C.  
SRP Savannah Project Site  
SRS Savannah River Site  
STP J. Strom Thurmond Collection, Clemson University Libraries, Clemson, S.C.  
TVA Tennessee Valley Authority  
USGS United States Geological Survey  
USDA United States Department of Agriculture  
WDP William Jennings Bryan Dorn Papers, South Carolina Political Collections, The University of South Carolina, Columbia, S.C.

## INTRODUCTION

### SOUTHERN WATER, SOUTHERN POWER

Over the course of three years beginning in 2006, residents around the southeastern part of the United States nervously watched water levels in their rivers and reservoirs drop dramatically. When rain stopped falling from the sky on the southeast from northern Alabama to central North Carolina, rivers dried up and set off the region's most recent drought of record. Marina operators extended floating docks to cope with plummeting reservoir water levels and keep recreational boats out of the mud. Homeowners along the same artificial lakes followed suit, but many docks, pontoon boats, and houseboats in small coves eventually settled on the dry bottoms. The drought also impacted municipal drinking water supplies. One small Tennessee community's water source – a deep well – went dry, forcing the town to truck-in water. By November 2007, other communities – including North Carolina's capital, Raleigh – reported having only a three-month supply or less of water on hand. Notably absent from much of the drought imagery was the American farm, and this made the drought a decidedly urban crisis as opposed to an agricultural affair. The most visible consequence of the drought in Georgia – and a persistent source of local anxiety, regional conflict, and national media attention – was the growing ring of red clay around Lake Lanier as the blue reservoir drained.<sup>1</sup>

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<sup>1</sup> Orme, Tenn., trucked water for months before the community obtained a permanent supply-line, see: Rusty Dornin, "Drought Stricken Georgia Says it Will Sue Over Water," CNN.com, November 19, 2007,

The U.S. Army Corps of Engineers, the federal agency responsible for managing Lanier, was releasing water from Buford Dam into the Chattahoochee River to meet downstream needs in Alabama, Florida, and Georgia and to comply with federal law. Those downstream needs included municipal drinking water for upwards of three million metro Atlanta residents plus people further downstream; waste-water assimilation for dozens of communities; golf course and suburban irrigation; industrial consumers like Coca Cola; power generation at hydro, coal, and nuclear facilities owned by primarily by the Georgia Power Company; and commercial and endangered aquatic species in the Apalachicola River.<sup>2</sup> In an effort to save water in Georgia, Governor Sonny Perdue declared October 2007 “Take a Shorter Shower Month” to promote water conservation after the state’s Environmental Protection Division prohibited all outdoor watering in 61 of the state’s 159 counties as the region’s worst drought in history got even worse.<sup>3</sup> These mandates helped save the region’s water supply and sparked a culture of conservation among Georgia’s citizens, but by the end of 2007 Lake Lanier was eighteen feet below “full pool.” The mandates, federal agency decisions, and human behavior alone could not re-fill the region’s streams, rivers, and working reservoirs.

After three dry years, the region rebounded dramatically, but not without significant costs. In September 2009, a series of storms dropped 15 to 20 inches of rain in one 72-hour

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<http://edition.cnn.com/2007/US/10/18/pip.atlantadrought/index.html>, last accessed March 25, 2010. See also: Blake Aued, “Water Worries: Ban On Use Tighten,” Athens (Ga.) *Banner Herald*, September 15, 2007, [http://onlineathens.com/stories/091507/news\\_20070915060.shtml](http://onlineathens.com/stories/091507/news_20070915060.shtml), last accessed March 25, 2010; Brenda Goodman, “Drought-Stricken South Facing Tough Choices,” *New York Times*, October 16, 2007, <http://www.nytimes.com/2007/10/16/us/16drought.html>, last accessed March 25, 2010; Larry Copeland, “Drought Anxiety Rises as Water Levels Fall,” *USA Today*, November 4, 2007, [http://www.usatoday.com/weather/news/2007-11-01-drought-anxiety\\_N.htm](http://www.usatoday.com/weather/news/2007-11-01-drought-anxiety_N.htm), last accessed March 25, 2010.

<sup>2</sup> Stacey Shelton, “Metro Atlanta’s Need for Water: Three Months From a Mud Hole,” Atlanta (Ga.) *Journal-Constitution*, October 11, 2007, p, A1; Dale E. Dodson, map, “Heavy Demands On Our Water,” Atlanta (Ga.) *Journal-Constitution* (October 2007), <http://www.ajc.com/metro/content/metro/stories/2007/10/26/watermap.html>, last accessed March 25, 2010.

<sup>3</sup> “Watering ban now the widest: ‘Unprecedented’ situation,” Athens (Ga.) *Banner Herald*, September 29, 2007, available on-line, [http://onlineathens.com/stories/092907/news\\_20070929061.shtml](http://onlineathens.com/stories/092907/news_20070929061.shtml), last accessed March 25, 2010.

period throughout metro Atlanta. Multiple Atlanta suburbs – from the affluent homes in Buckhead to manufactured “mobile” homes in Cobb County – flooded when area creeks and streams poured out of their banks during the cloudburst. Authorities closed multiple interstate highways when the flooding Chattahoochee River submerged bridges. At least ten deaths in Georgia were blamed on flooding and more the \$500 million in damages resulted from what experts now consider metro Atlanta’s flood of record. Lake Lanier – drained to its record low point in December 2007 – gained three feet alone during the September 2009 rain storms. In what became the state’s wettest year, the rest of 2009’s record rainfalls refilled Lanier, and the lake reached full pool and pre-drought levels by October.<sup>4</sup>

The events of 2007 through 2009 illustrate the American South’s persistent regional water problems and power struggles. Scholars, journalists, and residents have written extensively about the region’s other well-known race and labor problems, but the latest events highlight environmental problems that have also influenced political relationships and citizens’ expectations. Georgia’s recent climatic history serves as a reminder of the region’s historic capacity to shift quickly from flood to drought. These events also highlight how people have dramatically manipulated the region’s rivers and who has benefited. Southerners have built dams, levees, reservoirs, ponds, urban storm water systems, and other technological water control features for over a century, but significant flooding and drought incidents continue to

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<sup>4</sup> Robbie Brown and Liz Robbins, “Rain Stops, but 8 Are Dead in Southeast Floods,” *New York Times*, September 22, 2009, <http://www.nytimes.com/2009/09/23/us/23rain.html>, last accessed March 25, 2010; Patrik Jonsson, “Atlanta Flood: After drought, residents caught by surprise,” *Christian Science Monitor*, September 24, 2009, <http://www.csmonitor.com/USA/2009/0924/p02s02-usgn.html>, last accessed March 25, 2010; Rhonda Cook, Marcus K. Garner, Mike Morris, and Megan Matteucci, “Flood Death Toll at 9,” Atlanta (Ga.) *Journal-Constitution*, September 26, 2009, <http://www.ajc.com/news/flood-death-toll-at-142739.html>, last accessed March 25, 2010; Mary Lou Pickel, “Federal Officials: September’s Flood ‘Off the Charts,’” Atlanta (Ga.) *Journal-Constitution*, November 4, 2009, <http://www.ajc.com/news/atlanta/federal-officials-september-s-186344.html>, last accessed March 25, 2010; Heather Vogell and Margaret Newkirk, “Failure to Control Storm Water Makes Floods More Likely,” Atlanta (Ga.) *Journal-Constitution*, February 21, 2010, <http://www.ajc.com/news/failure-to-control-storm-318983.html>, March 25, 2010.

emerge as central problems in southern environmental history. The region's climatic episodes occurred randomly, but some of the consequences were predictable and foreseeable. Historic evidence points to a series of water events and human choices from the last 150 years that only resolved water problems for the short term or to serve narrow special interests. All too often solutions only exacerbated damages during future floods and droughts, and artificial reservoirs throughout the American South drive this point home. For example, Congress authorized Lake Lanier in 1945 to provide flood control, for power production, and to improve navigation in the lower Chattahoochee and Apalachicola river valleys. As the early 2000s drought and flooding revealed, Alabamians, Floridians, and Georgians expected the working federal reservoir to function as a static lake, provide drinking water, boost home values, or protect endangered species. Lake Lanier is only one of dozens of artificial reservoirs that now sit at a similar crossroads. This specific case illustrates the scope of the region's postindustrial water problems and the high stakes power struggles involved in allocating the region's water supplies.

The late journalist and environmental writer Marc Reisner posed a question about the American South, for which he offered no direct answer, in his critical and much-admired history of water and power in the arid American West. In *Cadillac Desert*, Reisner repeatedly illustrated how boosters, engineers, and politicians made water flow over mountains to moneyed interests, most notably in the agricultural sector. Reisner also claimed that "the reasons behind the South's fascination with dams" eluded him. He noted the different types of structures, from "water-supply reservoirs and small power dams" to "a handful of mammoth structures backing up twenty-mile artificial lakes."<sup>5</sup> The southeast had a high annual precipitation rate, a history of devastating floods, and was well known in Mark Twain's Mississippi riverboat narratives. In

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<sup>5</sup> Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York: Penguin Books, 1986, revised 1993), chapter nine, "The Peanut Farmer and the Pork Barrel," 307 for quote.

describing the region's humidity, as well as the human choices to build hydroelectric dams or channelize rivers to move water and vessels efficiently, Reisner actually identified the complexity of the southeast's water problems and power relations. Corporate and state agents manipulated the region's river environments, and they built "great lakes," small agricultural reservoirs, and engineered rivers to overcome diverse regional environmental conditions.<sup>6</sup> Reisner was on to something but he only scratched the surface. There are no natural lakes in the Blue Ridge and Piedmont South. Understanding where these reservoirs came from, the corporations and state institutions who built them, and what purposes the structures have served unlocks an untold history about southern water and southern power. Historicizing the American South's water and power highlights the value in appreciating and linking regional environmental conditions with the national narrative about water and politics.<sup>7</sup>

From an airplane seat or a Google Earth screen shot, the American South looks quite different than does the arid American West. Instead of linear irrigation ditches, treeless plains, rim-rock, or dry washes, passengers see row crops, pastures, and cul-de-sac suburbs hemmed within rectilinear boundaries giving way to thick forests on the rolling Piedmont and steeper Blue Ridge terrain. But from the sky, the South reveals at least one similarity with parts of the arid West: the presence of dams and artificial lakes. Large and small reservoirs dot the southern landscape from Alabama east to Georgia and north through the Carolinas. (Only within the last thirty years have circular green patches in southern Georgia indicated the presence of groundwater pumping and center-pivot irrigated farming.) At the landscape level, the creation of these ponds and reservoirs are among the most prominent type of human alteration to the

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<sup>6</sup> The Great Lakes of Georgia: <http://www.greatlakesofgeorgia.com>.

<sup>7</sup> I should note that policy and science professionals – in particular, the faculty and staff of the University of Georgia's Carl Vinson Institute of Government and the River Basin Center – have produced a prodigious volume of important information regarding water management and environmental impact for interest groups in Georgia's political communities since the 1980s.

regional environment, and yet existing southern water and river historiography does not adequately explain where these water bodies came from or the consequences of their creation. Indeed, given how prominently water development and politics have been featured in western environmental historiography, one is left to wonder why southern historians, environmental and otherwise, have been so slow to notice this compelling similarity that Mark Reisner did in the 1990s.

My dissertation, “Dam Crazy with Wild Consequences: Artificial Lakes and Natural Rivers in the American South, 1845-1990,” is an environmental history about water and power. When I started this project, I focused on the southern rivers – such as the Catawba, Savannah, Chattahoochee, and Alabama – that had figured prominently in the region’s history as transportation conduits or because of their capacity to flood and induce human-suffering. Southern lakes and droughts, I soon learned, had received less attention despite their direct connection to some of these same rivers and the region’s political economy. The South as a whole is home to alluvial “oxbow” and natural lakes in the Coastal Plain. For example, shallow “Carolina Bays” on the southeastern Coastal Plain are lakes, but according to one scientist, “No clear consensus has been reached regarding the complex issue of the origin of” these bodies of water.<sup>8</sup> There is, however, consensus on the origin of the Piedmont and Blue Ridge mountain regions’ lakes. Industrial capitalists, a transnational engineering community, and regional planners built countless artificial reservoirs to spur industrial development, consolidate corporate power, or deliver a multitude of economic and social benefits to poor southerners. In the process, these corporate and state operatives attempted to conquer challenging environmental conditions such as topography, flooding, drought, and a lack of indigenous fossil fuel sources.

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<sup>8</sup> Thomas L. Crisman, “Natural Lakes of the Southeastern United States: Origin, Structure, and Function,” *Biodiversity of the Southeastern United States: Aquatic Communities*, edited by Courtney T. Hackney, S. Marshall Adams, and William H. Martin (New York, N.Y.: John Wiley & Sons, Inc., 1992), 475-538, see 478 for quote.

After I looked at the rivers, dams, reservoirs, and transmission lines for a long time, I discovered a deep and rich story about water and power in the American South. This history of environmental change demonstrates how private corporations, public institutions, and citizens have challenged one another to manage natural resources equitably while stimulating economic growth. The South's numerous artificial lakes are artifacts from the region's complex environmental past and they illustrate some of the ways that southerners have navigated the region's water and other challenges. New solutions for old water problems, however, consistently sparked social conflict, fostered political strife, and created new environments.

People have utilized southern creeks, streams, and rivers to meet social and economic needs for centuries. They built rock weirs to catch fish, blasted bedrock to enhance navigation, and redirected water over waterwheels to obtain food, improve transportation, and generate power. More often than not, these redesigned watercourses supported these endeavors. But at times, the rivers did not. Flooding and drought disrupted fisheries, stymied navigation, or rendered waterwheels inoperable. In response to these climatic events, people moved out of river bottoms and developed a variety of technological solutions – dams, levees, and reservoirs – to support evolving social and economic needs. Often, peoples' decisions to build new structures created conditions that endangered other interests, forced still more people to move, diminished migratory fish runs, threatened racial hierarchies, galvanized grassroots opposition, and endangered environmental health. Over the long course of history, valley inhabitants responded to water problems of varying scope, impact, and proportions. Manipulated and controlled by competing human interests, the region's rivers and the precious water flowing between the banks, contributed to building powerful societies and breaking communities apart.

The Savannah River, which forms South Carolina's and Georgia's border, perfectly demonstrates how people negotiated water problems and attempted to bend rivers to meet human demands throughout the American South. I will focus on the Blue Ridge and Piedmont provinces because people shaped these valley sections on a more substantial scale than they did the Coastal Plain's section, and I will deemphasize navigation and harbor histories that are more common in river narratives.<sup>9</sup> This story will begin with a brief geologic history to explain why the valley's Blue Ridge and Piedmont regions lack natural water features like lakes. Then I will briefly discuss how Native Americans, early Americans, and early industrial valley inhabitants all used the river as a tool while surviving without levees, dams, and reservoirs for a very long time. Droughts and floods, however, also shaped their societies and communities. These water problems influenced human settlement patterns and the river valley's form in important ways, but the environmental problems did not spur significant capital investment in river improvement before the industrial revolution.

People dramatically altered the Savannah River valley after the mid-nineteenth century, and even these projects could not solve the region's recurring water problems. In the first of three formative periods, a cast of powerful characters from private and public institutions initiated a dam and reservoir building program to spur economic development during the critical "New South" moment. Private investors and utility companies built projects to generate water

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<sup>9</sup> Environmental histories of the Blue Ridge and Coastal Plain regions are also more common than Piedmont environmental histories: Jack Temple Kirby, *Poquosin: A Study of Rural Landscape & Society* (Chapel Hill: University of North Carolina Press, 1995); Mart Stewart, 'What Nature Suffers to Groe': *Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996, reprinted in 2002); Donald Edward Davis, *Where There Are Mountains: An Environmental History of the Southern Appalachians* (Athens: University of Georgia Press, 2000); Daniel S. Pierce, *The Great Smokies: From Natural Habitat to National Park* (Knoxville: University of Tennessee Press, 2000); Margaret Lynn Brown, *The Wild East: A Biography of the Great Smokey Mountains* (Gainesville: University Press of Florida, 2000); Judith A. Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge, Mass.: Harvard University Press, 2001); and Timothy Silver, *Mount Mitchell & the Black Mountains: An Environmental History of the Highest Peaks in Eastern America* (Chapel Hill: University of North Carolina Press, 2003).

power and eventually electricity, primarily for textile mills and other commercial purposes. Emergent energy companies and the textile industry attempted to control rivers and workers, and in the process tied together the region's water, labor, and racial problems. Independent company leaders, corporate captains, and transnational engineers built an extensive network of hydroelectric dams and textile villages in the heart of the southern Piedmont, and connected these nodes of production and consumption with an elaborate system of overhead copper transmission lines. The multi-state energy companies operated above and beyond political boundaries to deploy corporate and electrical power, monopolize customer territory, and define the "South" with power-lines. Urban and industrial centers also emerged as white and black southerners left fields for Atlanta's and Charlotte's factories at the beginning of the twentieth century. But within two decades, a multi-year regional drought brought this mushrooming hydraulic system and the South to its knees between 1925 and 1927. Additionally, the drought revealed the danger of remaining on a technological plateau dependent upon renewable energy. As the record drought ended, the region's energy brokers bridged a technological gap in the first of many water management up-scalings to generate electricity, but they could never distance themselves from southern rivers. Southern executives in board rooms, residents in cities, and workers in mills, it appeared, could not escape water problems within the circumscribed South without significant external assistance.

During the second period, between 1930 and 1944, a combination of economic and environmental factors altered the Savannah River valley's fate and highlighted the difficulty in determining if corporate or state agents were better equipped to solve the region's water problems. After the 1920s drought, disastrous floods swept the American South. As the Great Mississippi Flood (1927) wreaked havoc in that valley and captivated media attention, the U.S.

Army Corps of Engineers was undergoing a transition the flood cemented. At the time of the flood, Corps engineers were already evaluating the nation's rivers for power production, irrigation, and other comprehensive uses. Soon after the Great Mississippi Flood, Congress conferred all river management activities – defense, navigation, and flood control – upon the Corps and asked them to continue their national river survey. In the Savannah River valley, two serious droughts bracketed a major flood while the Corps appraised the valley's comprehensive possibilities. On the tail of the 1920s record drought, record Savannah River flooding in October 1929 ruptured communities and revealed metro Augusta's racial geography in the process. The flooding was then followed by another major regional drought in 1941 that compromised electrical and industrial production as well as corporate power. The federal initiative to control these problems on the nation's rivers also dovetailed with a movement to challenge the corporate and monopolistic models that had laid claim to these rivers decades earlier. But in the end, the federal risk management solutions for flooding and drought only manufactured future risk. As the Great Depression deepened, one of the New Dealers' first solutions tied together flood control, power production, and agricultural policy in an attempt to anchor economic liberalism and decentralized industrial development in the Tennessee River valley. Congress, however, became increasingly dissatisfied with the Tennessee Valley Authority model as the Great Depression got worse, and they continued to fund Corps surveys that evaluated the potential for multiple purpose dam projects on nearly all of the nation's rivers including the Savannah. As the Great Depression continued, neither energy corporations nor the Corps moved forward to build more dams and reservoirs to meet the region's power needs, plan for future droughts, or to mitigate possible flooding. Not until the Good War's end was in sight in the late 1940s did

corporate and state institutions express renewed interest in, and clash over, their plans to solve the Savannah River valley's water problems.

In the final and third, post-1945 period of southern river development, corporate and state institutions sparred over how best to confront the Savannah River valley's water problems.

Unlike the flurry of corporate water development projects completed during the critical New South period and the liberal New Dealers ill-fated TVA model, the Corps burst upon the scene and became the Sunbelt South's water and power broker. In the Savannah River valley alone, the Corps completed three massive multiple purpose dam and reservoir projects in a publicly funded attempt to solve the region's water problems and redefine regional power. Nearly all southern politicians, community leaders, and ever-present boosters initially welcomed federal spending to spur regional economic development. However, when corporate and state planners designed water projects to boost economic fortunes and solve water problems, they consistently created social and environmental problems. For example, regional water problems and national race relations merged in the Savannah River valley during the 1950s. A stinging drought and successful civil rights advancements emboldened opponents of public power who targeted the 'pork-barrel' endeavors as symbols of federal encroachment into peoples' lives and upon states' rights. Opposition to the Corps also arose on many other fronts. Energy executives and their allies in Georgia, South Carolina, and North Carolina challenged these federal energy programs, and they considered these retro-New Deal programs dangerous threats to free enterprise, capitalism, and corporate authority. Finally, a wide cross-section of citizens at the grassroots registered complaints in response to the Corps' real estate, reservoir management, water quality, economic, and environmental policies. Not all criticism was unfounded. In a refrain that would repeat itself throughout the Corps' existence, Army officers and engineers took on tasks to

complete their dam and reservoir plans for which they were not entirely prepared for. And, while corporate energy executives – the Corps’ primary detractors – claimed that public hydroelectric and multiple purpose facilities represented outdated, financially insecure, and inefficient technologies, they continued to pursue similar schemes. Out of this history of the South’s problematic drought and flooding history, one river was saved in the public’s interest. As countryside conservationists and environmentalists around the nation and the South mobilized in the 1960s, they looked at rivers such as the Chattooga as examples of undammed, wild, and scenic rivers worthy of federal protection. A coalition of river interests from the private and public sectors argued that the region’s lack of undeveloped and unpolluted rivers represented a new water problem. These free flowing river and clean water advocates broke with the past and built a relationship with southern rivers and reservoirs.

Much has been written about southern rivers from the perspective of river admirers, corporate historians, and water guardians. This literature details the important role that rivers played in the antebellum cotton market, the initial preference of riverboats over railroads for transportation, and the emergence of private investors who harnessed water to power local gristmills, lumber mills, cotton gins, and factories in the eighteenth and nineteenth centuries.<sup>10</sup>

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<sup>10</sup> Thomas Stokes and Lamar Dodd, *The Savannah* (New York, N.Y.: Rinehart, 1951); Henry Savage, Jr., *The River of the Carolinas: The Santee* (Chapel Hill: University of North Carolina, 1956, reprint in 1968); E. Merton Coulter, *Georgia Waters: Tallulah Falls, Madison Springs, Scull Shoals and the Okefenokee Swamp* (Athens: Georgia Historical Quarterly, 1965); Lynn Willoughby, *Flowing Through Time: A History of the Lower Chattahoochee River* (Tuscaloosa: The University of Alabama Press, 1990); Harvey H. Jackson III, *Rivers of History: Life on the Coosa, Tallapoosa, Cahaba, and Alabama* (Tuscaloosa: University of Alabama Press, 1995); Edward J. Cashin, *The Brightest Arm of the Savannah: The Augusta Canal, 1845-2000* (Augusta, Ga.: Augusta Canal Authority, 2002); John Lane, *Chattooga: Descending in the Myth of Deliverance River* (Athens: University of Georgia, 2004). For corporate histories, see: Wade H. Wright, *History of the Georgia Power Company, 1855-1956* (Atlanta, Ga.: Georgia Power Company, 1957); Jack Riley, *Carolina Power & Light Company, 1908-1958* (Raleigh, N.C.: Edwards & Broughton Company, 1958); Erwin C. Hargrove and Paul K. Conkin, eds., *TVA: Fifty Years of Grass-Roots Bureaucracy* (Chicago: University of Illinois Press, 1983); Robert F. Durden, *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001); Martha Elrod and Julie Groce, *Energizing Georgia: The History of Georgia Power, 1883-2004* (Macon, Ga.: Indigo Custom Publishing, 2004); and Leah Rawls Atkins, *Developed for the Service of Alabama: The Centennial History of the Alabama Power Company, 1906-2006* (Birmingham, Ala.: Alabama Power Company, 2006).

These narratives explain who, how, and why private investors committed to navigational improvements and built small dams. But some narratives lack an objective interpretation or do not venture deep into the twentieth century, and scholars have not clearly linked the region's modernization, water problems, and social conflict. This study merges the southern narratives about the New South, industrialization, and labor relations with a story of environmental change.

Southern historians have spent a tremendous amount of time and energy discussing the rise of the New South and Sunbelt. Historians have rightly argued that cheap human labor and an abundance of raw materials attracted industrial growth to the region. The deans of southern history, C. Vann Woodward and George Brown Tindal, briefly noted the role that southern energy companies – the executives, engineers, and capital – played in the region's explosive industrial development between 1890 and 1925.<sup>11</sup> And southern historians, from Broadus Mitchell to Gavin Wright, have also discussed regional developers' ability to use water power and hydroelectricity to redirect former agricultural laborers' energy from the field to the factory floor in decentralized factory towns where labor could be more easily manipulated and monitored.<sup>12</sup> However, few southern historians have paid attention to how southern industrialization and urbanization were built upon extensive environmental manipulation before and after World War II. Furthermore, southern historians have not clearly identified how corporations pooled water, energy, and political power at an early stage in the region's development. The southeast lacked vast coal seams, but had lots of water power. After combining capital, labor, and water power, corporate leaders transformed a land of cotton into a

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<sup>11</sup> C. Vann Woodward, *Origins of the New South, 1877-1913* (Baton Rouge: Louisiana State University Press, 1951), 128-130; George Brown Tindal, *The Emergence of the New South, 1913-1945* (Baton Rouge: Louisiana State University Press, 1967), 71-79, 95-97.

<sup>12</sup> Broadus Mitchell, *The Rise of the Cotton Mills In the South* (Baltimore, Md.: Johns Hopkins University Press, 1921), 263; J. Wayne Flynt, "The New Deal and Southern Labor," in James C. Cobb and Michael V. Namorato, eds., *The New Deal and the South* (Jackson: University Press of Mississippi, 1984), 63-95; and Gavin Wright, *Old South, New South: Revolutions in the Southern Economy Since the Civil War* (Baton Rouge: Louisiana State University Press, 1986), 43-47.

major industrial magnet. When New South and Sunbelt power brokers used water to generate energy, they made nature a critical actor in the region's history.

Southern historians, including David Carlton and Jacquelyn Dowd Hall, have presented only casual links between cheap human power and cheap natural power. Aside from Allen Tullos' social history of North Carolina's Piedmont – which sketched out links between that state's water power resources, textile labor, and the Duke Power Company – southern historiography does not fully explicate the emergence of southern energy companies and their regional energy infrastructure, or the energy sector's parallel rise with an electrified textile industry throughout the New South.<sup>13</sup> Every southeastern state hosted at least one influential and monopolistic energy company before 1930. These companies eventually interconnected their hydroelectric and transmission systems, and these technological links enabled large corporations to transcend political boundaries while making decentralized industrial growth and centralized urban development possible. When liberal New Dealers introduced the Tennessee Valley Authority and rural electrical programs, they directly confronted the energy corporations who had monopolized the southeast's widely available water power, indirectly consolidated nonunionized labor pools, and ignored rural farmers.

The Tennessee Valley Authority's history is another reason why scholars have not attempted to historicize southeastern water and power. The TVA's high modernist history obscures the legacy of private water conservation and management activities that took place in the American South in the decades before the New Deal. Understanding this private, pre-TVA legacy better illustrates what private energy corporations stood to lose during the famous Muscle

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<sup>13</sup> David L. Carlton, *Mill and Town in South Carolina, 1880-1920* (Baton Rouge: Louisiana State University Press, 1982); Jacquelyn Dowd Hall, James Leloudis, Robert Korstad, Mary Murphy, Lu Ann Jones, and Christopher B. Daly, *Like A Family: The Making of a Southern Cotton Mill World* (Chapel Hill: University of Chapel Hill Press, 1987); Allen Tullos, *Habits of Industry: White Culture and the Transformation of the Southern Piedmont* (Chapel Hill: The University of North Carolina Press, 1989).

Shoals controversy on the Tennessee River during the Great War, and why private interests continued to vilify federal energy projects as symbols of New Deal liberalism in the following quarter-century. By 1930, energy corporations, like the Georgia Power Company, had created a vast interconnected transmission system linking hydroelectric dams and coal plants to New South factories. Textile and manufacturing centers tapped a reservoir of landless laborers as the region added significant industrial production to a waning agricultural base. The availability of electricity – generated by water – made this economic modernization possible, and the TVA threatened to remap energy production and consumption and corporate authority. The TVA literature has also obscured the Army Corps of Engineers’ post-1945 role in shaping southeastern rivers. After World War II, the Corps became Sunbelt boosters’ preferred water management agency because the Corps could mimic the TVA’s technological water programs without recreating the TVA’s regional planning programs. The TVA had solved some of the region’s water problems, but by focusing on the TVA as the model of southern water management, we lose sight of the people and institutions that operated in the TVA’s shadows before 1930 and after 1945.<sup>14</sup>

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<sup>14</sup> The TVA historiography is immense, for example, see: Clarence Lewis Hodge, *The Tennessee Valley Authority: A National Experiment in Regionalism* (New York, N.Y.: Russell and Russell, 1968; first edition, Washington, D.C.: American University Press, 1938); Judson King, *The Conservation Fight: From Theodore Roosevelt to the Tennessee Valley Authority* (Washington, D.C.: Public Affairs Press, 1959); Preston J. Hubbard, *Origins of the TVA: The Muscle Shoals Controversy, 1920-1932* (Nashville, Tenn.: Vanderbilt University Press, 1961); John R. Moore, ed., *The Economic Impact of TVA* (Knoxville: University of Tennessee, 1967); Thomas K. McCraw, *Morgan vs. Lilienthal: The Feud Within the TVA* (Chicago, Ill.: Loyola University Press, 1970); Thomas K. McCraw, *TVA and the Power Fight, 1933-1939* (Philadelphia, Pa.: J.B. Lippincott Company, 1971); Arthur Earnest Morgan, *The Making of the TVA* (London: Prometheus Books, 1974); North Callahan, *TVA: Bridge Over Troubled Waters* (South Brunswick, N.J.: A. S. Barnes and Company, 1980); Philip Selznick, *TVA and the Grass Roots: A Study of Politics and Organization* (Berkeley: University of California Press, 1980); Michael J. McDonald and John Muldowny, *TVA and the Dispossessed: The Resettlement of Population in the Norris Dam Area* (Knoxville: University of Tennessee Press, 1982); Erwin C. Hargrove and Paul K. Conkin, eds., *TVA: Fifty Years of Grass-Roots Bureaucracy* (Chicago: University of Illinois Press, 1983); Margaret Lynn Brown, *The Wild East: A Biography of the Great Smokey Mountains* (Gainesville: University Press of Florida, 2000); and Karen M. O’Neill, “Why the TVA Remains Unique: Interest Groups and the Defeat of New Deal River Planning,” *Rural Sociology* 67, 2 (2002): 163-182.

Post-1945 southern historians – namely James C. Cobb and Bruce Schulman – have demonstrated how boosters and local developers shared interests in positive economic growth and labor control. But not all boosters were created equal. Some promoted industrial development purely on a private level with liberal local incentives, and others wanted to use federal dollars to build the infrastructure necessary for the Sunbelt’s future economic growth. Sunbelt historians, not unlike New South historians, have a mixed record linking economic development with environmental manipulation. Most southern historians, pre-occupied with New Deal and Tennessee Valley Authority programs, have not examined the Army Corps of Engineers’ role in the transformation of the cotton belt into the Sunbelt after 1945, or the consequences of the Corps’ dam and reservoir program. Cobb and other historians have addressed some of the environmental consequences of southern economic modernization – from mining in Tennessee and Florida to oil production in Arkansas and Louisiana – that could no longer be avoided after 1945. But even here, southern and other historians have missed the full scope and scale of the region’s postwar water problems and how they were part of a much larger set of national water problems and political struggles.<sup>15</sup>

Few topics have been as central to the growth of environmental history as a discipline as the history of water and power in the American West, and the central debate in western water

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<sup>15</sup> James C. Cobb’s assessment of the environmental consequences of industrialization is generally confined to water and air pollution after 1960, see: *Industrialization and Southern Society, 1877-1984* (Lexington: University of Press of Kentucky, 1984), 17-25, and chap. 6, “Natural and Environmental Resources and Industrial Development”; and, *The Selling of the South: the Southern Crusade for Industrial Development 1936-1990* (Urbana: University of Illinois Press, 1993; first edition 1982), chap. 9, “The Price of Progress.” See also: Bruce J. Schulman, *From Cotton Belt to Sunbelt: Federal Policy, Economic Development & the Transformation of the South, 1938-1980* (first edition 1991; Durham, N.C.: Duke University Press, 1994); Numan V. Bartley, *The New South, 1945-1980* (Baton Rouge: Louisiana State University, 1995); Jeffrey K. Stine, *Mixing the Waters: Environment, Politics, and the Building of the Tennessee-Tombigbee Waterway* (Akron, Ohio: University of Akron Press, 1993); Scott H. Dewey, “The Fickle Finger of Phosphate: Central Florida Air Pollution and the Failure of Environmental Policy, 1957-1970,” *Journal of Southern History* 65, 3 (1999): 565-603; Kari Frederickson, “Confronting the Garrison State: South Carolina in the Early Cold War Era,” *Journal of Southern History* 72, 2 (2006): 349-378; Craig Colten, “Contesting Pollution in Dixie: The Case of Corney Creek,” *Journal of Southern History* 72, 3 (2006): 605-634; and Steven Noll and David Tegeder, *Ditch of Dreams: The Cross Florida Barge Canal and the Struggle for Florida’s Future* (Gainesville: University of Florida Press, 2009).

history largely emerged from Donald Worster's *Rivers of Empire* and its critics. Worster argued that irrigation in the arid West reorganized communities in ways that were detrimental to both people and nature. The 'free' West, a region defined by aridity and settled with a pioneer spirit, evolved into a monolithic and oppressive hydraulic empire where a water elite co-opted federal authority and expertise to use water as an instrument of control in an agricultural mode of production. This interpretation has been challenged at several levels. As Donald Pisani has argued, Worster's West was too specific to California. According to Pisani, the West was much more complex and divided by diverse cultural, economic, and environmental factors that resulted in specific water management institutions based on specific local cultural and environmental conditions. And both Pisani and Norris Hundley have argued that water interests, aside from being locally distinctive, have also been much more fractured and contentious than Worster's interpretation allows. As an example, Mark Fiege has demonstrated how irrigation systems sometimes facilitated community institutions and non-oppressive relationships in Idaho. Where Worster saw powerful California agribusiness leaders straight-jacketing nature to control production and concentrate labor, Fiege found Idaho farmers working together and wrestling with nature to make a living. If Worster's water control disrupted ecological systems and alienated people from nature, Fiege observed a more intimate, if not trying, relationship between humans and nature. Where Pisani, Hundley, and others argued that Worster overstated his case for a monolithic water elite dominating a region, Fiege argued that Worster's depiction of nature dominated by modern water works has missed how environmental forces have reshaped and compromised the very systems designed to control nature.<sup>16</sup> The same could be said for the Savannah River valley.

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<sup>16</sup> The western water history is immense, for example see: Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York, N.Y.: Pantheon Books, 1985); Reisner, *Cadillac Desert*; Donald

Environmental historians, as should be obvious at this point, have long been fascinated with water and power, and nature and culture. As Worster's critics discovered, river societies in the urban and agricultural American West were never as coercive as the empires he described, nor were nature and culture so easily isolated. Richard White has provided the most useful example of a "hybrid" environment where nature and culture left a collective imprint in the Pacific Northwest. The Columbia River, as an "organic machine," is a place where Native Americans, commercial fishermen, and dam workers learned about the river's nature through their labor. They claimed physical space to harness the river's energy and solidified their own social power.<sup>17</sup> In the American South, historians have not often linked water and power, and perhaps the only coercive "empire" failed. Coastal Plain rice plantations – hybrid environments best described by Mart Stewart and Judith Carney – depended upon southern tidal rivers and African American slave labor to supply the technical and environmental knowledge necessary for crops' survival. As Stewart concluded, after the American Civil War and without slave labor, the planters' "hydraulic machine" fell apart as emancipated laborers walked away from the rice

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Worster, "Hydraulic Society in California," in *Under Western Skies: Nature and History in the American West*, (New York, N.Y.: Oxford University Press, 1992), 53-63; Norris Hundley, Jr., *The Great Thirst: Californians and Water: A History* (1992, revised edition 2001); Donald Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy, 1848-1902* (Albuquerque: University of New Mexico Press, 1992); Donald J. Pisani, *Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920* (Lawrence: University Press of Kansas, 1996); and Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999). For Pacific fisheries history, see: Arthur F. McEvoy, *The Fisherman's Problem: Ecology and the Law in the California Fisheries, 1850-1980* (Cambridge: Cambridge University Press, 1986); Joseph E. Taylor III, *Making Salmon: An Environmental History of the Northwest Fisheries Crisis* (Seattle: University of Washington Press, 1999); Matthew Evenden, *Fish versus Power: An Environmental History of the Fraser River* (New York, N.Y.: Cambridge University Press, 2004); and Karl Boyd Brooks, *Public Power, Private Dams: The Hells Canyon High Dam Controversy* (Seattle: University of Washington Press, 2006).

<sup>17</sup> Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York, N.Y.: Hill and Wang, 1995).

fields, the rivers washed away protective dikes, and rice cultivation was no longer economically viable.<sup>18</sup>

Water and power, however, continued to shape the region's environmental history far from the Coastal Plain. At the end of the nineteenth century, new institutions created a vast hydraulic system in the Blue Ridge and Piedmont regions. Powerful twentieth century energy corporations relied on manipulated rivers to generate electricity for industrial and urban consumers. Southern companies built an interconnected hydraulic system to facilitate the concentration of capital and labor in specific sites of production and consumption. Engineers designed capital intensive technological systems to capture water so they might use the water to generate electricity and then transmit the energy over an intermediary agricultural production zone to explicit industrial sites. The Piedmont South's textile and other manufacturing industries were the primary beneficiaries and consumers of this energy. Textile industrialists depended on white families who abandoned the agricultural zone for the mill village, and landlords in the agricultural zones relied upon black sharecroppers and casual labor. Water management, energy production, and electrical transmission made concentrating labor in cities and mill villages possible and dangerous. The system fell apart during droughts and was thoroughly challenged during the New Deal. Environmental conditions – floods and droughts – challenged energy companies in ways that made empire building impossible and controlling labor difficult in the American South's hybrid environments.

Climate, topography, and environmental conditions have mattered in southern environmental history as much as have race, class, and gender relations. Pete Daniel, Jeffery Stine, and John Barry have analyzed flooding, navigational, and racial histories, but even here,

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<sup>18</sup> Mart Stewart, *'What Nature Suffers to Groe': Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996, reprinted in 2002); Judith A. Carney, *Black Rice: The African Origins of Rice Cultivation in the Americas* (Cambridge, Mass.: Harvard University Press, 2001).

the Mississippi River and the Deep South have received the lion's share of attention.<sup>19</sup> The other side of this climatic coin, drought, has equally influenced the region's history and is strikingly absent from the literature.<sup>20</sup> In the twentieth century alone, southeastern droughts in the 1920s, 1940s, and 1950s reduced agricultural production, limited industrial operations, required suburbanites to conserve water at home, and impacted urban centers far removed from water sources. After the agricultural and urban droughts, energy executives diversified company generation technologies, local governments raised taxes to increase water supply capacity, and federal engineers re-plumbed the southeastern waterscape at various scales. Southern droughts – the slower, forgotten, but no less economically damaging regional water problem – dramatically influenced New South and Sunbelt modernization.

Environmental conditions affected the history of the American South's inland waterways. A history of the Savannah River valley's material environment reminds us that how people talked about and constructed ideas about "Nature" was less important than how they lived with, adapted to, and claimed the valley's physical water resources over time. Valley residents and investors certainly valued the river and its water power, flood control, and navigational utility, but they never fully commodified water or "rationalized" a system subject to intense flooding and drought. Rather, engineers responded to floods and droughts with reservoirs and other technologies to meet specific political and economic needs in exact historical moments. All too

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<sup>19</sup> Pete Daniel, *Deep'n as it come: The 1927 Mississippi River Flood* (New York, N.Y.: Oxford University Press, 1977); Stine, *Mixing the Waters*; John M. Barry, *Rising Tide: the Great Mississippi Flood of 1927 and How It Changed America* (New York, N.Y.: Simon & Schuster, 1997); Karen M. O'Neill, *Rivers By Design: State Power and the Origins of US Flood Control* (Durham, N.C.: Duke University Press, 2006).

<sup>20</sup> Donald Worster's well known book, *Dust Bowl* (New York: Oxford University Press, 1979), examines the consequences of drought in Kansas and Oklahoma between 1930 and 1930. I am only aware of two historical accounts of drought in the American South. The first addresses Arkansas, Kentucky, Louisiana, Mississippi, Tennessee, and West Virginia in the 1930s, see: Nan E. Woodruff, *As Rare as Rain: Federal Relief in the Great Southern Drought of 1930-31* (Urbana: University of Illinois Press, 1985). The second addresses drought and irrigation history in Mississippi and Alabama after 1970, see: Valerie Grim, "The High Cost of Water: African American Farmers and the Politics of Irrigation in the Rural South, 1980-2000," *Agricultural History* 76, 2 (2002): 338-53.

often, their solutions prompted new debates, incited social conflict, and generated environmental questions. Throughout the past and in today's contemporary context, these reservoirs and structures inflated expectations, oversold benefits, and invited social conflict while water problems continued. The South's working reservoirs are indeed human creations and technological artifacts, and thus do not behave entirely like natural or static lakes. In these deep and storied waters, hatchery raised bass run for fishing tournaments, invasive aquatic grasses like hydrilla bloom, pollution laden sediment settles, and water levels can fluctuate widely. In this context, the artificial reservoirs perform cultural and environmental functions, but not necessarily functions for which the projects were originally designed. As the more recent droughts, floods, and Lake Lanier's fluctuating water level demonstrate, peoples' expectations of the region's reservoirs have shifted in a post-industrial society while the problems remain the same.<sup>21</sup>

This project has no intention of furthering a myth of "Southern exceptionalism" and environmental determinism. A history of southeastern water problems demonstrates how people confronted and responded to specific environmental conditions while building a modern, urban, and industrial American society. Like other American regions, people shaped the South's historical experience through the application of technology and concentration of capital when they responded to environmental conditions. The existing water history has treated the American West's water problems as exceptional, and non-historians have been responsible for dismantling this myth. By historicizing the American South's water problems and power struggles, I simultaneously hold the region apart to explain what makes southern water problems different while bringing the region into the larger discussion about the nation's water problems.<sup>22</sup>

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<sup>21</sup> Paul S. Sutter, "Nature's Agents or Agents of Empire? Entomological Workers and Environmental Change during the Construction of the Panama Canal," *Isis* 98 (2007): 724-754.

<sup>22</sup> Matthew D. Lassiter and Joseph Crespino, eds., *The Myth of Southern Exceptionalism* (New York: Oxford University Press, 2010); Robert Glennon, *Water Follies: Groundwater Pumping and the Fate of America's Waters*

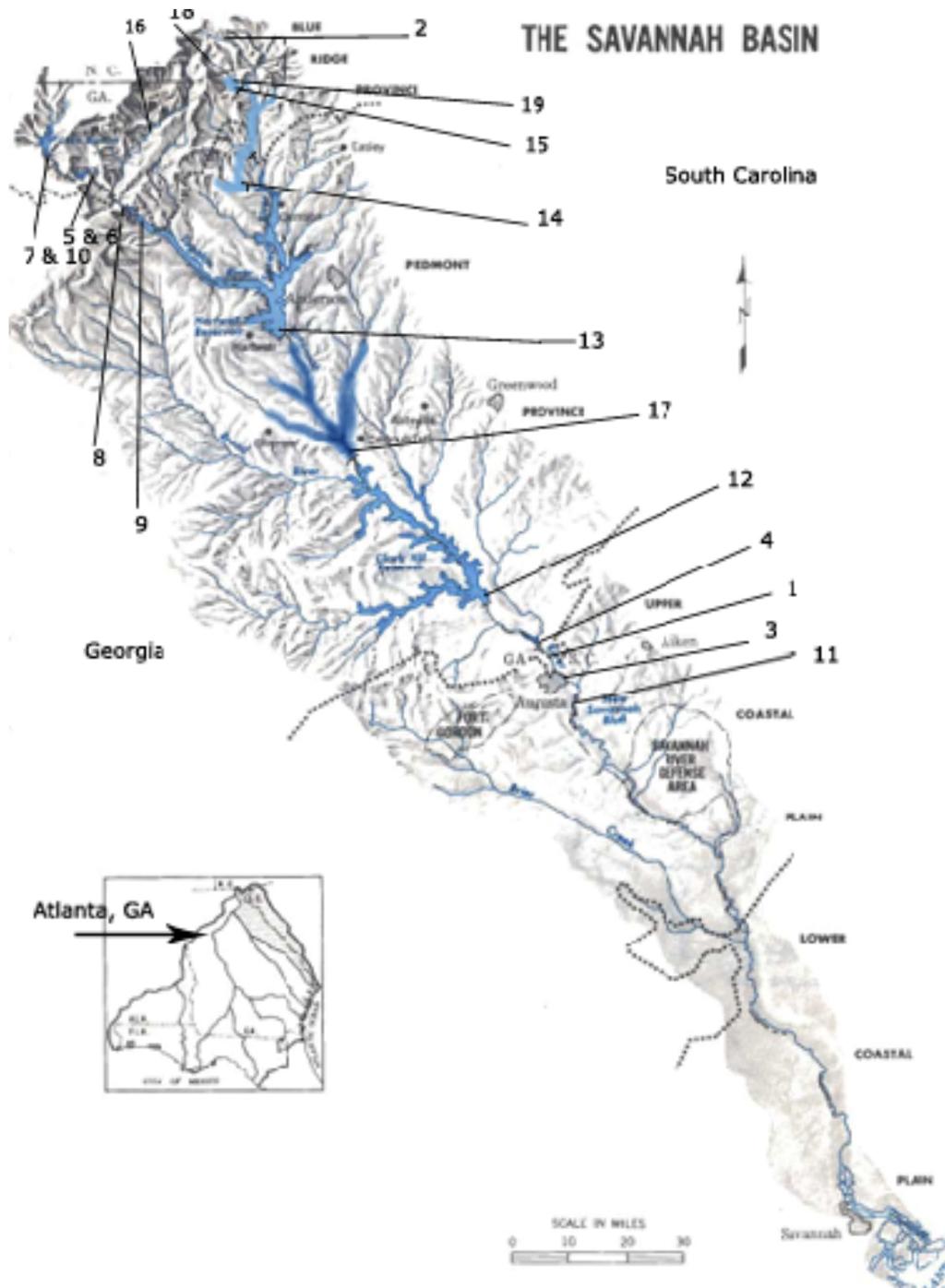


Figure I.1: Selected Savannah River Basin Features. Selected features listed in chronological order based on when facilities were built and/or went ‘online.’ Image from United States Study Commission, *Plan for the Development of the Land and Water Resources of the Southeast River Basins* (Atlanta, Ga.: [n.p.], 1963), and adapted by Christopher J. Manganiello.

(Washington, D.C.: Island Press, 2002); Cynthia Barnett, *Mirage: Florida and the Vanishing Water of the Eastern U.S.* (Ann Arbor: University of Michigan Press, 2007); Robert Glennon, *Unquenchable: America’s Water Crisis and What To Do About It* (Washington, D.C.: Island Press, 2009).

1. Augusta City Dam and Power Canal (water diversion dam & limited navigation), 1845
2. Lake Toxaway (hydroelectric), private resort, 1903
3. Augusta City Levee, originally built in 1915 (reinforced with assistance from the US Army Corps of Engineers, 1940)
4. Stevens Creek Dam (hydro & navigation capable), Georgia-Carolina Power Company, 1912
5. Tallulah Falls Dam and Lake (hydro), Georgia Power Company, 1913-14
6. Terrora/Mathis Dam and Lake Rabun (hydro), Georgia Power, 1915
7. Burton Dam and Lake Burton (hydro), Georgia Power, 1919
8. Tugaloo Dam and Lake (hydro), Georgia Power, 1923
9. Yonah Dam and Lake (hydro), Georgia Power, 1925
10. Nacoochee and Lake Seed (hydro), Georgia Power, 1927
11. New Savannah Bluff Lock & Dam (navigation only), Public Works Administration & Corps, 1937
12. J. Strom Thurmond Dam and Lake at Clarks Hill (multipurpose), Corps, 1953
13. Hartwell Dam and Lake (multi), Corps, 1962
14. Lake Keowee and Dam (Keowee Hydro Station), Duke Power Company, 1971 (Oconee Nuclear Station added in 1973)
15. Lake Jocassee and Dam (Pumped Storage Hydroelectric Station), Duke Power, 1973
16. Chattooga National Wild and Scenic River (56.9 river miles), 1974
17. Richard B. Russell Dam and Lake, formerly known as Trotters Shoals (multi), Corps, 1984
18. Horsepasture National Wild and Scenic River (4.2 mile section), 1986
19. Bad Creek Dam and Lake (Pumped Hydroelectric Station), Duke Power, 1991

## CHAPTER 1

### THE SAVANNAH RIVER VALLEY TO 1880

*“There are no lakes in any part of the region under consideration except a few near the coast, a position which renders them of no value as regards water-power.”<sup>1</sup>*

After months of planning and recovery from an industrial accident, John Muir began his southern walking-tour in late 1867, at an unusual and critical turning point in the region’s history. Well in advance of his better-known and published experiences of his first summer in California’s Sierra Mountains, Muir passed through Georgia in the wake of the American Civil War on his “thousand mile walk” from the mid-west to the Gulf of Mexico. After arriving in Gainesville, Georgia, Muir spent September 24<sup>th</sup> “sailing on the Chattahoochee” with an old friend from Indiana. While cruising the “first truly southern stream” he had ever encountered, the two men set about “feasting” on ripe wild grapes that dropped into the unencumbered upper Chattahoochee River. Muir and his host followed the apparently free-flowing river’s cue and currents, and discovered masses of grapes floating effortlessly in slow churning “eddies along the bank.” Other enterprising men working with the river from boats and the shore easily collected the grapes from these pools where the river’s current slacked. Muir enjoyed some of the delicious grapes right out of the river, as well as the muscadine wine they produced.

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<sup>1</sup> Department of the Interior, Census Office, *Statistics of Power and Machinery Employed in Manufactures: Reports of the Water-power of the United States*, Part I (Washington, D.C.: Government Printing Office, 1885), 669, hereafter *Statistics of Power*.

“Intoxicated with the beauty” of the river’s banks and intrigued by what the banks further down the river might look like, Muir briefly contemplated traveling the Chattahoochee by boat to the Gulf. However, he opted to forgo the water route in favor of overland travel to really see the southern landscape, and eventually, he reached Augusta by foot.

In deciding to walk and record his observations, Muir contributed to a set of social and economic assumptions about the American South. John Muir wanted to disengage from an “entangling society,” according to environmental historian and biographer Donald Worster, but did not avoid judging the region as rural and uncivilized backwater in his journal.<sup>2</sup> Furthermore, as environmental historian Mart Stewart has argued, Muir encountered a post-bellum South that remained – like the majority of the nation at the time – primarily an agricultural region with wild margins that lacked pristine wilderness.<sup>3</sup> In his travels across the Chattahoochee, Oconee, and Savannah River valleys, Muir “zigzagged...amid old plantations” and encountered former slaves working for wages and harvesting low-hanging bolls in cotton fields for wages. Muir also encountered the “northern limit” of long-leafed pine (*Pinus palustris*) ecosystem. The trees fascinated Muir: “Sixty to seventy feet in height, from twenty to thirty inches in diameter, with leaves ten to fifteen inches long, in dense radiant masses at the ends of the naked branches.” The cotton fields, African American laborers, plantations, and timber all pointed to a real, antebellum past. Muir described these social and economic realities and perpetuated a historical narrative of life and labor in the American South that overlooked critical components of the region’s environmental history.

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<sup>2</sup> Donald Worster, *A Passion for Nature: The Life of John Muir* (New York, N.Y.: Oxford University Press, 2008), 122.

<sup>3</sup> Mart Stewart, “If John Muir Had Been An Agrarian: American Environmental History West and South,” *Environment and History* 11, 2 (May 2005): 139-62.

Before the Civil War, Piedmont southerners had already begun to move beyond agricultural production, and they relied on southern rivers to do so. When Muir reached Augusta and the Fall Line, however, he did not say anything about the South's early industrial developments like the antebellum textile mills. Nor did he describe the 1,000 foot-long dam that diverted the Savannah River's current into a series of water-power canals. Augusta's industrialists, in this sense, recreated New England's Waltham-Lowell system that Henry D. Thoreau described in *A Week on the Concord and Merrimack Rivers* (1849). Augusta's system never reached the scale of development Thoreau found in New England. And, as Muir did, southern and environmental historians have largely neglected this early moment where southern water and power merged. But the southern city's system similarly captured water, incited social conflict, required external technical expertise, and altered the river's environment. The scattered grist and saw mills along small Savannah River creeks and tributaries paled in comparison to the Augusta project. And from this perspective, Augusta looked a lot like a New England mill village in an agricultural nation.<sup>4</sup>

The upper Chattahoochee and Savannah rivers flowed freely through Blue Ridge and Piedmont agricultural landscapes with "intoxicating banks" in the nineteenth century. Downstream at the fall line, however, entrepreneurs in towns and cities such as Augusta and Columbus had already erected diversion dams, created small artificial lakes, and laid foundations for an industrial South upon the banks of southern rivers during the 1840s. By focusing on

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<sup>4</sup> Theodore Steinberg, *Nature Incorporated: Industrialization and the Waters of New England* (New York, N.Y.: Cambridge University Press, 1991). Harry L. Watson used small-scale mill dams as a focal point to discuss the market revolution's advance in the American South, and the consequences for up-country farmers and fish, see: "The Common Rights of Mankind: Subsistence, Shad, and Commerce in the Early Republican South," *Journal of American History* 83, 1 (June 1996): 13-43.

natural history and the agricultural dimensions of the southern landscape, Muir obscured the early industrial legacy of the Savannah River valley.<sup>5</sup>

Throughout the nineteenth century – and in the centuries before – Savannah River valley inhabitants depended upon the river to survive. As John Muir traveled leisurely through multiple southern river valleys, he passed through a peopled and working landscape. The Savannah River valley, for example, had been shaped as much by Indian, African, and European hands as it had been shaped by droughts, floods, climate, and geology. All of these human and natural influences crafted a Savannah River valley that was an agricultural and industrious place before the American Civil War.

This chapter is important for understanding the early relationships between water and power in the southeast. I will explain the region's physical history, discuss who shaped the pre-industrial Savannah River over time, and demonstrate who laid the early industrial foundations for the region's modern lakes. First, it's important to understand the physical geography of the Blue Ridge and Piedmont physiographic regions. The region's geological and climatological history created a landscape devoid of natural lakes. Since the southern landscape was never touched by glaciers or blessed with permanent snowfields, the southeast's countless valleys, gorges, and rugged mountains never captured natural lakes. Second, people have always manipulated southern rivers, and rivers have always flooded and gone dry. Native Americans, Africans, and European-Americans used, commodified, redirected, and dammed the Savannah River's tributaries for centuries, but the region's major pre-industrial rivers generally flowed freely until the antebellum era. Even before John Muir walked through the South, the region's rivers and streams had provided valley residents and travelers with access to clean water, fish, and transportation networks. Native Americans built fish weirs and colonial Europeans built mill

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<sup>5</sup> John Muir, *A Thousand-Mile Walk to the Gulf* (Boston, Mass.: Houghton Mifflin, 1916), 48-63.

dams in the Savannah's tributaries to maintain their societies, but these structures created small reservoirs and never blocked the main river's flow. Third, pre-industrial peoples did not separate energy production and consumption. To do so required unavailable capital and inadequate technologies. Antebellum Georgians, South Carolinians, and their industrial allies, however, fundamentally transformed the region's free flowing rivers into 'slack water' reservoirs encumbered by dams, or channeled in new directions to generate industrial energy and consolidate corporate power. The southeast was rich in timber, wildlife, and minerals, but the land lacked the fossil fuels necessary to generate energy. Most importantly, the market revolution brought main-stream dams to the South in the 1840s. Entrepreneurs amassed private investors' capital or entered into public-private partnerships in order to build diversion dams along the region's fall-line urban centers – including Columbia (S.C.) on the Congaree River and Augusta on the Savannah River – to fill canals and supply factory labor with water and industrial energy.

Water and power have been linked for a long time in the American South. Muir may have observed Augusta's hydraulic infrastructure, and had he decided to float the Chattahoochee River from the Georgia mountains to the Gulf of Mexico, he would have discovered a similar system operating in Columbus. Aside from speculation, Muir did describe an agricultural landscape, and in so doing, he missed key physical industrial artifacts that were the building blocks of the American South's modern waterscape and political economy. As he descended the Savannah River valley, Muir did encounter the "New South" spirit that carried the pre-industrial quest forward to build a water and power nexus with alacrity.

## **The Physical Savannah River Valley**

The Savannah River watershed encompasses approximately 10,500 square miles in Georgia, South Carolina, and North Carolina. Like a funnel, the watershed consolidates water from underground springs and rain that falls on the ground's surface, and drains from the northwest and to the southeast. Water flows quickly to the Atlantic Ocean since this watershed travels the shortest distance from mountains-to-sea of any other mountain-to-sea river basin in the southeast. Blue Ridge Province streams and creeks descend from Western North Carolina's ancient mountains (5,500 feet above sea level) to the Piedmont Province (elev. 1,000').

Gathering speed, the rugged Southern Appalachian headwater streams give rise to Georgia's Tugalo River and South Carolina's Seneca River before these two rivers come together to form the three hundred mile long Savannah River. Serving as the dividing line between Georgia and South Carolina, the Savannah River then pushes through the Piedmont and over rocky shoals before cascading over the fall-line at Augusta, Georgia (elev. 200'). Below this city, the rocky Blue Ridge and Piedmont clays give way to the Coastal Plain's softer alluvial soils. The gradient change causes the rushing Savannah River to decelerate and slowly twist back upon itself to form serpentine 'ox bows' throughout the remainder of the river's journey to Savannah, Georgia (elev. 42') and the Atlantic Ocean.

Intense geological energy and force created the southern landscape and the Savannah River watershed. Tectonic shifts in the Earth's crust created river valleys like the Savannah over 200 million years ago, when what are now the North American and African continental plates repeatedly collided with one another before separating for the last time. These faulting and thrusting collisions – whereby the plates slid under or over each other – created uplift in the Earth's crust and resulted in the formation of the Blue Ridge mountains, which some geologists

think may have been at least as tall as the Rocky Mountains. Over the following millions of years, erosion – rain, snow, ice, and wind – slowly whittled the Blue Ridge, contributing to creation of valleys that drained through the rolling hills of the southern Piedmont and the more moderate Coastal Plain gradients to the Atlantic Ocean, or drained through the Ridge and Valley to the Gulf of Mexico.<sup>6</sup> The tectonic forces were important for creating deep valleys and narrow gorges – important landforms that can constrict stream flow – but these actions alone could not form southern lakes.

Glacial movement – in conjunction with tectonic forces and heavy snowpack – carved the landscapes necessary for natural lakes in other parts of North America, but these combined forces did not sculpt a southern landscape to create natural lakes. During the great Ice Age of the Pleistocene epoch (20,000 to 9,000 years ago), the giant Laurentide ice sheet stretched from coast to coast but never advanced from the polar north beyond present-day Ohio. Nearly three miles thick, the ice sheet sliced valleys and pushed soil to build low ridges. As the Laurentide ice sheet began to recede and melt 16,000 years ago, it left behind Mid-Western and New England waterscapes pocked with natural lakes from Minnesota to Maine, and flooded the Mississippi River valley with meltwater. Like tectonic forces, the glacial retreat alone did not scrape the southern landscape and leave behind a waterscape of natural lakes.<sup>7</sup> Geological and climatic events were not the only conditions that influenced the form and composition of the

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<sup>6</sup> L. L. Gaddy, *A Naturalist's Guide to the Southern Blue Ridge Front: Linville Gorge, North Carolina, to Tallulah Gorge, Georgia* (Columbia: University of South Carolina Press, 2000), 4-5; Leonard M. Adkins, *Walking the Blue Ridge: A Guide to the Trails of the Blue Ridge Parkway*, 3rd ed. (Chapel Hill: University of North Carolina Press, 2003), 3-4.

<sup>7</sup> Sharyn Kane and Richard Keeton, *Beneath These Waters: Archeological and Historical Studies of 11,500 Years Along the Savannah River* (Savannah, Ga.: United States Army Corps of Engineers and the Interagency Archeological Services Division, National Park Service, 1993), 9; Donald E. Davis, Craig E. Colten, Megan Kate Nelson, Barbara L. Allen, and Mikko Saikku, *Southern United States: An Environmental History*, Nature and Human Societies Series (Santa Barbra, Calif.: ABC-CLIO, Inc., 2006), 1, 7-8.

southern landscape. People also shaped the Savannah River valley for thousands of years before any lakes or artificial reservoirs appeared on the landscape.

### **The Intermittently Settled Savannah River Valley**

People have occupied, altered, and depended upon the Savannah River valley for thousands of years. Native Americans, according to anthropologists Paul A. Delcourt and Hazel R. Delcourt, functioned as crucial “agents of ecological change” in this southeastern valley as they did throughout North America. Archaic Era (8,000-2,000 B.C.E.) hunter-foragers moved seasonally throughout the southeastern river basins, including the Savannah’s, and established Coastal Plain camps in late fall to hunt game that congregated in the river valley during the winter and foraged on cane grass while people harvested oak-hickory nuts. When vegetation budded in the spring, an estimated 500-1500 people in family-groups dispersed throughout the upper valley, following game to the fall line, and into the Piedmont for the summer and fall before retreating back to the Coastal Plain for the winter. Low population numbers and limited technologies resulted in small scale ecological change, forests remained largely intact, and seasonal migrations ensured that flora and fauna had a chance to rebuild communities. In the later Archaic period, villages in the Piedmont increased in frequency and size for a variety of reasons. The Coastal Plain’s oak-hickory forest changed into a predominantly southern pine forest as global temperatures increased, and late Archaic hunter-foragers moved to the Piedmont above the fall line where the watershed encompassed an area of 7,000 square miles (or about 65% of the entire watershed) to secure mast (nuts) from the dominant oak-hickory forest.<sup>8</sup>

Archeologists consider Stallings Island, located about five miles upstream from Augusta, the home to North America’s oldest pottery. At Stallings Island, one team of archeologists

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<sup>8</sup> Paul A. Delcourt and Hazel R. Delcourt, *Prehistoric Native Americans and Ecological Change: Human Ecosystems in Eastern North America since the Pleistocene* (New York, N.Y.: Cambridge University Press, 2004), 29, 65-68, and quote on 169.

discovered midden mounds comprised chiefly of freshwater clams, catfish, and sunfish. Additionally, these researchers have unearthed some evidence of shad and sturgeon remains, but not enough to demonstrate collective or communal fishing activity.<sup>9</sup> Other archeologists have uncovered evidence of greater fishery activity that occurred during the Late Archaic period (about 2000 B.C.E) when migratory fish species may have become available as seasonally predictable food sources. In some locations, archeologists have located middens that suggest natives gathered at specific rendezvous sites to take advantage of migratory fish like shad. The Rocky River site, further upstream from the Stalling Island site and Augusta, was adjacent to a series of shoals— shallow parts of the rivers where the riverbed’s igneous rock substrate exposed itself in multiple places between the banks – that made it easier for Indians to harvest fish.<sup>10</sup> Finally, during the Late Archaic era, forager-horticulturalist groups increasingly settled in villages organized for defense and to procure food. These communities were still small enough so that a village-specific crop failure might be mitigated by assistance from an adjacent community bonded by kinship, trade, or communication links. Social and environmental change accelerated during the Woodland and Mississippian Periods (1000 B.C.E. – 1300 A.D.) as natives adapted sedentary agricultural production to supplement hunting and gathering strategies. Settlements increasingly took advantage of the rich soil the Savannah River deposited on the river flood plain to raise corn and other crops in places like Rucker’s Bottom. One anthropologist put the Rucker’s Bottom population at around one hundred between 1200 and 1450 AD.<sup>11</sup> Regardless of the size of Savannah River villages, as sedentary horticulturalists,

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<sup>9</sup> Kenneth E. Sassaman, *People of the Shoals: Stallings Culture of the Savannah River Valley* (Gainesville: University Press of Florida, 2006), 114-132.

<sup>10</sup> Kane and Keeton, *Beneath These Waters*, 44-49; Ruby A. Rahn, *River Highway For Trade - The Savannah: Canoes, Indian Tradeboats, Flatboats, Packets, and Barges* (Savannah, Ga.: United States Army Corps of Engineer District, 1968).

<sup>11</sup> David G. Anderson, *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast* (Tuscaloosa: University of Alabama Press, 1994), 299.

southeastern Indians actively domesticated plant species and banked seeds for future planting. When they left fields to fallow, grass and weed species competed for the open space. This evolution of survival strategies over generations led to increased numbers of people living in the valley itself, but the Savannah River valley never developed the large populated centers found in the Mississippi Valley such as Cahokia (Illinois).<sup>12</sup>

Human population grew throughout the entire Savannah River valley during the Mississippian period, leading Native Americans to farm more floodplain territory and to compete with one another for limited land in a narrow valley. At this time, settlement above the fall-line was more common than settlement below the fall line, but Savannah River wetlands in the floodplain, small tributary streams, pine barrens, and the narrow basin made sedentary settlement difficult and may have increased conflict over limited resources. As nut bearing trees migrated into the Piedmont, so too did the people and game that depended upon the trees' fruit.

Southern oaks and hickories, like other mast bearing trees, also supported animal populations. Oak (*Quercus*), hickory (*Carya*), and walnut (*Juglans*) trees dominated forest composition in the Piedmont and served as significant energy sources for humans and game. Nutmeat can provide 1.5 times the calories of beef, and seven productive hickory or oak trees could sustain one person for one year. According to one source, "within the eastern deciduous forest, a watershed of 10-km radius can produce as much as 1.9 million kg (more than four million pounds) of acorns and 236,000 kg (more than 500,000 pounds) of hickory nuts per year." People harvested the trees' manna after the first frost of the fall season before they hulled, heat-treated, dried, and stored the nuts for winter food supply.<sup>13</sup> But Savannah River chiefdoms ultimately declined in a valley full of natural resources. "The organizational collapse and

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<sup>12</sup> Kane and Keeton, *Beneath These Waters*, 125.

<sup>13</sup> Delcourt and Delcourt, *Prehistoric Native Americans and Ecological Change*, 69-73.

presumed associated abandonment of the central and lower Savannah River valley that took place in the late 15<sup>th</sup> century,” according to anthropologist David Anderson, “may also be tied, at least in part, to regional physiographic structure, specifically drainage patterns.” Anderson posits that drought and disease contributed to political disruption in the valley and outmigration from a valley that increasingly became a “buffer zone.” As the valley shed people, the new buffer zone also became a game sanctuary for animals, and the out-migration turned the Savannah River’s banks and the valley into a demilitarized zone separating rival chiefdoms in a process observed across the southeast and in other regions. These politically expedient buffer zones also had beneficial ecological consequences; they functioned as game reserves and refuges for animals to retreat and replenish populations. As the Savannah’s buffer zone emptied, the Ocute chiefdom in central Georgia or the Cofitachequi in central and eastern South Carolina absorbed the former Savannah valley residents. Prior to European arrivals in southeast, any conflicts that erupted in the river basin buffer zones probably involved hunting parties or the slave raiding Westo Indians seeking the Savannah’s fish and game.<sup>14</sup>

By the time Spanish Conquistador Hernando de Soto and his party crossed the Savannah River valley near Augusta in 1540, Native Americans had already migrated out of the valley. The conquistadors and their Indian porters, guides, and scribes traveled from central Georgia to the Savannah River through the mixed hardwood forest of oaks, pines, dogwoods, and

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<sup>14</sup> Kane and Keeton, *Beneath These Waters*, 125-134, 140. For evidence of Choctaw de-population, see Richard White, *The Roots of Dependency: Subsistence, Environment, and Social Change, Among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983), 10-13. For evidence of de-population in the Ohio River valley, see: Stephen Aron, *How the West Was Lost: The Transformation of Kentucky from Daniel Boone to Henry Clay* (Baltimore, Md.: Johns Hopkins University Press, 1996), 6-7. On movement and buffer zones in the Southeast, see: Anderson, *The Savannah River Chiefdoms*, 260-264; Tom Hatley, *The Dividing Paths: Cherokees and South Carolinians Through the Era of Revolution* (New York, N.Y.: Oxford University Press, 1993), 30, 86, 136; Marvin T. Smith, “Aboriginal Movements in the Postcontact Southeast,” in *The Transformation of the Southeastern Indians, 1540-1760*, edited by Marvin T. Smith, Robbie Franklyn Ethridge, and Charles M. Hudson (Jackson: University Press of Mississippi, 2002), 3-20; and Eric Browne, “‘A Bold and Warlike People’: The Basis of Westo Power,” *Light on the Path: The Anthropology and History of the Southeastern Indians*, edited by Charles M. Hudson, Thomas J. Pluckhahn, and Robbie Franklyn Ethridge (Tuscaloosa: University of Alabama Press, 2006), 123-132.

sourwoods for days and could not understand why the region appeared largely uninhabited. On April 17, the Spanish corps reached and crossed the rushing Savannah River where Pace's Island and Winn's Island once emerged from the river. Here the Spanish entourage learned much about river's power. The Savannah flowed with an obvious and visible current on the surface, obscured the slick river stones under the water, and was so deep that water nearly reached the horsemen's stirrups. As such, the mounts did not offer foot soldiers passage on their horses' rumps and forced those on foot to form human chains of thirty or forty men tied together. The river-crossing rope-teams fought and worked directly across the river's current in a laborious process that burned the day's light as well as human calories. Upon reaching the South Carolina bank the party settled into a makeshift camp to recover, but even this success was bittersweet. The group's human contingent succeeded in crossing the river but the river's current stole the party's portable food sources. In attempting to swim De Soto's herd of pigs across the river, the river's current swept many hogs downstream.<sup>15</sup> After De Soto passed through the valley, the southeast experienced a series of serious dry spells, including a nearly twenty-year long mega-drought (1555-1574), and some researchers have used bald cypress tree-ring data to implicate drought in the demise of the Lost Colony of Roanoke (1587-1589) and trouble in Jamestown (1606-1612).<sup>16</sup> Regardless of drought or rainfall in the sixteenth and seventeenth centuries, the Savannah River valley remained largely unvisited by Europeans for the next 150 years.

By the mid-eighteenth century, Europeans, including many recognized naturalists, began traveling and settling throughout the resource rich Savannah River Valley. Settlers and travelers

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<sup>15</sup> Charles M. Hudson, *Knights of Spain, Warriors of the Sun: Hernando de Soto and the South's Ancient Chiefdoms* (Athens: University of Georgia Press, 1997), 167-8. The islands are now under the J. Strom Thurmond Dam and Lake at Clarks Hill reservoir's water.

<sup>16</sup> David W. Stahle, Malcolm K. Cleaveland, Dennis B. Blanton, Matthew D. Therrell, and David A. Gay, "The Lost Colony and Jamestown Droughts," *Science* 280, no. 564 (April 24, 1998): 564-567; Richard Seager, Alexandria Tzanova, and Jennifer Nakamura, "Drought in the Southeastern United States: Causes, Variability over the Last Millennium, and the Potential for Future Hydroclimate Change," *Journal of Climate* 22 (October 1, 2009): 5021-5045, see 5039 for reference to the mega-drought and tree-ring data.

like renowned naturalist Mark Catesby reported dense canebrakes throughout region. River cane was a prolific bamboo-like grass that covered river bottoms and grew sandy soils. Cane was also popular forage for both domestic free range animals and wild game, and settlers learned that cane also marked areas of rich soil. Cane still exists today in a circumscribed range, but according to environmental historian Mart A. Stewart, cane has always been “a plant of the margins” that thrived on disturbances such as fire, blow-downs, and cutting. Large cane breaks disappeared as colonial livestock overgrazed the open range, and when humans replaced cane with cotton or other crops in the eighteenth century.<sup>17</sup> Since cane often established itself along rivers, Mark Catesby also found fish where he found cane. With the aid of Indian guides, Catesby traveled from Savannah to Fort Moore on multiple occasions between 1723 and 1725. The fort sat high on a South Carolina bluff, some two hundred feet above the river bed, and was only a few miles downstream from present-day Augusta, Georgia. Catesby described the region as “one of the Sweetest Countrys” he had ever encountered, and one that could match the agricultural production of Kent in England. One August, Catesby and three friends took advantage of one feature of the river’s produce: the annual sturgeon run from the headwaters to the sea. The Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) is an anadromous fish, and had already moved from the Atlantic Ocean’s saltwater to the Savannah River’s freshwater spawning grounds between January and May, before returning to the ocean in the fall. Proceeding to “where the Cataracts” and water-falls began just above present-day Augusta for a fishing excursion, “three of us in two days killed sixteen [sturgeon]...and two we brought” back to the

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<sup>17</sup> Mart A. Stewart, “From King Cane to King Cotton: Razing Cane in the Old South,” *Environmental History* 12, 1 (January 2007): 59-79.

fort to share. Besides the river's bounty, Catesby observed that South Carolina's waters were "replenished with Brooks and Rivulets of clear water," and "limpid" streams were ubiquitous.<sup>18</sup>

William Bartram – the best-known southern naturalist – provided one of the most complete pictures of the Savannah River valley, having traveled from the Atlantic port of Savannah throughout the valley's Piedmont and Blue Ridge headwaters between 1773 and 1775. Endowed with a gifted botanical eye and artful pen, Bartram described a valley rich in human and natural resources. He, like Catesby, recognized the Savannah River's water quality, and described the region's watercourses as "transparent," "crystal," "glittering," and "clear." "Rich and fertile" soils throughout the Savannah River's valley-floor made cultivation of corn easy for Indian and Euro-American farmers. The late Augusta historian Edward J. Cashin argued that the city's initial success depended on slave labor whose agricultural work produced nearly six times as much corn as on comparable acreage in Savannah. Bartram noted that one diversified South Carolina plantation, located near the present-day town of Bordeaux but now partially under Clarks Hill's reservoir was "situated on the top of a very high hill near the banks of the river Savanna." From Frenchman Mons. St. Pierre's house, Bartram looked down and across fields of corn, rice, wheat, oats, indigo, and sweet potatoes on "rich low lands, lying very level betwixt these natural heights and the river." Other reports suggest Bordeaux – located about 3.5 miles from the Savannah River in McCormick County, South Carolina – was primarily inhabited by up to seven-hundred Huguenot transplants who attempted silk cultivation and wine production. But after the American Revolution, the region turned to cotton as a staple crop. Bartram provided no

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<sup>18</sup> Hatley, *Dividing Paths*, 86. Mark Catesby and others commented on the region's high quality water from the colonial to the antebellum period, see: Stanley Trimble, *Man-Induced Soil Erosion on the Southern Piedmont, 1700-1970* ([n.p.]: Soil Conservation Society of America, 1974), 21-25; George Frederick Frick and Raymond Phineas Stearns, *Mark Catesby, The Colonial Audubon* (Urbana: University of Illinois Press, 1961), 26; C. R. Gilbert, *Species Profiles: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates (Mid Atlantic) - Atlantic and Shortnose Sturgeon FWS Biological Report 82(11.122) and TR EL-82-4* ([n.p.]: United States Fish and Wildlife Service and the United States Army Corps of Engineers, 1989).

sense of this or other plantations' total sizes, but these settlements required more than the river valley's soil and free flowing water to survive.<sup>19</sup> In the eighteenth century, Native Americans, explorers, and colonists lived by their fortuitous capacity and power to cultivate crops, raise livestock, and harvest fish from a Savannah River valley environment.

### **The Agricultural Savannah River Valley**

African slavery – legalized in Georgia in 1751 – made it easier for Euro-Americans to capitalize on the valley's natural resources, and enabled Georgians to directly compete with South Carolina in production of agricultural and export commodities.<sup>20</sup> Bartram called upon one slave owner downstream from Augusta who deployed African labor into the “ancient sublime” long-leaf pine and cypress forests. There, they cut and prepared timber for export downriver to Savannah and beyond to the “West-Indian market.” In addition to these land-based activities where people harvested calories from the soil, Bartram also watched one of his young Indian guides land a “fifteen” pound trout in the Broad River's clear waters with a barbed “reed harpoon.” Compared to De Soto's march through an uninhabited Savannah River valley two centuries previous, Bartram described the string of towns, plantations, and military garrisons in a resource rich and market-production oriented tri-cultural landscape. Euro-Americans throughout the countryside consistently harvested the valley's rich soil and water resources, and those resources became significantly more lucrative after the American Revolution.<sup>21</sup>

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<sup>19</sup> William Bartram, *Travels Through North & South Carolina, Georgia, East & West Florida, the Cherokee Country, the Extensive Territories of the Muscogulges, or Creek Confederacy, and the Country of the Chactaws; Containing An Account of the Soil and Natural Productions of Those Regions, Together with Observations on the Manners of the Indians*, edited by Francis Harper (Athens: University of Georgia Press, 1998), 11, 22, 208, 237; Edward M. Riley, “The Survey of the Historic Sites of the Clark Hill Reservoir Area, South Carolina and Georgia” (Richmond, Va.: National Park Service, June 1949), 10-11; Edward J. Cashin, *The Story of Augusta* (Augusta, Ga.: Richmond County Board of Education, 1980), 11.

<sup>20</sup> Betty Wood, *Slavery in Colonial Georgia, 1730-1775* (Athens: University of Georgia Press, 1984).

<sup>21</sup> Bartram, *Travels*, 29, 196-198; Timothy Silver, *A New Face on the Countryside: Indians, colonists and slaves in the South Atlantic forests, 1500-1800* (New York, N.Y.: Cambridge University Press, 1990).

Once European colonists arrived in the Savannah River valley, developments designed to harvest southern rivers' currents began to follow patterns familiar in other early national regions like New England. In the colonial and early American periods, private investors developed water resources at specific sites, constructing single mills or small factories alongside natural waterfalls or shoals. Millwrights undertook similar water development in watersheds adjacent to the Savannah. For example, in 1791, a mill owner operated a small water powered cotton mill on the Santee River near Columbia, South Carolina, a city whose inhabitants would again demonstrate an adept ability to harvest falling water in the future.<sup>22</sup> In Georgia, early settlers erected a saw-mill with a lengthy millrace on the Savannah River in 1736; Augustan Nathaniel Durkee's Summerville plantation included grist and saw mills (1801); and along Georgia's Oconee River, the Skull Shoals paper mill began operation after 1809.<sup>23</sup> Like Native American anglers who congregated around rocky shoals to capture fish and like farmers who turned the valley's mineral rich bottoms, Euro-American mill builders utilized specific sites and the river's energy to serve a limited geographical market.

Well into the antebellum era, private individuals and investors continued to harness the Savannah River's water energy to power gristmills, lumber mills, and cotton gins.<sup>24</sup> Planters such as James Edward Calhoun, who owned and operated the Millwood Plantation, erected low dams to power mills and machinery. James, the cousin of South Carolina's John C. Calhoun, owned property that stretched for seven miles and covered over 10,000 acres on both sides of the

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<sup>22</sup> Henry Savage, Jr., *The River of the Carolinas: The Santee* (Chapel Hill: University of North Carolina Press, 1956, reprint in 1968), 331.

<sup>23</sup> E. Merton Coulter, *Georgia Waters: Tallulah Falls, Madison Springs, Skull Shoals and the Okefenokee Swamp* (Athens, Ga.: Georgia Historical Quarterly, 1965), 89-91; Cashin, *The Story of Augusta*, 59; Michael C. White, *Waterways and Water Mills* (Warrenton, Ga.: C.S.R.A. Press, 1995), 202-210; Mart Stewart, 'What Nature Suffers to Groe': *Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996), 71.

<sup>24</sup> James C. Cobb, *Industrialization and Southern Society, 1877-1984* (Lexington: University of Press of Kentucky, 1984), 5.

Savannah River in Abbeville (South Carolina) and Elbert (Georgia) counties, and his property included small dams and diversion structures that channeled water downstream to small mills that sat upon riverbanks. Unlike some of the plantations Bartram visited high on bluffs above the river, Millwood sat in the Savannah River's floodplain below the mouth of the Rocky River and about sixty miles upstream from Augusta. Calhoun's many small diversion dams redirected the river to run multiple mills and assorted machinery after 1832, and by 1850, mill manager Delancy Chisenhall produced cornmeal, wheat flour, lumber, and leather for Calhoun.

Before the Civil War, Calhoun diversified his crops and succeeded because he ordered the energy of slaves, tenants, and soil to produce the plantation's primary product – cotton – in addition to peas, corn, turnips, and oats. Calhoun's diversification may have been an aberration in comparison to other plantation owners in the region, but his and his neighbor's staple cotton crop anchored the economy of central Georgia and South Carolina. As cotton replaced tobacco, the influence of up-river villages such as Petersburg, Georgia declined. Furthermore, because cotton plantations like Millwood could function as relatively self-sufficient institutions, there were few towns in the region. Throughout the region planters like Calhoun often erected cotton gins and grist mills, and allowed local farmers to use the facilities on a cash or exchange basis.<sup>25</sup> These operations remained local affairs, and only began to change as planters cultivated a new variety of cotton and developed new ginning and power sources at the beginning of the nineteenth century.

Textile professionals favored the high quality long-staple Sea Island cotton cultivated on the coast, but farmers and planters in the southern Piedmont could not cultivate Sea Island cotton. This dynamic soon changed. The convergence of a cotton variety (short-staple), improved ginning technologies, and access to international markets contributed to an explosive

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<sup>25</sup> Kane and Keeton, *Beneath These Waters*, 174.

moment in Piedmont cotton production during the antebellum era.<sup>26</sup> But the increased output also led to soil depletion, erosion, land consolidation, and out-migration. Farmers – those who owned no or few slaves – who could not keep up with soil improvement or land rotation cycles, or purchase new land and slaves, moved further west into Alabama and Mississippi. Between 1810 and 1850, there was a massive white exodus and a corresponding increase in black labor, throughout South Carolina’s and Georgia’s Piedmont. Some of those planters who remained assumed leadership positions in the region, and those who continued to farm in the bottomlands, the agricultural reformers like Calhoun, enjoyed greater returns on their crops because of direct access to markets in Augusta and Savannah.<sup>27</sup>

Calhoun’s access to the Savannah River linked him to the region’s water problems. The summers between 1832 and 1834 were particularly dry. Calhoun’s cotton and corn suffered ten weeks without rain from May thorough August in 1832, then the Savannah ran “unusually low and for a long time” in the fall of 1833, and Calhoun again was “wanting rain” to sustain his cotton in October 1834.<sup>28</sup> When the Savannah River was running, Calhoun’s hired white and slave laborers could manufacture material items necessary to keep the whole operation running and relatively self-sufficient, but they also constantly reacted to the river’s behavior. Flooding – or “freshets” – damaged floodplain fields and the river rose “as high nearly as in Dec. 1831

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<sup>26</sup> Angela Lakwete, *Inventing the Cotton Gin: Machine and Myth in Antebellum America* (Baltimore, Md.: Johns Hopkins University Press, 2003), 47-71.

<sup>27</sup> Kane and Keeton, *Beneath These Waters*, 176; Steven Stoll, *Larding the Lean Earth: Soil and Society in Nineteenth-century America* (New York: Hill and Wang, 2002).

<sup>28</sup> James Edward Calhoun, Plantation Journal, 1930-1834, Financial and Legal Papers, 1819, 1830-1836, 1838, 1843-1844, 1853-1854, Series 2, John Ewing Colhoun Papers (#130), Southern Historical Collection, Manuscripts Department, University of North Carolina, Chapel Hill, N.C., hereafter JEC. The 1833-34 summer droughts may have been the initial years of an “extended dry” period that lasted from 1834 to 1861, and the initial years of the Mid-western “Civil War” drought, see: Seager, et. al, “Drought in the Southeastern United States,” 5038; and Celine Herwiger, Richard Seager, and Edward Cook, “North American Droughts on the Mid to Late Nineteenth Century: A History, Simulation, and Implication for Mediaeval Drought,” *The Holocene* 16, 2 (2006): 159-171, see 160-162.

which exceeded any Freshet for many years before.”<sup>29</sup> Calhoun repeatedly contracted with individuals to reinforce and maintain dams because he felt “uneasy about...[their exposure] to the whole force of the River during freshets” and floods. Calhoun’s personal proto-industrial activities did not necessarily contribute to a southern ‘market revolution’ on a scale equivalent to what emerged in Massachusetts’ Lowell mills. Calhoun – a man rich in real property but perpetually short of cash – apparently dreamed of building a large textile mill on the Millwood site, but he left that task to downstream investors and “men of capital” with deeper pockets.<sup>30</sup>

By the nineteenth century, the Savannah River valley looked like other American river valleys. Small agricultural and growing industrial communities emerged along the river. But to be sure, Calhoun’s plantation was not the norm or like the towns that abutted New England’s rivers. The Savannah River had flowed freely until the decades before the American Civil War, and the Augusta Canal diversion dam signaled the beginning of a new relationship between water and power in the southern Piedmont.

### **“The Lowell of the South:” The Savannah River Valley and the Augusta Canal**

The city of Augusta, affectionately anointed as “the Lowell of the South” by the *Augusta Chronicle’s* editors, successfully redirected the Savannah River’s energy rich current on a much larger scale than Calhoun could have ever achieved. Augusta’s prominent city boosters secured the local political will, the necessary financial resources, and the appropriate technological

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<sup>29</sup> James Edward Calhoun, *Plantation Journal, 1930-1834*, JEC.

<sup>30</sup> For Calhoun quote, see The History Group, Inc., *Historical Investigations of the Richard B. Russell Multiple Resource Area* (Atlanta, Ga.: Archeological Services Division, National Park Service and the Savannah District, United States Army Corps of Engineers, 1981), 185; Charles Orser, Jr., Annette M. Nekola, and James Roark, *Exploring the Rustic Life: Multidisciplinary Research at Millwood Plantation, A Large Piedmont Plantation in Abbeville County, South Carolina and Elbert County, Georgia*, the Russell Papers (Atlanta, Ga.: Interagency Archeological Services Division, National Park Service, 1987), 448; Kane and Keeton, *Beneath These Waters*, 178, 182, 209; Theodore Steinberg, *Nature Incorporated: Industrialization and the Waters of New England* (Cambridge, Mass.: Cambridge University Press, 1991). For the distinction of “men of property” and “men of capital,” see: Tom Downey, “Riparian Rights and Manufacturing in Antebellum South Carolina: William Gregg and the Origins of the ‘Industrial Mind,’” *Journal of Southern History* 63, 1 (February, 1999): 77-108.

advice to begin construction on the Augusta Canal in the 1840s less than 100 miles downriver from Calhoun's Millwood Plantation.<sup>31</sup> Georgia and South Carolina generally lagged behind other states during the canal building era when compared to New York (Erie Canal, 360 miles long) or Maryland (Chesapeake and Ohio Canal, 185 miles). Georgians and South Carolinians only constructed a handful of transportation canals: the twenty-two mile long Santee and Cooper canal (constructed between 1792 and 1800); the fifteen-mile coastal Savannah-Ogeechee-Altamaha canal (1825-1830); and a twelve-mile canal connecting the Altamaha River with Brunswick, Georgia's port (1834-1854). The Santee-Cooper canal remained in service significantly longer than the latter two canals, but all canals suffered for financial reasons and as a result of railroad competition.<sup>32</sup> However, the "Lowell of the South" was motivated by this canal building era and the original Lowell's emergence as the epicenter of North American textile manufacturing.

Augustan Henry Harford Cumming merged the political, financial, and technological powers necessary to move the Augusta Canal from an idea in the 1830s to a reality in 1845. More than anything, historian Edward Cashin has argued, Cumming wanted to secure Augusta's mercurial economy and to reverse the city's dependence upon northeastern cities and the southern ports of Savannah and Charleston. Cumming sensed that Augusta could compete with Lowell – where investors built twenty-eight mills and massed eight thousand operatives by 1839.<sup>33</sup> Cumming and other regional entrepreneurs like South Carolinian William Gregg reasoned, why send raw cotton to New England when it could be processed closer to the fields

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<sup>31</sup> "Lowell of the South," *Augusta Chronicle*, January 2, 1845. For the best history of the Augusta Canal, see: Edward J. Cashin, *The Brightest Arm of the Savannah: The Augusta Canal, 1845-2000* (Augusta, Ga.: Augusta Canal Authority, 2002).

<sup>32</sup> Savage, *The River of the Carolinas*, 241-247; Ronald E. Shaw, *Canals for a Nation: The Canal Era in the United States, 1790-1860* (Lexington: University Press of Kentucky, 1993), 15-18, 123-124.

<sup>33</sup> Steinberg, *Nature Incorporated*, 3.

where it was cultivated? Gregg toured Lowell in 1844 and decided to reproduce the system in the Horse Creek valley ten miles east of Augusta on a Savannah River tributary in South Carolina. Operations at the Graniteville Manufacturing Company and mill village began in 1849 where Gregg employed over three hundred white workers to operate 9,000 spindles and three hundred looms.<sup>34</sup> In the years leading up to Gregg's decision to build his water-powered mill, people like Cumming understood that the region's large pool of restless labor – a problem in its own right – could be redirected from farms to the factory floor.

In the wake of the 1830s national financial panic and regional soil erosion, many Georgian and South Carolinian farmers began to flee the state for the “black belt” soils of Alabama and points west. This exodus, as historian Steven Stoll has illustrated, threatened the region's political economy. Local investment could stop the hemorrhaging by shifting from regional bartering and trading to a national and diversified commercial economy. Finally, Cumming reasoned, railroads began to bypass some southern cities but could ultimately favor others like Augusta. All of these factors – access to raw materials, local labor, and transportation links to international shipping – led Cumming and other “men of capital” to turn to the Savannah River to power a diversified commercial economy during the nineteenth century southern market revolution. The South, it would seem, was more than the agricultural region that Muir passed through in 1867.

In Cumming's mind, the Augusta Canal could tame a short section of an unpredictable river and power local factories while achieving two connected goals. First, as a transportation conduit, the canal provided a limited bypass through the fall-line. The canal was a limited navigational solution because boats could enter the canal upstream of Augusta but could not exit

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<sup>34</sup> Downey, “Riparian Rights and Manufacturing in Antebellum South Carolina,” 93-95; Eelman, *Entrepreneurs in the Southern Upcountry*, 43.

the canal into the Savannah River below Augusta. As a navigational waterway, the canal facilitated movement of agricultural products between Augusta and upstream communities. Once goods arrived in Augusta, they were offloaded, processed in Augusta, or reloaded onto Savannah riverboats or railroads. By attracting agricultural and commercial goods to Augusta, the city's economic boosters could then focus on developing additional rail and waterborne transportation networks to reach ports in Savannah and Charleston. Traveling the upper Savannah River's reaches by boat was daunting – shoals, rocks, and unpredictable water levels made travel hazardous at best. Despite many sources of water such as springs and rainfall, seasonally fluctuating water flows hampered commerce on nearly every river in the American South. Rivers typically ran low in the spring and summer, and could rise with autumn tropical storms and winter rains. Not enough rain made navigating the upper Savannah River's shoals difficult with cargo-laden boats, and too much water could turn rivers into torrents.

The Augusta Canal provided seven miles of safe passage through the Savannah River's fall-line and around one of the river's longest sets of shoals, regardless of water levels. The technology necessary for this endeavor – like canals in other parts of the American South – came from outside of the region. For example, a community of transnational engineers and surveyors associated with designing Lowell's water infrastructure contributed to designing southern water projects. Loammi Baldwin, Jr. and Charles H. Bigelow – both fixtures in New England's institutional water-power management – served as investors and consultants in southern canal projects including the Augusta Canal.<sup>35</sup> Augusta's survey team – comprised of the Georgia Railroad's chief engineer, John Edgar Thomson, and Augusta surveyor William Phillips – began their work in 1844. Phillips, a Pennsylvania native, learned about canal construction from his

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<sup>35</sup> Steinberg, *Nature Incorporated*, 88-91; Shaw, *Canals for a Nation*, 124; Robert L. Spude, *Augusta Canal, Historic American Engineering Record, HAER GA-5* (1977), 7, available online with images through the Built in America Collection, Library of Congress.

father who had supervised the Delaware and Chesapeake Canal's construction.<sup>36</sup> And James Bechno Francis, the famous Lowell water-power and canal engineer, also participated in the Augusta Canal's design and consultation process in the 1840s. Francis – born in Great Britain to a canal engineer's son – became Lowell's most prominent civil engineer for nearly forty-five years and consulted for all of Lowell's companies on waterpower needs.<sup>37</sup>

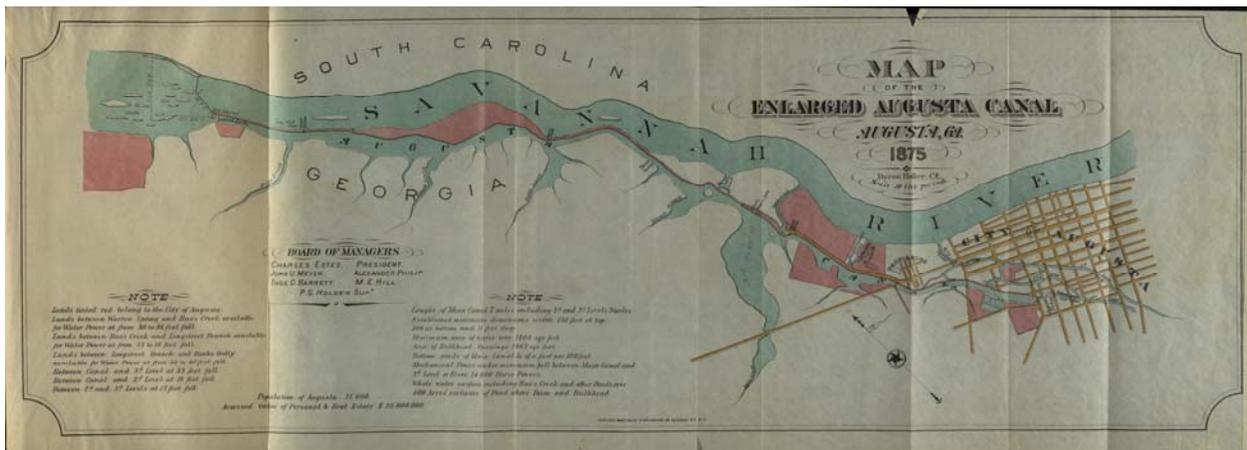


Figure 1.1: The Augusta Canal (1875). The diversion dam channeled the Savannah River's water through the canal head gates and the canal's single lock (upper left corner) to Augusta. Canal vessels could not access the river from the canal in downtown Augusta. Byron Holly, *The Enlarged Augusta Canal* (1875), Courtesy of Hargrett Rare Book and Manuscript Library, University of Georgia Libraries.

The engineers and individuals like Cumming who contributed to building the South's waterscape also demonstrate what the market revolution and transition to capitalism looked like in one part of the American South. Historians have typically reduced the market revolution to either a conflict between the interests of coastal merchants and yeoman farmers, or between cotton-planters, poor yeomen, and slaves.<sup>38</sup> The Augusta Canal's example illustrates that middle

<sup>36</sup> Spude, *Augusta Canal*, 7.

<sup>37</sup> Steinberg, *Nature Incorporated*, 88-95; Cashin, *The Brightest Arm*, 54; Shaw, *Canals for a Nation*, 124; Spude, *Augusta Canal*, 7.

<sup>38</sup> Charles Sellers, *The Market Revolution: Jacksonian American, 1815-1846* (New York, N.Y.: Oxford University Press, 1991); Harry Watson, "Slavery and Development in a Dual Economy: The South and the Market Revolution,"

class, urban professionals – like Cumming and William Phillips – do not fit into those categories. As historians Tom Downey and Bruce Eelman have argued, these antebellum individuals were the “men of capital” who shaped the southern waterscape and the South’s diversified market revolution. “Men of property” – those elite individuals who owned slaves, stands of timber, or small mills throughout the South – represented one layer of southern industrialists who increasingly ceded political power in the late-nineteenth century to another group of capitalists. “Men of capital” – like Cumming and his booster-neighbor William Gregg – symbolized the new southern industrialist who gained significant political power before the American Civil War. The Vacluse Manufacturing Company, organized in 1833 by German immigrant Christian Breithaupt, introduced a new kind of industry to Horse Creek valley, a tributary of the Savannah River. Located in South Carolina only miles from Augusta, Vacluse was soon followed by William Gregg’s Graniteville Manufacturing Company in 1845, and other companies like the South Carolina Paper Manufacturing Company (1849) and the Southern Porcelain Manufacturing Company (1854). Each Horse Creek mill and factory required a diversion dam, which illegally obstructed river navigation and the movement of lumber rafts by upstream millers. Legal conflicts ensued, but Gregg used his political and economic connections to win legislative exemptions from having to provide safe passage of navigable goods over his diversion dams. As Downey argues, South Carolina’s political economy shifted from favoring men of property who were rich in slaves and real estate, to men of capital who pooled capital to create incorporated institutions like mills and factories.<sup>39</sup>

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in Melvyn Stokes and Stephen Conway, eds., *The Market Revolution in America: Social, Political, and Religious Expressions, 1800-1880* (Charlottesville: University Press of Virginia, 1996), 43-73; Joseph P. Reidy, *From Slavery to Agrarian Capitalism in the Cotton Plantation South: Central Georgia, 1800-1880* (Chapel Hill: University of North Carolina Press, 1992).

<sup>39</sup> Downey, “Riparian Rights and Manufacturing in Antebellum South Carolina”; Eelman, *Entrepreneurs in the Southern Upcountry*.

The Augusta Canal’s “men of capital” – not unlike William Gregg across the river in South Carolina – secured their financial resources from various sources to couple water and power. Since no federal or state funds were available for canal construction in Georgia, the newly formed Canal Board of Commissioners turned to Augusta banker William D’Antignac. Through interlocked social and financial relationships, D’Antignac lured additional investors from the Bank of Augusta, Georgia Railroad Bank, Augusta Insurance and Banking Company, and Bank of Brunswick. Each of the four entities invested \$1,000 and the City Council of Augusta agreed to issue bonds worth \$100,000 to finance construction.<sup>40</sup> By April, 1845, construction companies signed contracts and broke ground on the city’s waterway to generate water power and regulate navigation. Local individuals, entities connected with the Georgia Railroad, and northeastern stone masons contracted to build sections of the canal. Irish laborers, African-American slaves, and Georgia citizens performed low-skilled work, and Italians often completed higher-skilled tasks like masonry work.<sup>41</sup> When the laborers completed the canal in 1847, it was forty feet wide at the surface, twenty feet wide at the bottom, and five feet deep. Over the course of the following decades the demands on the canal’s water power increased, necessitating improvements between 1850 and 1860 that enlarged the dam and canal to provide more water power to the city and fill the water-way.<sup>42</sup> But the seasonal fluctuation of water volume and surface water were not the only factors that rendered transportation and navigation difficult. Cotton may have been king for the financial economy, but this monarchy inflicted serious damage within nature’s economy.

While reports from South Carolina’s Piedmont and Blue Ridge border region suggest the Keowee River as “the most beautiful river in Carolina” with “pure and transparent” waters in

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<sup>40</sup> Cashin, *Brightest Arm of the Savannah*, 66-68.

<sup>41</sup> Shaw, *Canals for a Nation*, 123-124; Spude, *Augusta Canal*, pp. 5 and 7, and notes 25 and 38.

<sup>42</sup> *Statistics of Power*, 787-789.

1859, land use and soil management soon complicated river navigation downstream in the Savannah and other rivers.<sup>43</sup> South Carolina and Georgia farmers and planters demanded much from a soil that was not deep enough to continuously perform to human or market expectations. Piedmont tobacco and cotton agriculturalists participated in a cycle of land clearing and cultivation that resulted in high yields followed by varying degrees of soil erosion and land abandonment. A late-nineteenth century survey of potential water power in the United States remarked that the rivers in the Santee and Savannah rivers' headwaters were "in many places rapidly filling up with detritus – sand and mud – which is washed in from the hill-sides, so that many shoals [were] being rapidly obliterated, and at many places, where within the memory of middle-aged men there were shoals with falls of from 5 to 10 feet, at present scarcely any shoals can be noticed." The federal surveyor pointed to deforestation and "a superficial method of cultivation, by which this soil is also rendered less cohesive and more liable to washing."<sup>44</sup> Whether agriculturalists were "soil miners," "land killers," or victims in an "erosional tinderbox," human behavior and labor deployed on land had consequences for the river's function.<sup>45</sup> Erosion and sediments raised river bottoms, contributed to new and ever-shifting sand-bars, blanketed wetlands, buried shoals, and compromised spawning runs for the river's migratory fish. As farmers, planters, and slaves continually cleared new land, they sent more soil into the Savannah River and its tributaries, which only increased sedimentation, further compromised river navigation, and altered the composition of riparian ecology.<sup>46</sup>

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<sup>43</sup> John H. Logan quoted in Trimble, *Man-Induced Soil Erosion*, 57.

<sup>44</sup> *Statistics of Power and Machinery Employed in Manufactures*, 768.

<sup>45</sup> Carville Earle, "The Myth of the Southern Soil Miner: Macrohistory, Agricultural Innovation, and Environmental Change," in Donald Worster, ed., *The Ends of the Earth: Perspectives on Modern Environmental History* (New York, N.Y.: Cambridge University Press, 1988); "Land killers," from Edmund Ruffin, quoted in Stanley Trimble, "Perspectives on the History of Soil Erosion Control in the Eastern United States," *Agricultural History* 59, 2 (April 1985): 162-180, see 175; "Erosional tinder box," Stanley Trimble quoted in Kane and Keeton, *Beneath These Waters*, 172.

<sup>46</sup> Kane and Keeton, *Beneath These Waters*, 176 and 185.

Seasonal water flow and sediment-induced navigational hazards were not the only challenges to river navigation in the early nineteenth century. Railroad construction in the 1840s posed formidable competition for riverboat traffic. Extensive railroad construction reconfigured the flow of capital in the southeast, and a growing network of railroads re-directed cotton away from the Gulf of Mexico ports to eastern Atlantic ports like Savannah, Georgia, and Charleston, South Carolina.<sup>47</sup> This situation would seem to have benefited the upper-Savannah River basin as cotton and other staple products flowed to the river's metropolitan namesake. However, Savannah River waterborne commerce was limited by the same unpredictable water flows that affected other southern rivers.

From the town of Petersburg, Georgia – located upstream from Augusta at the confluence of the Broad and Savannah Rivers – Petersburg boats navigated tricky shoals to deliver cotton, corn, grains, and tobacco downriver to the Augusta Canal's entrance. The return trip required three days of upstream poling through those same difficult shoals.<sup>48</sup> Rivermen and boat builders combined forces to create the specialized Petersburg boat designed to shoot the river's rapids. The boats were sixty to eighty feet long and seven feet wide with a shallow draft to clear the shallow and rocky river bottom. The pilot, with an additional crew of six men, drove the boat from the stern with a long trailing oar while the deck hands deployed poles to keep the boat from crashing on the rocks. Leaving deck hands bruised, battered, and exhausted from fighting the river, these boats could carry up to sixty bales of cotton.<sup>49</sup> South Carolina slaves “familiar with the all the shoals and other obstructions” on the river piloted some of these boats, often traveling

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<sup>47</sup> Lynn Willoughby, *Flowing Through Time: A History of the Lower Chattahoochee River* (Tuscaloosa: The University of Alabama Press, 1990), 78.

<sup>48</sup> Cashin, *Brightest Arm of the Savannah*, chapter 4.

<sup>49</sup> Cashin, *Brightest Arm of the Savannah*, 47, 54.

over seventy-five miles between Andersonville and Augusta to deliver cotton.<sup>50</sup> Augusta City records from 1817 also suggest that before the advent of steam power, Augusta's river borne trade with Savannah was "fueled by the energy" of predominantly free African American rivermen. Of the 176 free blacks required to register with the city, "boating and carpentry" were the most common occupations among men.<sup>51</sup> These men fought and negotiated the river's currents, with many men drowning as a result.<sup>52</sup> Cumming's Augusta Canal provided limited upstream navigational improvements, and eliminated some of these dangerous experiences.

Cumming's second great hope for the Augusta Canal was to turn the valley's river water into energy for new industrial applications. Despite boosters' calls for industrial diversification before the American Civil War, Augusta remained utterly dependent upon agricultural production of tobacco and cotton in the city's hinterland, as illustrated by merchants' \$700,000 export of these products to Savannah in 1817. But by 1853, the canal's managers sold canal-water to the Augusta Manufacturing Company's two textile mills, the Granite Mill's flour and saw mills, the Cunningham Flour Mill, the Augusta Machine Works, and the T. J. Cheely Grain & Cotton Gin.<sup>53</sup> The two textile mills alone consumed 25,000 bales of cotton annually.<sup>54</sup> Cumming's canal vision succeeded in bringing industry to Augusta on a scale much smaller than that of the real Lowell in Massachusetts. But like the Merrimack River valley – complete with dozens of dams and power canals, as well as dozens of mills and thousands of operatives – the Savannah River's water became an instrument for industrialists while other river users found themselves at a disadvantage. Once the water entered the canal, the water belonged to the city of

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<sup>50</sup> "The Upper River," *Augusta (Ga.) Chronicle*, February 18, 1888, p. 8; Richard Lee Taylor and Marion F. Smith, *The Report of the Intensive Survey of the Richard B. Russell Dam and Lake, Savannah River, Georgia and South Carolina* (Columbia, S.C.: Institute of Archeology and Anthropology, University of South Carolina, 1979), 130.

<sup>51</sup> Cashin, *Story of Augusta*, 65.

<sup>52</sup> "Drowned – Inquest," *Augusta (Ga.) Chronicle & Sentinel*, April 5, 1859.

<sup>53</sup> Spude, *Augusta Canal*, note 30.

<sup>54</sup> Cashin, *Story of Augusta*, 71, 96-97.

Augusta; the water power generated from the canal was “owned entirely by the city” and was “leased to the different mills.”<sup>55</sup> These industrial dreams resulted in a hydraulic system poised to serve an industrial war machine.

### **The Confederate Savannah River Valley**

Cotton and other agriculturally related river commerce thrived in the Savannah River valley during the antebellum era. In fact, the survival of the Confederate States of America depended upon the Savannah River and the Augusta Canal. Augusta had many desirable natural advantages at the outbreak of American Civil War. The city’s environment made Augusta and other southern fall line cities like Richmond and Columbus central towns during the American Civil War. The Confederacy tapped Augusta’s resources to build a war machine because the city was far from the front lines, possessed a canal to provide ample water power for industrial applications, and was a major stop for east-west railroads. The Confederacy’s Ordnance Bureau built and managed the Confederate Powder Works along the Augusta canal with assistance from the Army of Northern Virginia’s chief artillery officer Brigadier General William Nelson Pendleton. Aside from gunpowder, Savannah River water power helped fabricate, stitch, and build the Confederate military machine, including pistols, army and navy uniforms, locomotives, rolling stock, wheelbarrows, and knapsacks. Men’s and women’s hands – more than 700 women worked in Augusta’s factories during the war – assembled these products with help from the river throughout the war except for one short period. In February, 1862, nature temporarily derailed the Confederate war-machine when heavy rains and rising waters breeched the Augusta Canal and compromised factory production until workmen completed repairs in March.<sup>56</sup>

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<sup>55</sup> *Statistics of Power*, 788.

<sup>56</sup> Cashin, *Brightest Arm of the Savannah*, chapter 7; Charles Dew, *Iron Maker to the Confederacy: Joseph R. Anderson and the Tredegar Iron Works* (New Haven, Conn.: Yale University Press, 1966).

Augusta was not alone in harnessing southern rivers' water to power pre-industrial machines during the war. Similar facilities emerged along river banks across the southern fall line during the American Civil War from Columbus, Georgia, to Richmond, Virginia.<sup>57</sup> Not unlike Augusta, Columbus' industrial capabilities were well developed and played vital roles in manufacturing before and after the Civil War. William H. Young's pre-war Eagle Mill – powered by water from John Muir's earlier celebrated Chattahoochee River – produced textiles for Confederate uniforms and tents, while the Columbus Iron Works manufactured cannon, ammunition, and steam engines.<sup>58</sup> While Muir enjoyed an upper-Chattahoochee River unencumbered by dams, the lower river resembled the pre-industrial rivers of New England and Augusta. Further West in Alabama, Daniel Pratt's factory on the Alabama River serves as yet another example of nineteenth century fall-line metropolitan energy-production. Pratt, a New England native who emigrated from Georgia, established Prattville, just outside of Montgomery. The water power possibilities drew Pratt to Alabama in 1831, where historian Harvey Jackson claims Pratt wished to establish a "sober and clean" New England mill town on the banks of the Alabama River, complete with churches, schools, and stores. By the 1850s, Pratt operated a cotton gin, textile mill, foundry, brick mill, and a door, sash, and blind factory. These early Alabama and Georgia factories paid white men and women wages, and also depended upon the hands of black slaves. But these factories likewise depended upon a material environment; they could never move far from the flow of southern rivers and their energy source. While these

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<sup>57</sup> Civil War and environmental history have recently converged, see: Jack T. Kirby, "The American Civil War: An Environmental View," on the National Humanities Center website, *Nature Transformed: The Environment in American History*, <http://nationalhumanitiescenter.org/tserve/nattrans/ntuseland/essays/amcwar.htm>, last accessed March 4, 2010; Mark Fiege, "Gettysburg and the Organic Nature of the American Civil War," in Richard P. Tucker and Edmund Russell, *Natural Enemy, Natural Ally: Toward an Environmental History of Warfare* (Corvallis: Oregon State University Press, 2004); and Lisa Brady, "The Wilderness of War: Nature and Strategy," in Paul S. Sutter and Christopher J. Manganiello, eds., *Environmental History and the American South: A Reader* (Athens: University of Georgia Press, 2009).

<sup>58</sup> Willoughby, *Flowing Through Time*, 88-89.

industrial communities and cities suffered decline immediately after the Civil War, they would become examples for a New South built upon antebellum dreams of diversified agriculture, manufacturing, railroads, and urban growth.<sup>59</sup> These old and new southern industrial dreams, however, were nightmares for other valley residents equally dependent on the river's fish for survival.

### **The Savannah River Valley's Fishery**

In the early nineteenth century, migratory fish reportedly swam over 380 miles from the Atlantic Ocean to the Savannah River's headwaters near Tallulah Falls to spawn, and river valley residents and slaves all scrambled to capitalize on the seasonal run well into the 1830s.<sup>60</sup> The national proliferation of mills and canals like the Augusta Canal, however, created new environments on an unprecedented scale that made future seasonal migration and harvests increasingly difficult. Like canals in Massachusetts, the Augusta Canal successfully served the city's agricultural and industrial constituencies as a transportation artery and energy source. However, to fill the canal with water to power the factories and move the boats, the designers and the investors had to include a low diversion dam – which eventually stretched across the whole river – into their grand plans.<sup>61</sup> The canal's first diversion dam did not stretch across the entire river, but additions to the structure eventually linked the Georgia and South Carolina banks with a single dam by 1857.<sup>62</sup> Until the end of the nineteenth century, the Augusta Canal's diversion dam would be “the only dam across the” Savannah River. And the decision to erect the Augusta Canal's diversion dam, like dams throughout the American South and beyond, created new environments. Engineers built the Augusta Canal dam and the canal head gates –

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<sup>59</sup> Harvey H. Jackson III, *Rivers of History: Life on the Coosa, Tallapoosa, Cahaba, and Alabama* (Tuscaloosa: University of Alabama Press, 1995), 104, 113-115.

<sup>60</sup> Charles Minor Blackford, “The Shad – A National Problem,” *American Fisheries Society* (1916): 5-14, see 9.

<sup>61</sup> Spude, *Augusta Canal*, 6 and note 26.

<sup>62</sup> *Ibid.*, 7.

where the canal takes on water from the main stem of the Savannah River – in the heart of the region’s fall line where the river tumbled from the Piedmont onto the upper Coastal Plain through the series of waterfalls, shoals, and the “Cataracts” described by naturalist Mark Catesby in the eighteenth century. As a result, a “pond” extending “for about 1½ or 2 miles, with an average width of 1,500 feet, interspersed with islands and rocks” buried those shoals and Catesby’s sturgeon fishing spot under the Savannah River’s water. Water only flowed over the diversion dam when the canal could not carry all of the river’s water. The August Canal diversion dam was the river’s first major bank-to-bank dam and created the river’s first artificial reservoir, and it did not serve all constituencies equally.<sup>63</sup> The human and political relationships that determined access to water were seldom on equal footing.

The diversion dam created a barrier to benefit the canal, but the dam also had major consequences for the river’s migratory fish. The Savannah’s free flowing water – fed by mountain streams and springs – supported anadromous fish species such as sturgeon and shad. American shad (*Alosa sapidissima*), like the Pacific Northwest’s iconic salmon species, were born in freshwater streams in the spring season and spent most of their adult lives’ in the Atlantic Ocean’s saltwater. The Savannah valley’s pre-nineteenth century watercourses provided hospitable habitat for shad: gravel bottoms and sandy substrates, good water velocity, high levels of dissolved oxygen, low temperatures, and, as William Bartram observed, “clear” water without a lot of suspended sediment. Most juvenile shad migrated to the Atlantic Ocean off the Florida coast and perhaps as far north as Long Island within the first year, and after three to six years in saltwater, returned between January and April to their stream-of-birth to spawn.<sup>64</sup>

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<sup>63</sup> *Statistics of Power*, 790.

<sup>64</sup> Douglas E. Facey and M. J. Van Den Avyle, *Species Profiles: Life Histories and Environmental Requirements of Coastal Fishes and Invertebrates (South Atlantic): American Shad* (United States Fish and Wildlife Service and

Many anglers took advantage of this cycle. As one South Carolina resident observed, “The rivers and smaller streams of the upper-country abounded in fish” before and after the American Revolution. The Savannah and its tributaries such as Steven’s Creek, teemed with “well-known varieties” and species like shad, whose “numbers... filled not only the rivers, and their larger tributaries, but the smaller creeks and rivulets” as far upstream as the Seneca River (and near today’s town of Clemson). Many South Carolina streams “were famous with the early sportsmen and settlers for their shad fisheries,” herring, and sturgeon, and people came to expect the “March and April” fish runs.<sup>65</sup> Savannah River valley residents – from Native Americans to nineteenth century Americans – depended upon migratory fish like shad as protein sources. Shad converted aquatic organisms into fatty tissue, and southerners recognized shad as sources of energy and as commodities.

Augusta’s newspaper – including the same newspaper whose editorial board promoted the city as the “Lowell of the South” – ran advertisements for merchants selling “barrels” of shad for “family use.”<sup>66</sup> Property owners highlighted the Savannah River as a benefit when selling their land, noting when “good shad” fisheries were “attached to the property.”<sup>67</sup> One fisherman claimed that “shad were so plentiful in the Savannah river...that one thousand shad were caught in one day” by slave labor at a plantation site a few miles below Augusta.<sup>68</sup> But the Augusta Canal’s investors valued the river’s water and resources for industrial consumption and not individuals, families, or commercial fish dealers. While the canal’s managers and South

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United States Army Corps of Engineers, 1986); John McPhee, *The Founding Fish* (New York, N.Y.: Farrar, Straus and Giroux, 2002), 112.

<sup>65</sup> John H. Logan, *A History of the upper country of South Carolina from the Earliest Periods to the Close of the War of Independence*, Volume I (Columbia, S.C.: P. B. Glass and Charleston, S.C.: S. G. Courtenay & Co., 1859), 75.

<sup>66</sup> Advertisement, Augusta (Ga.) *Daily Chronicle & Sentinel*, October 30, 1849, p. 3.

<sup>67</sup> Advertisement, Augusta (Ga.) *Daily Chronicle & Sentinel*, January 12, 1850, p. 3.

<sup>68</sup> “Fish Culture: Restocking the Savannah River with Shad – What the Fishermen Say,” Augusta (Ga.) *Chronicle and Sentinel*, January 9, 1877, p. 2.

Carolínians had reportedly agreed that the canal's diversion dam would include passageways for fish like shad, so families of "all classes" including "poor people" could continue harvesting fish from the river for personal consumption, agreements did not always produce structures.<sup>69</sup>

The first inter-state conflict over the shared Savannah River flared when Augusta's leadership consistently rebuffed South Carolínians who demanded functional fish ladders or passageways in the Canal's diversion dam.<sup>70</sup> South Carolínians and Georgians had lobbied their elected officials throughout the late eighteenth century and early nineteenth century to keep rivers across the southern Piedmont free of dams and full of wild fish. As historian Harry Watson has illustrated, southern yeomen fought to protect shad fisheries and against the mill dams that symbolized a market revolution they did not fully comprehend. Southern yeoman and "men of property" resorted to legal instruments – petitions, and private and public laws – to fight the "men of capital" and eliminate commercial obstructions to spawning runs. Small legal victories empowered county authorities to appoint commissioners to inspect streams and dams. In both Georgia and South Carolina, statutes initially tried to balance anglers' and millers' needs, since "keeping open the River Savannah" was "of the greatest importance to the citizens of the back country." In the early 1800s, legislation in both states threatened those who blocked the Savannah between Augusta and the junction of the Tugaloo and Keowee rivers with jail time and fines. Until the beginning of the nineteenth century, private legislative bills and petitions submitted on behalf of the yeoman led state legislators to forge compromises between local

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<sup>69</sup> "Obstructing the Fish," *Augusta (Ga.) Chronicle and Constitutionalist*, June 4, 1879, p. 1; see "Georgia State News," *Augusta (Ga.) Chronicle*, June 5, 1885, p. 2.

<sup>70</sup> "The Canal Dam," *Augusta, (Ga.) Daily Chronicle & Constitutionalist*, November 22, 1881, p. 3; "Georgia State News," *Augusta (Ga.) Chronicle*, June 5, 1885, p. 2.

fisherman and mill owners. Millers agreed to provide fish passage during spawning runs or at other times of the year in order to maintain their dams and associated mills.<sup>71</sup>

Mill builders, however, consistently pushed the envelope until mill opponents could fight back neither by petition nor pick-axe. South Carolinians complained about the loss of the Savannah River's shad fishery in particular, and repeatedly tried to employ a 1784 South Carolina legal instrument – affectionately referred to as the “fish sluice statute” – requiring “all owners of all dams, or other obstructions” on state rivers to include “slopes, or make openings in their dams or obstructions, so that the fish at all times might freely pass up or down” the rivers and streams.<sup>72</sup> One source detailed a situation in a valley adjacent to, but outside of the Savannah River valley, where South Carolinians attacked the source of their frustration. In 1824, six South Carolina men paddled forty miles down the Saluda River to Lorick's Mill in Edgefield County.<sup>73</sup> “A dam at this place had been built with public funds...and in connection with” a plan to improve navigation. “A strong frame-work, supported by pens of rock, formed the material of the dam in which, with a semblance of respect to the [fish sluice] statute, a small gap had been left, but not so deep as to afford, in the spirit of the Act, a sluice for the passage of fish.” The six men, including an Abbeville County doctor and a former military officer,

Went resolutely to the task of throwing out the rip-rapped stone, and cutting the timbers with their axes. Numerous spectators collected, in the meantime, on both banks of the river to witness the process of demolition; no opposition was offered. Thus they toiled for three days, and in that time succeeded in opening a deeper passage not more than some six feet wide; but thinking this sufficient for their purpose, the party desisted, and returned home.

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<sup>71</sup> The History Group, Inc., *Historical Investigations of the Richard B. Russell Multiple Resource Area*, 49; Harry L. Watson, “The Common Rights of Mankind: Subsistence, Shad, and Commerce in the Early Republican South,” *Journal of American History* 83, 1 (June 1996): 13-43, see 24, 28-29, and 33. For examples of fines levied in South Carolina, see: David Kohn and Bess Glenn, eds., *Internal Improvement in South Carolina, 1817-1828* (Washington, D.C.: [privately printed], 1938), 322 and 353.

<sup>72</sup> Logan, *A History of the Upper Country of South Carolina*, 76-77; Augustus Kohn, *The Water Powers of South Carolina* (Charleston, S.C.: Walker, Evans, and Cogswell, 1911), 19.

<sup>73</sup> Steinberg, *Nature Incorporated*, 100, 134.

Despite this effort the dam's owners eventually repaired the structure, "and not a shad perhaps since that day has extended its migrations in the Saluda" beyond that point.<sup>74</sup> This futile demonstration of force was not common but would be reproduced thirty-five years later by a group of Massachusetts men. Like the Saluda River dam and the larger Lawrence dam on New England's Merrimack River (completed in 1848), the Augusta Canal diversion dam – a massive, timber and stone structure – contributed to the demise of the Savannah River's migratory fishery in 1847.<sup>75</sup>

The nineteenth century debate over the "common rights of mankind" involving water rights, dams, and fish stretched from Massachusetts to Georgia. Citizens of the early republic attempted to negotiate the shape of the industrial revolution in America but did not fully grasp the complex relationships between water quality, fish life cycles, and human behavior on land. The dams alone did not eradicate the shad fishery. The dams, combined with agricultural and forestry operations in the headwaters that increased erosion spoiled spawning grounds, while commercial fishery operations in the lower valley targeted females for eggs (caviar). Combined, these commercial operations spelled doom for the Savannah River's shad fishery in the years immediately preceding and following the American Civil War. Regardless of natural cycles and ecology, farmers eager to remain outside of the emerging national market clearly understood that obstructions like the Augusta Canal Company's dam privileged industry over yeoman farmers. The losers were fish, humans dependent upon fish protein, and the river's overall water quality. Despite these challenges, the Savannah River continued to flow and power industry on the cusp

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<sup>74</sup> Logan, *A History of the upper country of South Carolina*, 78-79.

<sup>75</sup> Steinberg, *Nature Incorporated*, 79, 167.

of the New South's birth.<sup>76</sup> The dam remained a barrier to migrating fish before the American Civil War and inhibited fish passage beyond Augusta into the river's Blue Ridge headwaters.

The conflicts between early republic mill dam owners, timber-men, commercial fishermen and their slave labor, and yeoman fishermen who clashed over mill dams, free flowing rivers, and migratory fish in southern rivers continued after the American Civil War. Despite multiple Georgia and South Carolina legislative commissions, clamoring journalists, and assistance from the United States Fish Commission between 1870 and 1890, Augusta city leaders had not been able to reestablish a functional shad fishery in the Savannah River. When some valley residents gazed at the river, they observed a fishery in decline and blamed the 1845 Augusta Canal diversion dam across the Savannah River for disrupting the local fishery and upstream economies.<sup>77</sup>

Mid-nineteenth century Georgia shad enthusiasts who were interested in fish, and not necessarily in water quality, influenced one of the American South's first federal conservation programs. In the 1840s, Savannah doctor N. C. Daniell conducted his own fish propagation experiment when he captured Savannah River shad, reproduced baby shad-fry, and then sent the fry to an acquaintance in Alabama for release in the 1840s. Within a couple of years, he learned that shad had survived and were trapped in Alabama waters for years after their initial release. About thirty years later, William Clift brought this story to light in an 1871 American Fisheries Society presentation as proof that shad populations could be reestablished in the Mississippi, Missouri, and other southern watersheds.<sup>78</sup> New Yorker Seth Green, one of the nation's first systematic fish culturalists, had already successfully propagated shad in the Hudson River before transporting and introducing the fish into California's Sacramento River that same year.

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<sup>76</sup> Watson, "The Common Rights of Mankind."

<sup>77</sup> "Georgia State News," Augusta (Ga.) *Chronicle*, June 5, 1885, p. 2.

<sup>78</sup> William Clift, "Shad Culture," *Transactions of the American Fisheries Society* 1, 1 (December 1, 1871): 21-28.

Alarmed by the nation's shad fishery decline and inspired by Green's work, Clift and the American Fish Culture Association lobbied Congress to establish the United States Fish Commission.<sup>79</sup> Based on these various experiments, Assistant Secretary of the Smithsonian Institution and U.S. Fish Commissioner Spencer Fullerton Baird soon promoted regional programs to "multiply numbers" of shad throughout the Atlantic Ocean and Gulf of Mexico river basins despite the regions' known industrial challenges like mill dams.<sup>80</sup> A few years later, Baird sent Green to Augusta in the spring of 1873 to assess the Savannah River's shad situation on behalf of the U. S. Fish Commission.

Seth Green, considered the nation's authority on fish propagation at the time, led this federal conservation effort to save Savannah River valley fish in 1873. The local newspaper described Green as a "famous fish breeder" who planned to catch wild shad "provided enough fully ripe" fish could be found along their historic migration routes in Augusta's vicinity. With male sperm and female roe, Green planned to breed "at least one million" shad per day over the course of a few weeks.<sup>81</sup> April's "intense heat" however, almost derailed the project. Green fell victim to "sun stroke" to such a degree that his ability to function was impaired and he "was obliged to return" to his home-base in Rochester, N.Y. to recuperate.<sup>82</sup> The four man crew Green left behind scouted the Savannah River twenty miles above and below Augusta for one week, but the party caught only a few dozen shad because they assumed it was still *too early* in

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<sup>79</sup> "Obituary – Seth Green," *New York Times*, August 20, 1888, p. 5.

<sup>80</sup> James W. Milner, Appendix XIX, "Report on the Propagation of the Shad (*Alosa Sapidissima*) and Its Introduction into New Waters by the U. S. Fish Commissioner in 1873," in United States Commission of Fish and Fisheries, *Report of the Commissioner for 1872 and 1873* (Washington, D.C.: GPO, 1874), p. 420, available online: [http://penbay.org/cof/cof\\_1872-1873\\_xix.pdf](http://penbay.org/cof/cof_1872-1873_xix.pdf) (accessed March 4, 2010); Charles Minor Blackford, "The Shad – A National Problem," *Transactions of the American Fisheries Society* 46, 1 (December 1, 1916): 5-14, see 8; Dean Conrad Allard, Jr., *Spencer Fullerton Baird and the U.S. Fish Commission* (New York, N.Y.: Arno Press, 1978), 137.

<sup>81</sup> "Propagation of Shad in the Savannah River," Augusta (Ga.) *Chronicle and Sentinel*, April 22, 1873.

<sup>82</sup> Seth Green, Superintendent of Fisheries of New York, Rochester, N.Y., to Spencer F. Baird, United States Fish Commission, Commissioner, May 10, 1873, Letters Received, 1871-1874, Volume 3, Entry #1, United States Fish Commission and the Bureau of Fisheries, Record Group 22, National Archives II, College Park, Md., hereafter USFC.

the season to capture the migrating fish.<sup>83</sup> Other Augustans later criticized Green's party for not having adequate local knowledge, and believed the Commission's party actually arrived *too late* in the season and used the wrong fishing equipment. Regardless of timing, Green's and the Commission's first foray into propagating shad in the Savannah River failed.

Despite this early failure, Georgia and South Carolina Department of Agriculture Commissioners continued to seek advice and material support from the U.S. Fish Commission. The states' agricultural commissioners and private individuals solicited advice for establishing hatcheries to increase carp, shad, trout, and salmon populations in their jurisdiction's rivers in the 1880s.<sup>84</sup> Georgia and South Carolina officials had contemplated a fish ladder for the Augusta Canal's diversion dam throughout the 1880s, and U.S. Fish Commission employee Marshall McDonald produced a sketch of a fishway he proposed for the Augusta Canal diversion dam in early 1881. After visiting the site, McDonald expressed doubts that propagation in the region would work given the "unquestionably...giant decline in the fisheries of these southern rivers." But he continued to recommend that the city invest \$1,000 in a fishway made of timber and cast iron grating that he designed "to be built over" the dam.<sup>85</sup> Georgia's state fishery experts inspected the Augusta Canal's diversion dam and recommended the city construct a fish ladder

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<sup>83</sup> Seth Green, Superintendent of Fisheries of New York, Rochester, N.Y., to Spencer F. Baird, United States Fish Commission, Commissioner, April 22, 1873, Letters Received, 1871-1874, Volume 3, USFC; "The Shad Fisheries of the Savannah River," *Augusta (Ga.) Chronicle and Sentinel*, April 28, 1873, p. 2; Seth Green, "Operations in 1873," in Appendix XVIII, "Report on Shad-Hatching Operations" of *Report of the Commissioner for 1872 and 1873* (Washington, D.C.: GPO, 1874), pp. 406-408, available online: [http://penbay.org/cof/cof\\_1872-1873\\_xviii.pdf](http://penbay.org/cof/cof_1872-1873_xviii.pdf) (accessed March 4, 2010); Allard, *Spencer Fullerton Baird*, 133-135.

<sup>84</sup> A. P. Butler, South Carolina Department of Agriculture Commissioner, Columbia, S.C., to Maj. T. B. Ferguson, U.S. Fish Commission, October 26, 1880, Item #70572, Box 1, Entry 2, Records of the Office of the Commissioner of Fisheries, Record Group 22, National Archives II, College Park, Md.; A. Cary, Georgia Fish Commission, Superintendent, to Maj. T. B. Ferguson, U.S. Fish Commission, July 26, 1881, Box 1, Entry 2, Records of the Office of the Commissioner of Fisheries, Record Group 22, National Archives II, College Park, Md.

<sup>85</sup> Marshal McDonald, Brunswick, Ga., to Maj. T. B. Ferguson, U.S. Fish Commission, February 20, 1880, Item #70262, Box 1, Entry #2, Records of the Office of the Commissioner of Fisheries, Record Group 22, National Archives II, College Park, Md.; "Georgia State News," *Augusta (Ga.) Chronicle*, June 5, 1885, p. 2.

on either of the extreme ends of the diversion dam to put to rest long running South Carolinians and vocal Elberton, Georgia citizens' complaints about the shad fisheries decline.<sup>86</sup>

Despite the federal and the states' late-nineteenth century fish conservation programs in Georgia and South Carolina, the simple recipe of adding more fish to the water could not save shad or other species. Any hatchery raised fish could move easily downstream over the Augusta Canal diversion dam on their way to the Atlantic Ocean, but upon returning, the fish would always run the gauntlet of commercial fishermen's nets before reaching Augusta and the foot of the dam.<sup>87</sup> Despite plans to revitalize the migratory shad fishery, making space for shad in the New South's economic or conservation plans did not matter to the industrial boosters because the fish had reportedly "entirely disappeared" by 1885.<sup>88</sup> The fish, however, still mattered to Georgia residents in Elberton and Athens who continued to heap scorn upon Augusta's political and industrial constituencies for making shad "as scarce...as hen's teeth" in the Savannah River's headwaters and for depriving agrarian citizens of "their chief luxury."<sup>89</sup> Despite this critical assessment, the antebellum commercial and nascent New South industrial spirit rose with the waters behind the same dams that harmed fisheries and frustrated anglers in the 1890s in the Savannah River and other southern valleys.

### **Muir, Electricity, and A New South**

The proceeding examples illustrate some of the American South's deep interconnected histories of people, land, water, and power. Water problems – such as drought or flooding – occurred and affected discrete communities. Other problems – such as fish and dams – also

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<sup>86</sup> "The Canal Dam," Augusta (Ga.) *Chronicle & Constitutionalist*, November 22, 1881, p. 3.

<sup>87</sup> "Cultivation of Shad in the Savannah River," Augusta (Ga.) *Chronicle and Sentinel*, April 6, 1873, p. 2; "Propagation of Shad in the Savannah River," Augusta (Ga.) *Chronicle and Sentinel*, April 22, 1873, p. 2; "The Shad Fisheries of the Savannah River," Augusta (Ga.) *Chronicle and Sentinel*, April 28, 1873, p. 2; "Fish Culture: Restocking the Savannah River with Shad – What the Fishermen Say," Augusta (Ga.) *Chronicle and Sentinel* January 9, 1877, p. 2; "Fish Facts," Atlanta (Ga.) *Constitution*, December 12, 1883, p. 7.

<sup>88</sup> "From Columbia: The State Fisheries," Augusta (Ga.) *Chronicle*, July 18, 1885, p. 2.

<sup>89</sup> "Around Georgia," Augusta (Ga.) *Chronicle*, August 25, 1889, p. 2.

affected specific communities of river users and river ecology. Regardless of the problem or the solution, human activity in the Savannah River basin demonstrated how energy demands resulted in new environmental realities and affected social relationships. Southern rivers remained predominantly free flowing rivers with occasional pools formed behind mill dams, but the region lacked the major lakes or reservoirs that mark the modern landscape. Cultural choices and environmental change in the Savannah River basin followed a path generally paralleling other American regions like New England but on a smaller scale. The southern region remained primarily agricultural with proto-industrial mills along small creek, but cities and towns across the South increasingly attracted greater concentrations of capital and people in industrial environments powered by water. By the late nineteenth century, the American South continued a slow process of agricultural and industrial economic diversification. King Cotton still reigned, but cotton factors increasingly processed the fibers in the South and did not export all of it to distant mills. Additionally, investors looked into forests for additional products like timber and pulp that encouraged formation of new industries, technologies, and products like synthetic textiles in the early twentieth century. These new developments all required new energy and endless capital reserves. In response, southern boosters stumping for the New South, not unlike those before them, continued to turn to the region's rivers for energy and corporate power.

Throughout the discussions over how to build and fund the Augusta Canal, supporters used the canal as an example of how the city could define itself. The canal would enable the city to diversify its agricultural and industrial economy, and to free itself from dependence upon other cities and regions. This sentiment would coalesce into a "New South Creed" and mantra in the decades between Reconstruction and the early twentieth century as southerners looked for

additional means to build a profitable and productive diversified economy.<sup>90</sup> Soon after the war, visionary southerners proposed new ways to power southern society and we can see this in an unlikely source.

As John Muir traveled the agricultural, industrial, and post-bellum South in 1867, he encountered a surprising landscape. Muir had breezed through Augusta, Georgia, on his own march to the sea, and perhaps never understood the workings of the Augusta Canal or the existence of the diversion dam and subsequent loss of the shad fishery. If he had, Muir would have immediately recognized that the Savannah River was not like the free flowing Chattahoochee River on which he sailed and harvested wild grapes for his muscadine wine. While the upper-Chattahoochee River remained unencumbered and free flowing, the industrial Savannah River was dammed, redirected, and turned into a renewable energy source before the American Civil War. Muir certainly would have encountered mill dams on the lower Chattahoochee River at Columbus, Georgia, had he proceeded to the Gulf of Mexico by boat as he had contemplated. Perhaps Muir was even surprised and uncomfortable with the industrial South he discovered and the people he met.

One of the individuals Muir encountered on his travels between Augusta and Savannah was revealing of the South's future. Muir stopped to sleep or eat with folks who had space and interest in his cash, and at one of these stops Muir encountered a nascent New South booster named "Mr. Cameron." In comparing Muir's interest in botany, Cameron disclosed his own: "My hobby is e-lec-tricity." Cameron – well in advance of the majority of his contemporaries – held a vision for a future South where "that mysterious power or force, used now only for telegraphy, will eventually supply the power for running railroad trains and steamships, for

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<sup>90</sup> Paul M. Gaston, *The New South Creed: A Study in Southern Myth-making* (New York, N.Y.: Vintage Books, 1970), 64-70

lighting, and, in a word, electricity will do all the work of the world.” While Cameron did not explicitly link his electric dreams with the an early industrial Savannah River, or consider the larger implications of an electrical society for human labor and nature, Cameron’s unsolicited and prophetic outlook meshed with the industrial advocacy of the antebellum men of capital and emerging New South boosters eager for regional independence at the end of the nineteenth century. Neither Muir nor Cameron could foresee what an electrified South might look like, nor could the two men have conceived of the consequences for southern rivers and corporate power.<sup>91</sup>

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<sup>91</sup> Muir, *A Thousand-Mile Walk*, 48-63.

## CHAPTER 2

### HITCHING THE NEW SOUTH TO “WHITE COAL”: WATER, TECHNOLOGY, AND POWER, 1890-1930

In his 1932 book, *Human Geography of the South: A Study in Regional Resources and Human Adequacy*, Rupert Vance declared that “There are two great economic complexes that may be expected to force” states to abandon selfish or provincial attitudes in exchange for regional or national outlooks. Vance’s regional study provided solutions for integrating the South with the rest of the nation in addition to changing longstanding assumptions about a South bedeviled by race relations, marked as a colonial outpost, and perceived as poor land inhabited by poor people. Vance, born in Arkansas and a member of the University of North Carolina’s liberal strain of regionalist debate in the 1930s, saw a way out as the United States entered the global Great Depression. First, Vance considered railroad networks central to connecting crops and peripheries to markets and central cores. More recently, historians have illustrated the environmental and cultural consequences of railroads in the American West and South, and how transportation and communication technologies integrated those regions into the national fabric.<sup>1</sup> But Vance’s second “complex,” hydroelectric development in the humid and generally water-blessed South, is a less understood actor and corporate force of southern change in the first three decades of the twentieth century. In a region well-endowed with flowing water, Vance identified

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<sup>1</sup> William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York, N.Y.: Norton, 1991); Edward Ayers, *The Promise of the New South: Life After Reconstruction* (New York, N.Y.: Oxford University Press, 1992).

southern rivers as prime energy resources that could be “harnessed” to produce power for human endeavors. Vance’s travels and collaborative research throughout the Southeast revealed an extensive privately owned network of dams, reservoirs, and transmission lines that stretched from North Carolina to Mississippi. Based on these observations, Vance discussed the possibility of building a publicly supported regional hydro-complex that mimicked the private energy company’s monopolistic systems, but one that would distribute electricity and manage other natural resources more equitably. When Vance looked across the “Piedmont Crescent of Industry” before President Franklin D. Roosevelt created the Tennessee Valley Authority in 1933, water appeared as one of the most underutilized natural resources and as a renewable energy source monopolized by a few private utility companies and the textile industry. Much as John Muir had witnessed in his travels across the South after the Civil War, Vance’s observations revealed a South in transition. Vance, however, saw both the fruits and inequity of the New South era, and he embraced ‘white coal’ as means to challenge the established water and power dynamic.<sup>2</sup>

This chapter examines who hitched the New South to white coal in a critical period of the region’s water history between 1890 and 1933. Southern rivers have figured prominently in the region’s history as transportation conduits or because of their capacity to flood.<sup>3</sup> Southern lakes,

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<sup>2</sup> Rupert Bayless Vance, *Human Geography of the South: A Study in Regional Resources and Human Adequacy* (Chapel Hill: University of North Carolina Press, 1932), for quotes see: “economic complex” 17, “harnessed” 285, and “Piedmont Crescent of Industry” chapter 12.

<sup>3</sup> American South river and water histories are limited and include: Thomas Stokes and Lamar Dodd, *The Savannah* (New York, N.Y.: Rinehart, 1951); Henry Savage, Jr., *The River of the Carolinas: The Santee* (Chapel Hill: University of North Carolina, 1956, reprint in 1968); E. Merton Coulter, *Georgia Waters: Tallulah Falls, Madison Springs, Scull Shoals and the Okefenokee Swamp* (Athens: Georgia Historical Quarterly, 1965); Henry E. Barber and Allen R. Gann, *A History of the Savannah District U.S. Army Corps of Engineers* (Savannah, GA: United States Army Corps of Engineers, 1989); Lynn Willoughby, *Flowing Through Time: A History of the Lower Chattahoochee River* (Tuscaloosa: University of Alabama Press, 1990); Harvey H. Jackson III, *Rivers of History: Life on the Coosa, Tallapoosa, Cahaba, and Alabama* (Tuscaloosa: University of Alabama Press, 1995); Mart Stewart, ‘What Nature Suffers to Groe’: *Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996); Edward J. Cashin, *The Brightest Arm of the Savannah: The Augusta Canal, 1845-2000* (Augusta, Ga.:

however, have received far less attention despite their direct connection to some of those same rivers and to the regional energy infrastructure. There are no natural lakes in the southern Piedmont and Blue Ridge mountains, yet countless lakes are visible from an airplane window today. The region's lakes came online beginning in the nineteenth century to serve limited industrial functions and grew to provide an array of benefits. This chapter is a region-wide study and the Savannah River valley in Georgia and South Carolina – which serves as the primary example throughout this chapter – perfectly illustrates the critical New South moment in the region's water history. Private investors and engineers took advantage of the Piedmont and Blue Ridge mountain south's environmental conditions – a typically humid region with a well-defined fall-line and rugged mountains – that made the New South increasingly attractive for hydroelectric development and an electrified textile industry after 1890 and before 1933.

This chapter weaves multiple historiographies together. The history of southern lakes reveals a gap in the region's past that does not fully account for who created the region's vast artificial waterscape or why. First, extensive scholarly attention to the Tennessee Valley Authority obscures the legacy of private energy companies and the water conservation activities that took place in the American South in the decades before the New Deal. Robert Durden identified this problem in his Duke Power Company history, but Durden's and other southern energy utility company corporate histories have focused only on single companies – and were often written from within – at the expense of a more nuanced regional history.<sup>4</sup> Understanding

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Augusta Canal Authority, 2002); and John Lane, *Chattooga: Descending in the Myth of Deliverance River* (Athens: University of Georgia, 2004).

<sup>4</sup> A word on corporate nomenclature is required. The companies I will call Alabama Power, Duke Power and Georgia Power throughout this chapter changed names through consolidation, new ownership, incorporation, or holding company transfers throughout the twentieth century; I will use these names for simplicity and to illustrate the current corporations' legacies. Today, Georgia Power is one of four companies – including Alabama Power, Gulf Power, and Mississippi Power – under the umbrella of the Southern Company (established in 1945). Duke Power was initially known as the Southern Power Company (established in 1904 and having no affiliation with the current Southern Company), became Duke Power in 1924, and is currently known as Duke Energy. For corporate

the private, pre-TVA legacy better illustrates what private energy companies stood to lose during the famous and well documented Muscle Shoals private v. public power controversy on the Tennessee River during Great War, and why private interests continued to vilify public projects after 1945. Furthermore, there is a pre-TVA history that reveals an American South that rivals the American West in the degree to which its waterways, particularly in the Blue Ridge and Piedmont regions, were transformed before the New Deal.<sup>5</sup>

Second, environmental and water history primarily emerged through scholarship of the American West. This body of literature illustrates key distinctions between that arid region and the more humid South. Western water managers primarily designed projects to create storage capacity and redistribute scarce water resources to agricultural and urban constituencies.

Projects in the American South, a region typically known for water management projects that drained swamps or protected agricultural land from flooding in places like the Mississippi River valley, also created storage capacity. In the South, however, textile and urban constituencies, not

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histories, see: Wade H. Wright, *History of the Georgia Power Company, 1855-1956* (Atlanta, Ga.: Georgia Power Company, 1957); Jack Riley, *Carolina Power & Light Company, 1908-1958* (Raleigh, N.C.: Edwards & Broughton Company, 1958); Robert F. Durden, *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001); Martha Elrod and Julie Groce, *Energizing Georgia: The History of Georgia Power, 1883-2004* (Macon, Ga.: Indigo Custom Publishing, 2004); and Leah Rawls Atkins, *Developed for the Service of Alabama: The Centennial History of the Alabama Power Company, 1906-2006* (Birmingham, Ala.: Alabama Power Company, 2006).

<sup>5</sup> The TVA historiography is immense, for example, see: Clarence Lewis Hodge, *The Tennessee Valley Authority: A National Experiment in Regionalism* (New York, N.Y.: Russell and Russell, 1968; first edition, Washington, D.C.: American University Press, 1938); Judson King, *The Conservation Fight: From Theodore Roosevelt to the Tennessee Valley Authority* (Washington, D.C.: Public Affairs Press, 1959); Preston J. Hubbard, *Origins of the TVA: The Muscle Shoals Controversy, 1920-1932* (Nashville, Tenn.: Vanderbilt University Press, 1961); John R. Moore, ed., *The Economic Impact of TVA* (Knoxville: University of Tennessee, 1967); Thomas K. McCraw, *Morgan vs. Lilienthal: The Feud Within the TVA* (Chicago, Ill.: Loyola University Press, 1970); Thomas K. McCraw, *TVA and the Power Fight, 1933-1939* (Philadelphia, Pa.: J.B. Lippincott Company, 1971); Arthur Earnest Morgan, *The Making of the TVA* (London: Prometheus Books, 1974); North Callahan, *TVA: Bridge Over Troubled Waters* (South Brunswick and New York: A. S. Barnes and Company, 1980); Philip Selznick, *TVA and the Grass Roots: A Study of Politics and Organization* (Berkeley: University of California Press, 1980); Michael J. McDonald and John Muldowny, *TVA and the Dispossessed: The Resettlement of Population in the Norris Dam Area* (Knoxville: University of Tennessee Press, 1982); Erwin C. Hargrove and Paul K. Conkin, eds., *TVA: Fifty Years of Grass-Roots Bureaucracy* (Chicago: University of Illinois Press, 1983); David E. Whisnant, *Modernizing the Mountaineer: People, Power, and Planning Appalachia* (Knoxville: University of Tennessee Press, 1994); Margaret Lynn Brown, *The Wild East: A Biography of the Great Smokey Mountains* (Gainesville: University Press of Florida, 2000).

farmers, benefited from projects that stored water and generated electricity for factories and towns across the southeast.<sup>6</sup>

Finally, southern historiography, not unlike TVA scholarship, does not fully explicate the emergence of southern energy companies and their regional energy infrastructure, or the energy sector's connection to the electrified textile industry. New South historians have rightly argued that cheap human labor and an abundance of raw materials attracted industrial growth to the region. The deans of southern history, C. Vann Woodward and George Brown Tindal, both noted the role that southern energy companies – the executives, engineers, and capital – played in the region's explosive industrial development between 1890 and 1925. Southern historians have also discussed regional developers' ability to use hydro-generated electricity to redirect former agricultural laborers' energy from the field to the factory floor in decentralized factory towns where labor could be more easily manipulated and monitored. However, all of these southern historians have presented only casual links between cheap human power and cheap natural power, and the majority of them have provided even less information about the consequences of these links for the region's economic development and environment before 1930.<sup>7</sup> In sum, the existing southern, environmental, and river historiography does not

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<sup>6</sup> The most influential water related histories in the American West, include: Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York, N.Y.: Pantheon Books, 1985); Marc Reisner, *Cadillac Desert* (New York, N.Y.: Penguin Books, 1986, revised 1993); Donald Worster, "Hydraulic Society in California," in *Under Western Skies: Nature and History in the American West*, (New York, N.Y.: Oxford University Press, 1992), 53-63; Norris Hundley, Jr., *The Great Thirst: Californians and Water: A History* (1992, revised edition 2001); Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York, N.Y.: Hill and Wang, 1995); Donald J. Pisani, *Water, Land, and Law in the West: The Limits of Public Policy, 1850-1920* (Lawrence: University Press of Kansas, 1996); and Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 1999).

<sup>7</sup> Broadus Mitchell, *The Rise of the Cotton Mills in the South* (Baltimore, Md.: Johns Hopkins University Press, 1921), 263; C. Vann Woodward, *Origins of the New South, 1877-1913* (Baton Rouge: Louisiana State University Press, 1951), 128-130; George Brown Tindall, *The Emergence of the New South, 1913-1945* (Baton Rouge: Louisiana State University Press, 1967), 71-79, 95-97; J. Wayne Flint, "The New Deal and Southern Labor," in James C. Cobb and Michael V. Namorato, eds., *The New Deal and the South* (Jackson: University Press of Mississippi, 1984), 63-95; Gavin Wright, *Old South, New South: Revolutions in the Southern Economy Since the Civil War* (Baton Rouge: Louisiana State University Press, 1986), 43-47. Allen Tullos is one exception, but he only

adequately explain where southern lakes came from or the consequences of their creation for rivers, industry, and southern cities.<sup>8</sup>

Rupert Vance provides a launching point to explore the American South's second great complex – hydroelectric technology driven by the New South's thirst for an indigenous energy source – that made southern rivers and private energy companies integral actors in the region's economic history. North Carolinian James B. Duke – the tobacco king and private university's namesake, and Vance's most detailed example – started one of the most prolific southern energy companies that continues to operate over one-hundred years later. The Duke Power Company's founding goal in 1904, according to the company's namesake himself, was to harness “white coal” from rivers that previously flowed unused as “waste to the sea.”<sup>9</sup> The region's hundreds of artificial lakes have a history. Today, the American South's rivers and lakes are artifacts that reveal much about the legacy of private water management, hydroelectric technology, and corporate power in the decades before the advent of the Tennessee Valley Authority in 1933.

### **From Water Wheels to Transmission Lines**

Half a century before Vance touted the South's potential for water power during the depths of the Great Depression, the New South's preeminent spokesman and journalist-orator – Henry Woodfin Grady – had also turned his developmental eye towards the region's water

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sketches the links between the Carolina Piedmont's water power, textiles, and the Duke Power Company without connecting these circumstances to the regionalists, Vance, or a pre-TVA history, see: *Habits of Industry: White Culture and the Transformation of the Southern Piedmont* (Chapel Hill: The University of North Carolina Press, 1989). James C. Cobb's assessment of the environmental consequences of industrialization is generally confined to water and air pollution after 1960, see: *Industrialization and Southern Society, 1877-1984* (Lexington: University of Press of Kentucky, 1984), 17-25, and chap. 6, “Natural and Environmental Resources and Industrial Development”; and, *The Selling of the South: the Southern Crusade for Industrial Development 1936-1990* (Urbana: University of Illinois Press, 1993; first edition 1982), chap. 9, “The Price of Progress.”

<sup>8</sup> For the most recent review of southern environmental history, see: Paul S. Sutter and Christopher J. Manganiello, eds., *Environmental History and the American South: A Reader* (Athens: University of Georgia Press, 2009); and Christopher Morris, “A More Southern Environmental History,” *Journal of Southern History* 75, 3 (August 2009): 581-598.

<sup>9</sup> Robert F. Durden has written extensively on the Duke family and foundation, but most important for this essay is Durden's book on the power company: *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001), 64 for James B. Duke quote.

power. Grady promoted more than industrial and agricultural diversification, racial compromise, and regional reconciliation beginning in the 1880s.<sup>10</sup> In one of his more memorable speeches – his famous Pickens County funeral reminiscence in 1889 – Grady harped on the South’s near colonial status and its dependence upon imported goods despite having immense stores of raw materials. The only thing the South contributed to that funeral, in Grady’s observation, was the corpse and the hole in the ground. The corpse’s clothes, coffin, and headstone all arrived in Georgia from other states via the railroad. Grady’s lesson from this experience became a crusade to turn the South’s easily accessible raw materials – cotton, timber, and stone – into locally available finished products to build an economically independent, or at least competitive, New South. Grady, not unlike his antebellum predecessors or those who followed him, recognized the region’s potential and full array of environmental resources as the key to reaching this goal. Soils, forests, minerals, and human labor all stood ready to power the South’s economic engine. Grady also understood in 1881 that the South’s abundant “water-powers” were necessary for industrial growth and could be powerful instruments, particularly since southern water “was never locked a day by ice or lowered by drought.” As the thinking went, the region could modernize quickly because the South’s ample water-powers could provide cheap energy for mills and factories.<sup>11</sup> When Grady looked at southern water resources, he saw the region’s numerous rivers as tools for private investors interested in the New South’s industrial modernization.

Before 1890, southern mills and small factories remained physically connected to the rivers from which they derived energy. Textile and other manufactures in Augusta (Ga.) and

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<sup>10</sup> “Greeting Grady,” Atlanta (Ga.) *Constitution*, December 25, 1886, p. 1, accessed through ProQuest Historical Data Base (subscription) unless otherwise noted.

<sup>11</sup> Joel Chandler Harris, *Life of Henry W. Grady Including His Writings and Speeches* (New York, N.Y.: Cassell Publishing Company, 1890), see pp. 199-207 and “Cotton and Its Kingdom” (1881), 273.

Columbia (S.C.) used water from power canals – diverted from the Savannah and Broad Rivers respectively – to drive factory machinery. At these sites canal water turned waterwheels and transferred a river’s current to manufacturing equipment through iron rods, timber arms, ropes, and leather belts. Georgia “fall-line” towns such as Augusta, Macon, and Columbus – located at the point where the Piedmont and Coastal Plain meet and easy navigation ends – utilized locally produced waterpower in manufacturing applications. These sites generated and consumed energy on-site, and sold products within a limited geographical market. White business and community leaders of the New South, like some of their antebellum predecessors, recognized that the southern landscape, labor force, and economy could not compete with larger markets without external investment. An 1877 Philadelphia journalist, speaking on the behalf of southern boosters, trumpeted the South’s cheap “land, labor, fuel, water power, and” building materials as tools that made the “way to clear and large profits” possible for enterprising individuals with capital.<sup>12</sup> And in cities where mills, factories, and other commercial enterprises could not access large quantities of water or build on river banks, factory managers generated power, and eventually electricity, on-site in isolated coal-fired steam plants.<sup>13</sup> These waterwheels and steam plants may have laid the foundations for the New South’s initial industrial boom, but they were soon surpassed by new systems requiring substantial financial backing, multiple generation stations, transmission systems, and larger artificial reservoirs.

After 1890, engineers increasingly improved technological systems that pulled sites of energy production and consumption apart. On June 22, 1894, the Columbia (S.C.) Cotton Mill’s owners could boast of having electrified the first cotton mill in the American South. Engineers designed a small hydroelectric station along the Columbia Canal to transmit electricity to a

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<sup>12</sup> Quoted in Woodward, *Origins*, 114.

<sup>13</sup> Durden, *Electrifying the Piedmont Carolinas*, 5; Willoughby, *Flowing Through Time*, 155.

cotton mill only 800 feet from the Broad River's current.<sup>14</sup> New and modified technologies – including turbines, generators, transformers, high-tension power-lines, and electric motors – enabled factories and mills to increasingly slip the restraints of geography and move from river banks to towns of all sizes. Despite these improvements, making hydroelectricity has remained a basic process. Dams store water before directing it through a penstock – or a large pipe – to a turbine. After succumbing to gravity in the penstock, the falling water turns a turbine that is connected to a generator where spinning magnets produce and generate electricity. Transformers step-up the voltage and send electricity out across transmission lines to another transformer that decreases the voltage for use in homes, businesses, or factories to drive electric motors in appliances and machinery. Hydroelectric development in region with plenty of water became increasingly organized and capitalized after 1890 with plenty of room for technological innovations at each of these stages, and privately managed water conservation regimes quickly began to rearrange social relationships between people and rivers in valleys like the Savannah's.

The New South quest to merge human energy and falling water in the Savannah River valley via hydroelectricity began with William Church Whitner in the 1890s. Unlike earlier water power and hydroelectric projects that supplied factories located along rivers, Whitner's Savannah River basin projects interjected significant distance between energy production and consumption. The Anderson Water, Light & Power Company commissioned Whitner, a civil engineer and graduate of the University of South Carolina, to design and build a coal-fired steam power plant for Anderson, South Carolina's municipal water works. As Whitner completed this project, he considered the late nineteenth century debate over the costs and benefits of steam

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<sup>14</sup> George F. Swain, J. A. Holmes, and E. W. Meyers, *Papers on the Waterpower in North Carolina: A Preliminary Report*, North Carolina Geological Survey, Bulletin No. 8 (Raleigh, N.C.: Guy V. Barnes, Public Printer, 1899), 341; Augustus Kohn, *The Water Powers of South Carolina* (Charleston, S.C.: Walker, Evans, and Cogswell, 1911), 37; David L. Carlton, *Mill and Town in South Carolina, 1880-1920* (Baton Rouge: Louisiana State University Press, 1982), 46n11; Durden, *Electrifying the Carolinas*, 3.

versus water generated power. George E. Ladshaw, an unabashed water power booster and one of Whitner's contemporaries, encouraged southern engineers to forgo steam generated power altogether in the Carolina's fall-line region. Since southern river systems received greater annual rainfall than northern systems, "southern rivers yield a greater amount of power per square mile." Based on this argument, Ladshaw assumed individual mills and factories could always produce their own energy by conserving water behind dams, thus freeing independent mills from "water power companies" such as Whitner's employer. And with water under sound management, mill managers could then turn to exploiting what Ladshaw saw as the South's other well advertised advantage and energy source: "labor is cheap, abundant and tractable."<sup>15</sup> Whitner considered Ladshaw's advice to monopolize human and river energy locally at a single mill via water power, but Whitner ultimately chose a private water power company's deep pockets over an individual mill's limited scale and scope.

After successfully completing the steam and water-supply project, Whitner determined the Anderson Water, Light & Power Company could eliminate its dependence upon imported coal and the associated railroad freight costs, and thus avoid steam technology in a region with ample surface water. Other engineers in coal-poor regions from North Carolina to southern California reached similar conclusions in the 1890s: importing coal to generate steam energy remained cost prohibitive in comparison to emerging hydroelectric generation and long distance transmission technologies.<sup>16</sup> Late nineteenth century conflict between labor and management – such as the Homestead steel strike (1892), the Pullman rail car factory strike (1894), and the

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<sup>15</sup> George E. Ladshaw, *The Economics of the Flow of Rivers and the Development of Hydraulic Power: Water Power vs. Steam Power* (Spartanburg, S.C.: Jones and Company Printers and Publishers, 1889), 3-4, 26.

<sup>16</sup> F. C. Finkle, "Electrical Development of Hydraulic Power," *The Engineering Magazine* 14, no. 6 (March 1898): 1011-1026, see 1012; Thorndike Saville, "The Power Situation in North Carolina," *Manufacturers Record* (December 25, 1924): 68-70, see p. 69; James C. Williams, *Energy and the Making of Modern California* (Akron, Ohio: The University of Akron Press, 1997), 5.

Alabama coal fields strikes (1894) – also presented additional challenges to fossil fuel delivery that renewable energy water works like Whitner’s could avoid in the future.<sup>17</sup>

Whitner convinced fellow Anderson Water, Light & Power Company executives to invest in two pioneering Savannah River valley hydropower projects. By successfully incorporating new generating technology with alternating current transmission lines, Whitner’s Rocky River High Shoals Hydro Station (operational, 1895) and the Seneca River’s Portman Shoals Hydro Station (1897), were the first projects in the American South to transmit electricity over long distance transmission lines.<sup>18</sup> Whitner fitted the old Rocky River watermill with a turbine, and he designed the new Portman Shoals low dam to generate hydroelectricity before transmitting the power over ten miles of lines to Anderson to fuel textile mills, run municipal water supply pumps, and brighten city lights. At Portman Shoals, Whitner built a low, rubble-masonry dam over twenty-feet tall to create a small reservoir and divert water into turbines to generate electricity; during high water periods, water also flowed over the dam’s crest and spillway before continuing downstream. Whitner completed the two Anderson hydropower projects, and then he applied his experience throughout the South.<sup>19</sup>

Whitner functioned as an engineer for multiple power companies throughout the South between 1899 and 1902. He designed a hydroelectric project for the Columbus Power Company and worked on the Phoenix Mills’ dam; both projects still span Georgia’s and Alabama’s shared

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<sup>17</sup> For reference to Alabama strikes, see: J. Wayne Flynt, *Poor But Proud: Alabama’s Poor Whites* (Tuscaloosa: The University of Alabama Press, 1989), 140-143.

<sup>18</sup> Nearly simultaneously, private investors developed similar systems in other southern states. The Pelzer (S.C.) Manufacturing Company built a hydropower facility on the Saluda River to electrify a mill three miles distant in 1896. And, in 1897, the Winston-Salem (N.C.) Fries Manufacturing and Power Company installed the “first power-transmission plant in North Carolina” on the Yadkin River in April. Electricity was transmitted about three miles to five mills and factories, and the city’s railway company. See: Swain, et. al., *Papers on the Waterpower in North Carolina*, 348-350.

<sup>19</sup> Beth Ann Klosky, “Six Miles That Changed the Course of the South”: *The Story of the Electric City, Anderson, South Carolina* (Anderson, S.C.: The Electric City Centennial Committee, in cooperation with the City of Anderson and Anderson Heritage, Inc., 1995), 44-45, 50.

Chattahoochee River today. He also worked on a long-distance transmission project in Griffin, Ga., where the Towaliga Power Company utilized a new fifteen mile transmission system to drive cotton mills. Next, Whitner began work on a hydroelectric plant on the Catawba River at Rock Hill with Dr. Walker Gill Wylie. Together they organized the Catawba Power Company in 1899 and planned to sell electricity to customers in Charlotte, N.C. In 1902, Whitner divested himself of the Catawba Power Company, and he moved to Richmond to help expand the Virginia Railway and Power Company's generation capacity on the James and Appomatox Rivers for electric streetcar systems in Richmond and Petersburg. Finally, Whitner became involved with the Fredericksburg Power Company, and the Richmond and Chesapeake Railway Company, which was building a railroad between Richmond and Washington, D.C. Whitner's initial Savannah River projects launched a career that transformed rivers across the New South in new ways that increasingly served distant industrial, commercial, and municipal customers while making concentrated human and industrial settlement further from southern rivers possible.<sup>20</sup>

At the turn of the century, William Church Whitner bridged two communities, one regional and one transnational. Whitner and his contemporaries in the energy industry represent New South actors who pushed the region's economic development, as James C. Cobb might say, beyond planters and industrialists.<sup>21</sup> Whitner was a founding member of the New South's emerging middle class and functioned as what historian David Carlton would call a "town

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<sup>20</sup> I have reconstructed Whitner's biography and career from numerous sources, including the following. Anderson Water, Light & Power Company, *First Annual Report*, ([n.p.], [n.d.]), and *Wm. C. Whitner & Co., Inc. Consulting and Construction Engineers*" ([n.p.]: Richmond, Va., [n.d.]), are located in William Church Whitner (1864-1940) Papers, R69 Mss(R), South Carolinian Manuscripts Collection (microfilm), University of South Carolina, Columbia, S.C. See also: Kohn, *Water Powers of South Carolina*, 37-39; Benjamin Mortimer Hall and Max R. Hall, *Third Report on the Water-Powers of Georgia*, Geological Survey of Georgia, Bulletin No. 38 (Atlanta: Byrd Printing Company, 1921), 28-29; Thomas W. Martin, "Hydro-Electric Development in the South," in *The South's Development: A Glimpse of the Past, the Facts of the Present, A Forecast for the Future*, Part II, volume 86, no. 24 (Baltimore, Md.: Manufacturers Record, 1924), 241-261; Durden, *Electrifying the Piedmont Carolinas*, 3-10; and "Generators At Portman to be Silenced Forever," Anderson (S.C.) *Independent*, December 9, 1960, Folder 3 "Clark's Hill News Clippings," Box 3, Lester Moody Collection 2002.036, Augusta History Museum, Augusta, Ga.

<sup>21</sup> James C. Cobb, "Beyond Planters and Industrialists: A New Perspective on the New South," *Journal of Southern History* 54, 1 (February 1988): 45-68.

builder.” Whitner’s hydroelectric projects ultimately contributed to building the “new world” of Piedmont mill towns that Carlton analyzed, and he laid the groundwork for an “embryonic urban civilization” for cities like Atlanta. Finally, Whitner helped introduce a new industrial-social order, best described by historian Bryant Simon, to a region formally dominated by agricultural production.<sup>22</sup> By 1907, according to Carlton, the majority of townsmen and mill builders were South Carolinians. Northern capital financed mill building, “but only fourteen directors” out of 476 lived “north of the Potomac [River].” Three of seventy-two mill presidents lived outside of South Carolina, but likely lived in North Carolina’s Piedmont. Carlton concluded that South Carolina’s manufacturing town building and the “industrialization of South Carolina’s Piedmont was largely the product of southern brains and hands.”<sup>23</sup> Southern historians have often conflated textile, timber, and other industries at the expense of understanding the energy industry that made the growth of these parallel industries possible. The core-owners and labor pool in South Carolina’s industries at the turn of the century were ‘southern,’ but an eclectic mix of individuals in the energy industry influenced the future of southern rivers and the electrical utility industry before the advent of the Tennessee Valley Authority. Whitner was a member of the regional South Carolina community responsible for the new industrial-social order in manufacturing towns, but the technology that Whitner depended upon to build the New South knew no regional boundaries.

William Church Whitner was a member of a transnational engineering and energy community as much as he was a regional member of the South Carolina town building community of southern industrialists. The southern manufacturing industry’s financial

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<sup>22</sup> David L. Carlton, *Mill and Town in South Carolina, 1880-1920* (Baton Rouge: Louisiana State University Press, 1982), “town people” 8, “new world” and “embryonic” 39; Bryant Simon, *A Fabric of Defeat: The Politics of South Carolina Millhands, 1910-1948* (Chapel Hill: University of North Carolina Press, 1998).

<sup>23</sup> Carlton, *Mill and Town*, 43, and chap 2 “Mill Building as Town Building: The Industrial Impulse.”

investment arrived from outside of the South, but the energy sector's executives and engineers derived experience and knowledge from all over the globe. A blossoming in international engineering trade journal publication demonstrated that projects like Whitner's emerged in other parts of the world and United States. One such publication – *Engineering Index* – illustrates the high level of international professionalization and technological transfer occurring at the turn of the century within the engineering community. First appearing in 1884, the *Index's* one-thousand page volumes originally covered five year periods, and functioned as a clearing house for over ninety journals highlighting topics of interest for mechanical, electrical, municipal, commercial, military, and industrial “Engineers, Superintendents, and Managers,” as well as informing manufacturers and potential investors. By 1900, the third volume of the *Index* had grown to include an astonishing 40,000 cross-referenced citations from over two hundred international sources in multiple languages. And in 1906 the first annual index appeared, weighing in at nearly four hundred pages, to provide “engineering’s first and most comprehensive collection of time saving abstracts on worldwide developments in all related disciplines.” Before building his Anderson projects, Whitner studied these journals and apparently traveled to New York to meet Nikola Tesla, a Croatian immigrant who invented alternating-current (AC) transmission technology in 1888 that remains the industry standard today.<sup>24</sup> Engineers like Whitner who did not travel abroad could travel through the journals and gain indirect exposure to the work of the transnational engineering community.

Many of the men responsible for shaping the American South's energy infrastructure and waterscape before 1930 read these journals, and they circulated throughout the United States and overseas to inspect, engineer, and manage projects. For example, the Alabama Power Company emerged in 1906, and the company looked less like a ‘southern’ or an American company, and

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<sup>24</sup> Durden, *Electrifying the Piedmont Carolinas*, 6-7

more like a transnational company after 1911. Canadian born James Mitchell (1866-1920), one of the company's three core founding executives, got his start in the electrical industry with the Massachusetts-based Thomson Houston Company in 1884 in the railway motor division traveling around the United States troubleshooting railway motors and new street railway projects.<sup>25</sup> In the early 1890s, Thomson Houston assigned Mitchell to South America to spur sales in street lighting and power generating equipment.<sup>26</sup> He worked for the company until 1901 when he assumed the general manager position for the Canadian-owned São Paulo Tramway, Light, and Power Company where he worked until 1906.<sup>27</sup> After about sixteen years in Brazil, Mitchell returned briefly to the United States with his family and then moved again to London. There he worked with longtime friends and the principals of the Sperling & Company investment house. The firm sent Mitchell and his family to Japan where he spent four months surveying potential dam sites before ultimately recommending that the company not invest in the Japanese projects.<sup>28</sup> Mitchell then moved to New York City in 1911 to set up a Sperling & Company branch office before venturing south on a water-power tour. He soon stopped in the Savannah River valley to assess Clarks Hill (S.C.) water power sites but was not convinced of the sites' potential.<sup>29</sup> In his written report on two proposed power sites near Clarks Hill – Prince's Island and Anthony Shoals – Mitchell, like his contemporary New South boosters, cheerfully concluded that “the apathy and backwardness which has characterized the old South since the close of the Civil War is yielding to the vigor of a new generation, stimulated by the

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<sup>25</sup> I have reconstructed James Mitchell's biography from numerous sources, including the following: “James Mitchell Dies of Paralysis at 54,” *New York Times*, July 24, 1920, p. 9; and Alabama Power Company, *Alabama Power Company Golden Anniversary*, December 4, 1956, Pamphlet, p. 3. Leah Rawls Atkins has produced the most recent and thoroughly researched southern utility company history to date, see: *Developed for the Service of Alabama*, 18.

<sup>26</sup> Duncan McDowall, *The Light: Brazilian Traction, Light and Power Company Limited, 1899-1945* (Toronto: University of Toronto Press, 1988), 34.

<sup>27</sup> McDowall, *The Light*, 92; Atkins, “*Developed for the Service of Alabama*,” 18.

<sup>28</sup> Atkins, “*Developed for the Service of Alabama*,” 18.

<sup>29</sup> *Ibid.*

progressive ideas and aided by the influx of men and money from the North.” Mitchell saw possibility and “a great awakening” in the lumbering, textile, and agricultural sectors. In evaluating the Clarks Hill project’s finances, he did note that United States’ water power companies and their foreign investors were “free from the dangers of political troubles, such as are attendant on Latin American projects.” As such, financial arrangement and “payments may safely be allowed to extend over a much longer period than might be advisable in the case of some other geographical situation.”<sup>30</sup> After his South Carolina consultations, Mitchell’s southern travels led him to Alabama where he encountered two Alabama natives: a riparian legal expert named Thomas Wesley Martin (1881-1964) and former riverboat Captain William Patrick Lay (1853-1940). Mitchell soon re-organized Lay’s fledgling Alabama Power Company in 1911, and used his international experience and credit connections to turn the financially deprived southern energy company into a regional and national force, on which there is more to come in this chapter. But James Mitchell was not the only transnational engineer and executive working in the southern energy industry.

Two other transnational engineers and their contributions to the southern energy industry are worthy of mention. Massachusetts-born William E. Mitchell (1882-1960), James Mitchell’s younger brother, also moved around before working for multiple southern electric companies. After graduating from the Massachusetts Institute of Technology, William traveled to Brazil in 1906 where he spent six years with two companies developing hydro projects for the Brazilian Traction, Light and Power Company. He eventually returned to the United States and worked in the American West for General Electric before assuming a management position in the Alabama Power Company in 1912. Twelve years later, William Mitchell joined the Atlanta-based

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<sup>30</sup> James Mitchell, “Report on the Twin City Power Company,” July 5, 1911, p. 1629, in *Reports and Other Data from Engineers, 1900-1927*, second red binder, Box 2, Records of Twin City Power Company, South Caroliniana Library, University of South Carolina, Columbia, S.C.

Georgia Power Company and was named company president in 1945.<sup>31</sup> Finally, Richard Pfaehler was born in Germany and graduated from Stuttgart's Royal College of Technology in 1905. Beginning in 1908 and for the next fifty years, Pfaehler worked as a hydraulic engineer in North Carolina and Canada for the Southern Power Company, the Duke Power Company, and the W. S. Lee Engineering Corporation. He supervised the planning process for a proposed North Carolina nitrogen fertilizer plant, served as an engineer assigned to the Catawba River (N.C.) hydro station, and worked as a project engineer on the Saguenay River (Quebec) hydro project.<sup>32</sup> William Church Whitner's, the Martin brothers' and Pfaehler's transnational community influences and experiences highlight the range of actors responsible for shaping the South's rivers and energy industry in advance of the Tennessee Valley Authority. Furthermore, these actors illustrate why the old planter-industrialist dichotomy was so limiting when, as James C. Cobb and William Stueck have observed, "there is more value in studying the South as a part of the world than as a world apart."<sup>33</sup> As southern historians continue to move beyond the old categories, they would do well to consider the New South's transnational influences before the 1930s every bit as much as they consider globalization and the American South after 1945. Three of the four individuals worked for the American South's three most successful energy companies during the first half of the twentieth century, and they made the companies distinctive – not necessarily because the companies were southern or for cultural reasons, but because the companies were transnational.

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<sup>31</sup> Harllee Branch, Jr., *Georgia and the Georgia Power Company: A Century of Free Enterprise!* (New York, N.Y.: The Newcomen Society in North America, 1957), 24; Wright, *History of the Georgia Power Company*, 235; Atkins, "Developed for the Service of Alabama," 38.

<sup>32</sup> "Biographical and Professional Record of Richard Pfaehler, N.C.," Miscellaneous Series, General Subseries, Scrapbook, Box 54, James Buchanan Duke Papers, Rare Book, Manuscript, and Special Collections Library, Duke University, Durham, N.C.

<sup>33</sup> James C. Cobb and William Stueck, eds., *Globalization and the American South* (Athens, Ga.: University of Georgia Press, 2005), xi.

Regardless of which executives and engineers traveled abroad and who did not, the trade journals provided narratives, graphs, charts, technical drawings, and images of site-specific projects designed to meet unique regional environmental conditions and needs. The periodicals described a myriad of projects that provided clean water for municipal use, supplied irrigation systems, or generated power in Bolivia, Brazil, France, Switzerland, Germany, South Africa, India, Japan, and New Zealand. North American developments – along California’s American River, South Carolina’s Seneca River, and British Columbia’s Fraser River – integrated new hydroelectric generation and electrical transmission technology with existing dam and reservoir technology found throughout the world.<sup>34</sup> The *Index*’s entries and observations from mobile engineers illustrate, among other things, that late nineteenth and early twentieth century North American water conservation and hydropower projects – from British Columbia and California, to Ontario and South Carolina – were not exceptional. Rather, they were part of a vibrant transnational exchange of ideas, management, capital, and technical expertise.

In the late 1880s and 1890s, private hydropower companies throughout the United States began incorporating water conservation and management with high-tension power lines to transmit electricity from rivers to distant mining, agricultural, and urban areas. Looking to other regions and communicating with equipment manufactures in the northeast, Whitner must have been aware of other projects such as the Willamette Falls Electric Company’s 1889 diversion dam, powerhouse, and the nation’s first long distance transmission system (fourteen-miles),

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<sup>34</sup> *The Engineering Index* (New York and London: Engineering Magazine), multiple years and volumes. See *Electrical World* (May 26, 1928) edition for reports on regional development around the USA. The Rhine River’s alpine headwaters saw hydroelectric development primarily after 1892, see: Mark Cioc, *The Rhine: An Eco-Biography, 1815-2000* (Seattle: University of Washington Press, 2002), pp. 62-64 and 131-132. In 1895, the Folsom project on California’s American River set new standards for generation and transmission, see: Williams, *Energy and the Making of Modern California*, 176. British Columbia’s development occurred after 1913, see: Matthew Evenden, *Fish versus Power: An Environmental History of the Fraser River* (Cambridge, 2004), 56-69.

which powered electric lights in Portland, Oregon.<sup>35</sup> Some writers have posited that southern California led the way in privately financed electrical transmission because mining facilities and new urban centers incited a “demand for power” for mining equipment, industrial machinery, rapid transit, and electric lights after 1892.<sup>36</sup> Others have linked California’s agricultural production to private energy companies: rural fruit growers needed electricity to pump ground water to irrigate crops. For example, the 1897 Bakersfield and Kern River hydroelectric plant was “built expressly for operating centrifugal pumps for irrigation work” according to one engineer.<sup>37</sup> When private investors developed electrical sources and technologies, cities small and large shifted away from gas to electric street lights for perceived and real safety reasons. But it was street cars, more than lights and water pumps that were the greatest engine of change for urban energy consumption, particularly after Richmond, Virginia put the first commercially viable electric streetcar line in the United States into service in 1887.<sup>38</sup> Initially, coal-fired steam plants powered these transportation networks, but as these systems expanded in cities such as Atlanta, cheaper water-generated electricity replaced coal-generated electricity.<sup>39</sup> And by 1896 the world’s most anticipated, politicized, and publicized hydroelectric project – Niagara Falls – began generating and transmitting energy to Buffalo, New York.<sup>40</sup> Private investors and engineers learned about these old projects and built new projects throughout North America with longer transmission lines, taller dams that increased “head” (or height that water falls through a

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<sup>35</sup> Williams, *Energy and the Making of Modern California*, 174.

<sup>36</sup> F. C. Finkle, “Electrical Development of Hydraulic Power,” *The Engineering Magazine* 14, no. 6 (March 1898): 1011-1026, 1012; Charles M. Coleman, *P. G. And E. of California: The Centennial Story of Pacific Gas and Electric Company, 1852-1952* (New York, N.Y.: McGraw-Hill Book Company, Inc., 1952), 107; Williams, *Energy and the Making of Modern California*, 5, 10, 168-170.

<sup>37</sup> Rover McF. Doble, “Hydro-Electric Power Development and Transmission in California,” *Association of Engineering Societies* 34, no. 3 (March 1905): 75-99, see p. 82.

<sup>38</sup> “Electric Railroad Development,” *The Engineering & Building Record and Sanitary Engineer* (May 9, 1891): 383. See also: Institute for Electrical and Electronics Engineers (IEEE) History Center, “Richmond Union Passenger Railway,” <http://ewh.ieee.org/r3/richmond/railway.htm> (accessed March 4, 2010).

<sup>39</sup> David E. Nye, *Electrifying America: Social Meanings of a New Technology, 1880-1940* (Cambridge, Mass.: The Massachusetts Institute of Technology Press, 1990), 193-197.

<sup>40</sup> Ginger Strand, *Inventing Niagara: Beauty, Power, and Lies* (New York, N.Y.: Simon & Schuster, 2008), 148-153.

penstock before striking a turbine), and increasingly complex numbers of dams, diversion tunnels, pipeline conduits, and reservoirs necessary to generate and deliver energy to residential, commercial, agricultural, and industrial consumers. All of these methods – deployed by engineers such as Whitner – transformed river currents into electrical currents across the United States and around the world. In the process, corporate executives and engineers replaced free flowing rivers with artificial reservoirs throughout the American South.

### **Building a Region with “White Coal”**

After 1900 private energy companies in the American South – including the independent Tennessee River Power, Alabama Power, Georgia Power, Duke Power, and numerous other smaller companies – planned and developed multiple-dam and sometimes multiple purpose projects across the region to redirect river energy for use by human hands. “Water power,” Rupert Vance declared in *Human Geography*, was “the one unifying force under laying industrial development” in the southern Piedmont.<sup>41</sup> Vance understood this development through North Carolina’s James B. Duke, and the Duke Power Company was the most successful private enterprise involved in the large scale development of southern river valleys. Dr. Walker Gill Wylie – a South Carolina native, New York City physician, President of the Catawba Power Company, and William Church Whitner’s former business partner – presented the self-made American Tobacco Company king with the idea of developing a series of hydroelectric reservoirs and dams on the Catawba River.<sup>42</sup> Together, Wylie and Duke tapped William States Lee – a Citadel graduate and engineer who had previously worked alongside William Church

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<sup>41</sup> Vance, *Human Geography*, Chapter 12, “The Piedmont Crescent of Industry,” see 281.

<sup>42</sup> Robert F. Durden, *The Dukes of Durham, 1865-1929* (Durham, N.C.: Duke University Press, 1987), 177, 182. For more on Wylie’s and Whitner’s ultimately ill fated relationship and partnership involved in the Catawba Station (Rock Hill, S.C.) project, see correspondence between the two men, and J. G. Anderson, Anderson Motor Company, Rock Hill, S.C., to W. C. Whitner, Rock Hill, S.C., December 30, 1924, located in the William Church Whitner collection (1864-1940) Papers, R69 Mss(R), South Carolinian Manuscripts Collection (microfilm), University of South Carolina, Columbia, S.C.

Whitner at Portman Shoals and who completed Wylie's Catawba Power Company Rock Hill hydroelectric project in 1904 – to provide the technical know-how.<sup>43</sup> Not unlike other company founders who merged technical skill, river knowledge, and financial resources, the Duke-trio began building a system in 1905 that soon linked together four hydroelectric plants (three on the Catawba River) and two auxiliary coal-fired steam plants in North and South Carolina's Piedmont in a little more than five years.<sup>44</sup> By then, the Duke Power Company's Catawba and Great Falls projects stored water behind dams before turning falling river water into energy for distribution over seven hundred miles of transmission lines to reach over one hundred cotton mills.<sup>45</sup> While many energy industry investors worried about distributing electricity or finding customers, James B. Duke did not wait for markets to emerge – he created them. The company did not start with, and had not planned to service, rural or residential customers. As Duke Power historian Robert Durden has demonstrated, Duke invested directly in, or subsidized, the electrical conversion of southern textile mills to ensure a market for his company's electricity.<sup>46</sup> One hydraulic expert noted that by 1912, the company maintained 1,380 miles of transmission lines over a territory that stretched “200 miles from east to west and 150 miles from north to south” to deliver electricity to 156 cotton mills, homes in forty-five mill towns, municipal street lights, and an inter-urban railway.<sup>47</sup>

Rupert Vance informed his regionalist-inspired readers that “while the greatest potential water resources of the area” could “be found in the Tennessee River system, the highest actual development” had been reached on the Catawba River by Duke's company between 1905 and

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<sup>43</sup> “A Hydro-electric Power Development on the Catawba River, Near Rock Hill, S.C.,” *Electrical World and Engineer* 44, no. 4 (July 23, 1904): 129-132; Kohn, *Water Powers of South Carolina*, 82-83.

<sup>44</sup> Durden, *Electrifying the Piedmont Carolinas*, ix-x, 3-23.

<sup>45</sup> C. A. Mees, “Development of the Rocky Creek Station of the Southern Power Company,” *Engineering Record* 59, no. 14 (April 3, 1909): 462-469, see p. 462.

<sup>46</sup> Durden, *Electrifying the Piedmont Carolinas*, 20.

<sup>47</sup> J. A. Switzer, “Water-Power Development in the South, Part I,” *Cassier's Magazine* 41, no. 6 (June 1912): 561-576.

1911.<sup>48</sup> These power dams and artificial reservoirs did not explicitly provide multiple purpose benefits as federal projects do today: they did not supply water to irrigation networks or aid navigation, but they did provide incidental flood control. For example, the *Gastonia Gazette* reported in 1928 that Duke's North Carolina dams "saved this section from the ruin and devastation" experienced by similar flooding in 1916 that washed out all bridges crossing the Catawba River. Unlike the 1916 flood event that left some hydroelectric plants in-operable for up to nine weeks, the company's Catawba River dams "checked the flow of the water and have held it in restraint in 1928, so that there has not been the resultant damage from floods and freshets."<sup>49</sup> Duke's power company was initially the most successful at harnessing a single southern river with a series of dams and artificial reservoirs. James B. Duke, as one former executive intimated, was always quick to remind his staff "that before the plants were built," water flowed downstream, but "when the plant was installed," the water lost was "in dollars."<sup>50</sup> The company soon faced stiff competition as other corporations also raced to conserve the New South's water resources, extend transmission systems, and cultivate industrial power.

Private companies in Tennessee, Alabama, Georgia, and South Carolina followed Duke in the complex task of water conservation and energy production over the course of the twentieth century's first two decades.<sup>51</sup> Each individual company incorporated old and new ideas to create dam, reservoir, and transmission networks that fit site specific environments in different watersheds. Each company assumed nature's energy – falling water – would always generate

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<sup>48</sup> Vance, *Human Geography*, 284.

<sup>49</sup> *Gazette* quoted in: "How Power Dams Saved the Day in the Carolinas," *Electrical World* 92, no. 10 (September 8, 1928): 477; John W. Fox, "Outline of the Development of Duke Power Company" (1952), p. 9, Miscellaneous Series, Printed Materials Subseries, Box 55, James Buchanan Duke Papers, Rare Book, Manuscript, and Special Collections Library, Duke University, Durham, N.C.

<sup>50</sup> John W. Fox, "Outline of the Development of Duke Power Company" (1952), p. 13-C, Miscellaneous Series, Printed Materials Subseries, Box 55, James Buchanan Duke Papers, Rare Book, Manuscript, and Special Collections Library, Duke University, Durham, N.C.

<sup>51</sup> See *Electrical World* (May 26, 1928) edition for development reports on every major United States region.

electrical power, but each company would learn that rivers did not always participate willingly in conservation regimes.

In the Savannah River valley, the first group of investors and engineers to build a dam across the main river in the twentieth century were South Carolina businessmen connected to William Church Whitner's previous water and water power technology dealers. In 1904, Dr. Samuel M. Orr, the Anderson Water, Light & Power president, his son Harry, who worked for General Electric's Atlanta office, plus Atlanta civil engineer O. H. Sheffield, collaborated on the Gregg Shoals hydroelectric project. The Georgia Legislature gave the company rights to build up to three dams "across the Savannah River" in 1904, and two years later, the South Carolina Legislature approved the Savannah River Power Company's charter. The company was mostly comprised of men from Anderson and Greenville, but the company also included a healthy non-southern contingent like nearly every other southern water power company. Joseph E. Serrine served as Gregg Shoals' principal engineer, and he started his career with the Boston-based company of Lockwood Greene and Company. Finally, C. Elmer Smith, was the lead contractor from the S. Morgan Smith Company. According to an Atlanta journalist, the S. Morgan Smith company was a York, Pennsylvania turbine manufacturing company considered "the largest hydraulic machinery concern in the world" at the time, and the company had previously constructed the Atlanta Water and Electric Company's first hydroelectric dam on the Chattahoochee River in 1902.<sup>52</sup> This group of investors and engineers rejoiced when Congress ratified the Gregg Shoals plans in February, 1907, but final approval would pivot upon an Army

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<sup>52</sup> "Big Dam Will Be Built as Rapidly as Possible," Atlanta (Ga.) *Constitution*, October 19, 1902, p. 6; John P. Johnson, *Gregg Shoals Dam and Power Plant, Historic American Engineering Record*, HAER, SC, 4-SAVRI (Washington, D.C.: National Park Service, 1980), 1-8, available online with images through the Built in America Collection, Library of Congress.

Corps of Engineers investigation into competing claims that the new dam would impinge upon the river's navigability and migratory fishery.

The delay in final approval hinged on claims primarily from a small oppositional lobby interested in maintaining navigation above Augusta – Gregg Shoals was about eighty river miles upstream. Ample evidence existed that Petersburg (pole) boats traveled between the Savannah River's headwaters above Gregg Shoals to Augusta. Lt. Colonel Dan Kingman, Chief Engineer of the Corps' Savannah District, thought the navigation v. hydroelectric dam debate had national implications, and he ultimately favored a project that would provide both benefits.<sup>53</sup> There were other claims from anglers, whose lobby had succeeded in attaching a line to the Georgia Legislature's enabling legislation calling for "fish-ladders to be built in conjunction with the dams." Despite an internal and external debate among Army Engineers, the Secretary of War eventually approved a single purpose hydroelectric dam at Gregg Shoals, thereby over-ruling the navigation and fish lobbies, given testimony that fish "had not been seen in that part of the river for over 25 years." When completed, the fourteen-foot tall dam stretched over nine-hundred feet across the river from Georgia to South Carolina. The power house and turbines – located on the South Carolina side of the river – generated electricity for Anderson, twenty-two miles away, as well as Abbeville (twenty-seven miles distant) and Greenwood (four miles). North Carolinian Hugh MacRae (1865-1951) brought new investment to the company blood as the organization contemplated multiple coordinated dam and reservoir sites along twenty-five miles of the Savannah River above Augusta between Stevens Creek and Gregg Shoals in the early 1900s.<sup>54</sup>

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<sup>53</sup> Lt. Col. Dan C. Kingman, Savannah District, to John V. Stribling, Anderson, S.C., January 2, 1907, and Lt. Col. Dan C. Kingman, Savannah District, to Brigadier General A. MacKenzie, Chief of Engineers, Washington, D.C., April 17, 1907, both located in Folder: Power Dam at Gregg Shoals, Box 79, Accession 76E342, Records of the Corps of Engineers, Record Group 77, National Archives Southeast Region, Morrow, Ga.

<sup>54</sup> Hugh MacRae's grandson, Hugh Morton, eventually developed western North Carolina's famous Grandfather Mountain as a tourist destination. MacRae initiated construction on the Blewett Falls hydro plant on the Pee Dee

But the company only developed the Gregg Shoals site and did not complete the planned Cherokee Shoals and Calhoun Falls projects on account of a 1907 financial panic.<sup>55</sup> And while the Gregg Shoals dam presented a barrier for any fish ascending the river, “the pool created above the dam” reportedly became “a favorite fishing spot for local people and plant personnel” who cast lines from shore and boats.<sup>56</sup> The conflict over Gregg Shoals was primarily an argument between commercial, navigational, and power interests, with a limited number of voices speaking for fish, and the Savannah River Power Company’s dream to conserve water to generate electricity for distant cities won the day. Commercial and regional goals again stopped water and fish that had passed the Savannah River’s shoals, but not all private southern water conservation projects succeeded so easily or faced easily surmountable environmental conditions.

In Tennessee, the Hales Bar dam accomplished many engineering firsts by 1914 that other companies and institutions emulated in the following decades. Hales Bar, built between 1905 and 1913 by the Tennessee River Power Company, was the southeast’s first major multiple purpose water management installation, and, as one contemporary periodical claimed, it was the single largest “hydroelectric development in the South.”<sup>57</sup> When construction commenced, “there were no hydroelectric plants in operation in the state of Tennessee,” according to

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River in North Carolina before the Carolina Power & Light Company assumed ownership of the project in 1912, see: Riley, *Carolina Power & Light*, 65, 279.

<sup>55</sup> Kohn, *Water Powers of South Carolina*, 63, 95-96; U.S. Congress, House, Committee on Interstate and Foreign Commerce, *Dam Across Savannah River at Cherokee Shoals*, 61<sup>st</sup> Congress, 3<sup>rd</sup> sess., House Report 1863 (January 7<sup>th</sup>, 1911), 1-3, available online through Readex U.S. Congressional Serial Set (subscription database); The History Group, Inc., *Historical Investigations of the Richard B. Russell Multiple Resource Area* (Atlanta, Ga.: Archeological Services Division, National Park Service, and Savannah District, United States Army Corps of Engineers, 1981), 141.

<sup>56</sup> “Treatise on Inland Waterway Improvement, River Transportation and Its Economies,” Part I, Augusta (Ga.) *Chronicle* (October 11, 1908), p. 2; “Treatise on Inland Waterway Improvement, River Transportation and Its Economies,” Part II, Augusta (Ga.) *Chronicle* (October 18, 1908), p. 9-10; Johnson, *Gregg Shoals Dam and Power Plant*, 1-8.

<sup>57</sup> “Hydroelectric Development on the Tennessee River,” *Electrical World* 62, no. 20 (November 15, 1913): 997-1000.

University of Tennessee hydraulic engineering professor J. A. Switzer.<sup>58</sup> Chattanooga boosters and businessmen had conceived of plans for a dam and navigation lock in the vicinity of their city after observing “the progress of the development of water power in various parts of the country.” They determined that a dam and navigation project might be viable, particularly if they could convert “the water power generated at the dam into electrical energy” for use by an existing market of 70,000 residential, commercial, and industrial customers.<sup>59</sup> After lobbying Congress, Chattanooga city representatives received a 99-year lease from the federal government in 1904 to complete a Tennessee River power and navigation project requiring Corps inspection and approval.<sup>60</sup> City leaders, could not finance the project, and they eventually relinquished the project to C. E. James, C. Guild, and A. N. Brady of the Tennessee River Power Company.<sup>61</sup> This new company financed the project but the structures’ safety remained the Corps’ responsibility.<sup>62</sup>

The Corps, after all, was tasked with a civil works mission to improve navigation. Army engineer units have always served the American military since the American Revolution, but it was not until 1802 that Congress formally established the Corps of Engineers. This happened at the same time that Congress created the U.S. Military Academy at West Point to build an officers corps. In addition to domestic coastal defense and battlefield responsibilities, the Corps officially assumed civil works missions in 1824. In the early national period, the Corps surveyed new roads, mapped new territories, maintained navigation channels, and improved harbors.

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<sup>58</sup> J. A. Switzer, “Water-Power Development in the South, Part I,” *Cassier’s Magazine* 41, no. 6 (June 1912): 561-576.

<sup>59</sup> Thomas E. Murray, “The Improvement of the Tennessee River and Power Installation of the Chattanooga and Tennessee River Power Company at Hale’s Bar, Tenn.,” *Transactions of the American Society of Mechanical Engineers*, vol. 27 (May, 1906): 521-555.

<sup>60</sup> J. A. Switzer, “Water-Power Development in the South, Part II,” *Cassier’s Magazine* 42, no. 1 (July 1912): 91-96.

<sup>61</sup> “Hydro-Electric Developments ‘Unparalleled in the World,’” *Manufacturers Record* 65, no. 21 (May 28, 1914): 41-42.

<sup>62</sup> John W. Frink, “The Foundation of Hales Bar Dam,” *Economic Geology* 41, no. 6 (1946): 576-597, see 579.

Between 1900 and the 1930s, the Corps' civil works mission expanded to include flood control, but the Corps could only participate in flood control projects if the improvements enhanced navigation and benefited the national economy. The Corps primary civil works responsibility was to grease the wheels of commerce by keeping the nation's navigable water ways open and safe for boats and barges.<sup>63</sup>

Hales Bar was the first truly multiple purpose facility built on a navigable river in the United States before 1913, and was "the first case where river improvement and power development" were combined, according to one periodical.<sup>64</sup> Situated thirty-three winding river miles downstream from Chattanooga, the Tennessee River Power Company poured a concrete dam and spillway, built a powerhouse, and piled an earthen embankment to complete a structure that stretched 2,500 feet across the river and created an artificial reservoir thirty-six miles long.<sup>65</sup> The Tennessee River Power Company financed the dam's lock and built the lock to meet the Army Corps of Engineers' specifications. When completed, the Hales Bar multipurpose facility was equipped with "the largest single lift in the world" for tug-boats and barges. With canals downstream around shoals at Riverton and Muscle Shoals, Alabama, this public-private enterprise at Hales Bar enabled commercial traffic to travel from Paducah, Kentucky, to Chattanooga.<sup>66</sup> Private industry succeeded in completing the multiple purpose project, but, as one Corps historian has explained, the dam and powerhouse encountered construction challenges

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<sup>63</sup> Jeffery K. Stine, "United States Army Corps of Engineers," in Donald R. Whitnah, ed., *Government Agencies*, Greenwood Encyclopedia of American Institutions (Westport, Conn.: Greenwood Press, 1983), 513-516.

<sup>64</sup> "Hydroelectric Development on the Tennessee River," *Electrical Review and Western Electrician* 63, no. 21 (November 22, 1913): 1005-1009. Between 1909 and 1911, the Bureau of Reclamation completed the Salt River and Roosevelt Dam project, which was the Bureau's first multiple purpose reclamation (irrigation) and power project, see: David P. Billington and Donald C. Jackson, *Big Dams of the New Deal Era: A Confluence of Engineering and Politics* (Norman: University of Oklahoma Press, 2006), 28-46.

<sup>65</sup> J. A. Switzer, "The Power Development at Hale's Bar," *Resources of Tennessee* (March 1912): 86-99.

<sup>66</sup> "Hydroelectric Development on the Tennessee River," *Electrical World* 62, no. 20 (November 15, 1913): 997-1000.

that left the Corps responsible for navigational facilities in a structure they considered a potential liability.<sup>67</sup>

The Hales Bar project represented collaborative and engineering successes, but the private attempt at a massive water conservation project faced many environmental challenges. The region's porous Bangor limestone and sedimentary rock presented engineers and workers with no shortage of problems as they attempted to set the dam's and the powerhouse's foundations. This limestone was apparently "soluble in the river water," according to one technical writer, and "had a geological exploration been made, this condition would" have likely resulted in the project's termination. But the project continued, requiring engineers and laborers to drill hundreds of vertical holes up to thirty feet deep before pumping cement grout under pressure into the holes to fill horizontal and lateral fissures. Workers used upwards of 200,000 bags of cement to manufacture "solid rock" for the dam's foundation. This solution worked in the short term, but in 1914 four "boils" emerged below the dam, indicating that water continued to enter limestone crevices above the dam, flow through limestone channels under the dam's foundation, and reemerge immediately downstream of the dam.<sup>68</sup> Engineers attempted numerous fixes, such as dumping rock, carpets, burlap, and cinderblock into fissures on the dam's upstream side. These efforts fixed isolated spots, but new boils continued to emerge on the dam's downstream side. Between 1919 and 1921, engineers injected asphalt-grout under the dam's foundation to depths of 130 feet. This method – used elsewhere only once before – stopped the major leakage and reduced the overall number of boils, but it still could not seal all of the leaks. In the decade before the Tennessee Valley Authority acquired the Hales Bar project

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<sup>67</sup> Leland R. Johnson, *Engineers of the Twin Rivers: A History of the Nashville District Corps of Engineers, United States Army* (Nashville, Tenn.: United States Army Engineer District, 1978), 166-168.

<sup>68</sup> "Hydroelectric Development on the Tennessee River," *Electrical Review and Western Electrician* 63, no. 21 (November 22, 1913): 1005-1009.

in 1939, engineers continued to study seepage under the dam before concluding that the amount of water lost under the dam was probably higher than previous estimates, and that “this flow emphasizes the large number of small openings which must occur in the foundations and do not lend themselves to measurement.”<sup>69</sup> (TVA eventually abandoned the Hales Bar project and they buried the dam under Nickajack Lake in 1967.) Seepage represented a problem since any water lost under the dam – like wasted water over any dam – was potential hydropower and profit lost.

This limited public-private venture into multiple purpose planning and water conservation in the Tennessee River valley did not bode well for future collaborations since the initial projected cost of \$3 million mushroomed to an actual cost of \$11 million. “At the time of construction, Hales Bar was a great precedent setting project,” noted TVA engineers in 1941. And, excepting some Western dams and the Niagara Falls project, Hales Bar had the “greatest power installation of any dam in the country” when completed in 1914.<sup>70</sup> But the engineering failures – from site selection to solving water storage problems – did not inspire future confidence in public-private conservation schemes. This was serious business since at least one Tennessee hydraulic engineer understood in 1912 that it did “not require the prophetic vision of a dreamer to suppose that the day will come when practically the entire length of such rivers as the Tennessee will be linked to water wheels, and so be forced to contribute their maximum to the country’s supply of power.” J. A. Switzer, a University of Tennessee professor continued,

Nor is it visionary to say that the next great step will then be the building of enormous reservoirs at the headwaters of the rivers to impound the flood waters now going to waste, and by means of them doubling or trebling the power susceptible to utilization at

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<sup>69</sup> Tennessee Valley Authority, “History of Leakage at the Hales Bar Dam,” *Proposed Improvements to the Hales Bar Project*, TVA Report No. 11-100 (November 1941), 1-6, Hales Bar Dam, Tennessee River, TVA, 1910-1913, collection 1051, Archives Center, National Museum of American History, Smithsonian Institution, Washington, D.C., hereafter Archives Center.

<sup>70</sup> *Ibid.*

all such sites as Hale's Bar. Just as certainly as that the Government will complete the Panama Canal will the Government in due time undertake this work.<sup>71</sup>

Switzer, with apparent predictive powers in 1912, envisioned extensive government valley and headwaters projects throughout the nation, starting with the Tennessee Valley.

Other Tennessee power companies attempted to manipulate the state's water resources and land forms in order to conserve water for power production and private profit. One New South company planned to develop "all of the available power of the Clinch and Powell rivers in Tennessee and Virginia" with five individual dams. Another company – the East Tennessee Power Company – built two consecutive high-concrete dams and reservoirs on the Ocoee River in north Georgia between 1910 and 1913.<sup>72</sup> The Tennessee River Power Company (owner of Hale's Bar), the East Tennessee Power Company, and other electric companies in Nashville and Knoxville eventually merged in 1922 to form the Chattanooga-based Tennessee Electric Power Company. TEPCO, as the new company was known, became the state's single largest company and provided electricity to about one hundred urban areas in middle and eastern Tennessee until 1933.<sup>73</sup> But one other Tennessee entity– the Aluminum Company of America (ALCOA) – in particular deserves mention and credit for their role in shaping the southern waterscape in east Tennessee. Since the aluminum production process required significant amounts of energy, the Pennsylvania-based company wanted to maintain its own power supply in eastern Tennessee.<sup>74</sup> Beginning in 1912, ALCOA worked to acquire "title to all the power rights and riparian privileges on the Little Tennessee River" and its tributaries in southwestern North Carolina and

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<sup>71</sup> J. A. Switzer, "The Power Development at Hale's Bar," *Resources of Tennessee* (March 1912): 86-99, see p. 98, Hales Bar Dam, Tennessee River, TVA, 1910-1913, collection 1051, Archives Center.

<sup>72</sup> William P. Creager, "Developing Electric Power Under 250-Head in Tennessee," *Engineering Record* 69, no. 16 (April 18, 1914): 454-456.

<sup>73</sup> Aaron D. Purcell, "Struggle Within, Struggle Without: The TEPCO Case and the Tennessee Valley Authority, 1936-1939," *Tennessee Valley Historical Quarterly* 61, 3 (Fall 2002): 197.

<sup>74</sup> "Hydro-Electric Developments 'Unparalleled in the World,'" *Manufacturers Record* 65, no. 21 (May 28, 1914): 41-42; "Hydro-Electric Power Development of the Southern Appalachian Region," *Blue Book of Southern Progress, 1924 Edition* (Baltimore, Md.: Manufacturers Record, 1924).

southeastern Tennessee – the Cheoah, the Tuckaseegee, and the Nantahala Rivers. While attempting to acquire rights to the sixty-five mile Little Tennessee, the company also acquired rights along the Little Tennessee’s tributaries where the company built the Cheoah dam between 1916 and 1919. ALCOA’s “ultimate plan,” according to J. A. Switzer, included multiple dams placed “one beyond the other” so that each dam would “back water nearly or quite up to the toe of the dam next above it [thus utilizing] practically all of the fall of the streams” to generate electricity. Additionally, the company’s projects would have the ability to “conserve the flood waters” in the spring for release during the dry summer and fall seasons.<sup>75</sup> On the eve of the Great Depression, ALCOA formed a subsidiary in July 1929 to purchase small hydroelectric dams in Andrews and Bryson City, North Carolina. But the Great Depression derailed ALCOA’s plans to fully develop the Little Tennessee and Hiwassee Rivers until the outbreak of World War II.<sup>76</sup> The Great Depression disrupted private water conservation and management projects throughout the South, but other companies continued to set examples throughout Rupert Vance’s “Piedmont Crescent of Industry” in the 1920s.

Before the federal government moved into river valleys to build multiple purpose dams, the Alabama Power Company tapped its own Coosa and Tallapoosa Rivers to serve the state’s agricultural, commercial, and industrial economies through water conservation, much like companies had in North Carolina, Tennessee, and other southern states. Between 1870 and 1890 numerous federal surveys of these two rivers proposed a series of dams and locks to facilitate navigation. When plans stalled for lack of federal funding, William Patrick Lay took it upon

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<sup>75</sup> J.A. Switzer, “Water-Power Development in the South, Part II,” *Cassier’s Magazine* 42, no. 1 (July 1912): 91-96.

<sup>76</sup> ALCOA operated at least two subsidiaries: Tallassee Power Company (Tapoco) and Nantahala Power & Light Company. See: Mountain Heritage Center, Western Carolina University, “NP&L Company Timeline,” <http://www.wcu.edu/mhc/exhibits/NPL/Index.htm> (accessed March 4, 2010); and J. S. Barrett, “History of Tapoco, North Carolina,” *Graham County Centennial*, (Robbinsville, N. C. : Graham County Centennial 1972, Inc., 1972), available online: <http://www.grahamcounty.net/GCHistory/06-tapoco/tapoco.htm> (accessed March 4, 2010).

himself to improve the Alabama River. Lay had already developed a single hydroelectric dam and reservoir project to generate electricity for the Coosa River city of Attalla, and he wanted to contribute more of the same to the rest of Alabama. According to Alabama river historian Harvey Jackson, Lay knew that the navigation-minded Army Corps did not think multiple dams, locks, and reservoirs on Alabama rivers would ever convey enough commerce to justify the projects' costs.<sup>77</sup> But Lay continued to envision a system of high dams and locks that would replace shoals and rapids with a series of navigable flat water reservoirs and hydroelectric facilities.

Lay encountered resistance while planning the Coosa River Lock 12 dam. According to Alabama Power Company historian Leah Rawls Atkinson, Congress stalled approval for the project due to lingering concern about the catastrophic Johnstown, Pa., dam collapse in 1889.<sup>78</sup> When the privately owned and maintained Pennsylvania resort dam failed, a torrent of water killed over 2,200 people. Media reports captivated the nation, turned the American Red Cross into a major disaster response institution under Clara Barton's leadership, and cast a looming shadow of doubt on dams of any height and construction. Johnstown, however, was not the only private dam to fail as a result of poor engineering or environmental conditions. Four private water and power company dam failures in Alabama, Georgia, and South Carolina sparked intense criticism within the engineering community. Two dams on Alabama's Tallapoosa River, one on the Chattahoochee in Columbus, Georgia, and one in South Carolina failed after a winter storm swept across the South in December 1901. The dams did not do as much damage as the

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<sup>77</sup> Jackson, *Rivers of History*, 175-176.

<sup>78</sup> Atkins, *Developed for the Service of Alabama*, 22-29. For the definitive Johnstown story, see: David G. McCullough, *The Johnstown Flood* (New York, N.Y.: Simon and Schuster, 1968).

Johnstown dam failure did, but these and other international dam disasters certainly caught the attention of the private utility and engineering communities.<sup>79</sup>

Undaunted by dam failures, Lay and other New South boosters believed that reliable tall-dam technology existed and could produce energy for new factories as well as provide navigational links between markets. Lay eventually received Congressional approval in 1907 to construct a privately financed hydroelectric dam on the Coosa River at Lock 12, but Lay had no investment capital. A few years later, Alabama lawyer Thomas Wesley Martin met James Mitchell, the Canadian-born engineer who had worked for transnational investors and companies in Brazil in the 1890s.<sup>80</sup> While Martin and Mitchell discussed the possibilities of developing Alabama rivers, their joint interests led them to Lay. With access to capital and managerial experience, Mitchell assumed leadership of a reorganized Alabama Power Company from Lay in 1911.<sup>81</sup> Together the three men – not unlike the genesis of the Duke Power Company in North Carolina – created a twenty-year plan to use Alabama rivers to generate hydro- and coal-fired electricity, facilitate navigation, lure industry, and stimulate agricultural development in Alabama. According to the company’s boosterish lore and self-promotion, “All this was based on confidence in the people of Alabama and the potentialities of its resources and faith in the beginning that capital could be obtained from English investors who never before had given a

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<sup>79</sup> B. H. Hardaway, “Failure of Dams near Anderson, S.C., and at Columbus, GA.,” *Engineering News* 47, no. 2 (January 9, 1902): 34; “Further Details of the Failure of the Portman Shoals Dams, Near Anderson, S. C.,” *Engineering News* 47, no. 3 (January 16, 1902): 48; B. H. Hardaway, “Remarks on the Recent Failures of Masonry Dams in the South,” *Engineering News* 47, no. 6 (February 6, 1902): 107-109. See also: Lars Jorgensen, “The Record of 100 Dam Failures, Part I,” *Journal of Electricity* 44, no. 6 (March 15, 1920): 274-276; and Lars Jorgensen, “The Record of 100 Dam Failures, Part II,” *Journal of Electricity* 44, no. 7 (April 1, 1920): 320-321, p. 320.

<sup>80</sup> Jackson, *Rivers of History*, 177.

<sup>81</sup> Alabama Power Company, *Alabama Power Company Golden Anniversary*, December 4, 1956, Pamphlet, p. 3.

thought to investing millions in one of the old cotton states of America.”<sup>82</sup> The Alabama Power Company moved quickly after securing access to foreign capital – following in the footsteps of other southern energy companies such as Duke Power – and completed three dams on the Coosa River and one on the Tallapoosa River between 1910 and 1929.<sup>83</sup>

Numerous smaller southern power companies also planned private water conservation and management projects in the Savannah River Valley, and also encountered the environmental consequences that came with creating new reservoirs. A consortium of investors from Georgia, South Carolina, Pennsylvania, and New York formed the Georgia-Carolina Power Company, and the South Carolina legislature granted the company a charter in 1908. The company spent nearly five years planning and obtaining Congressional and War Department approval for what would be the Savannah River valley’s first multiple purpose dam about nine miles upstream from Augusta. The Stevens Creek hydroelectric dam ultimately incorporated a navigation lock that one journalist called “one of the most gigantic development enterprises ever undertaken in this section of the South.”<sup>84</sup> The company – like nearly all southern utility companies – built a small laborers’ village to house over 400 men and their families. The company town provided sanitation and sewer service, a hospital, schools, a bakery, and an ice factory. And, not unlike other water conservation projects in the Jim Crow South, private water power companies did little to challenge segregation.<sup>85</sup> The Georgia-Carolina Power Company erected a

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<sup>82</sup> Alabama Power Company, *Alabama Power Company Golden Anniversary*, December 4, 1956, Pamphlet, p. 7; “Hydro-Electric Developments ‘Unparalleled in the World,’” *Manufacturers Record* 65, no. 21 (May 28, 1914): 41-42.

<sup>83</sup> Alabama Power Company, *Alabama Power Company Golden Anniversary*, December 4, 1956, Pamphlet, p. 15; Jackson, *Rivers of History*, 209-19.

<sup>84</sup> “The Giant of 40,000 Horsepower Will Be Looked Upon Monday By Minds That Conceived and Made It,” Augusta (Ga.) *Chronicle*, February 15, 1914, p. 4.

<sup>85</sup> Other private companies – including the Alabama Power Company and the Georgia Power Company – also established racially segregated work camps, see: H. M. Atkinson, “Georgia Railway and Power Co.: Power Development on Tallulah and Chattooga Rivers,” *Manufacturers Record* (November 2, 1922), see caption for “Sheppard’s Camp, for white laborers”; and Harvey H. Jackson, III, *Putting “Loafing Streams” To Work: The*

geographically separated “negro camp...about a quarter of a mile from the white camp.” But once the dam was done and black and white laborers moved on, one company engineer thought the company village would “be an ideal spot for a summer resort,” and maybe even a health resort. The “mammoth pond” would perfectly suit “boating, and other purposes” like fishing.<sup>86</sup> Most power companies – including Alabama Power and Duke Power – maintained resort-like properties on company reservoirs for staff retreats and leisurely enjoyment.<sup>87</sup>

### **Public Health and Private Reservoirs**

No health resorts emerged on the reservoirs in the early twentieth century, and instead, the reservoirs became flash points for adjacent communities affected by mosquito breeding and malarial outbreaks. A central Georgia project offers a concrete and early example. For four years beginning in 1907, the Central Georgia Power Company acquired land for a dam and reservoir at Lloyds Shoals on the Ocmulgee River about seven miles east of Jackson, Georgia, and about forty miles southeast of Atlanta.<sup>88</sup> The company – one of many private utilities eventually absorbed by Georgia Power in the 1920s – amassed over 7,000 acres in three counties (Newton, Jasper, and Butts), in part because the state granted the company the legal power to condemn land in order to complete the project. Construction on the Lloyd Shoals dam and reservoir clearing operations began in 1908, and as the new Jackson Lake reservoir filled in 1911, new environment conditions spurred health and legal problems because the company did

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*Building of Lay, Mitchell, Martin and Jordan Dams, 1910-1929* (Tuscaloosa: University of Alabama Press, 1997), 25-28, 80. The Rabun County Historical Society (Clayton, Ga.) has numerous Georgia Power Company images including at least a half-dozen of the African American labor camp at the Terrora project. The African American shacks have windows cut into wood plank-walls but no glass as seen in the white workers' shacks. One photo shows a sign reading: “No Whites Allowed in the Negro Camp.”

<sup>86</sup> “Great Hydro-Electric Power Development at Stevens Creek Attracting Attention of Many,” *Augusta (Ga.) Chronicle*, November 17, 1912, p. 8.

<sup>87</sup> Durden, *Electrifying the Piedmont Carolinas*, 19; Jackson, *Putting “Loafing Streams” To Work*, 113, 180-181.

<sup>88</sup> “Lloyds Shoals and the Ocmulgee Dam,” in Lois McMichael, *History of Butts County, Georgia, 1825-1976* (Atlanta, Ga.: Cherokee Publishing Company, 1978), 55-57; “Jackson Lake and Lloyd Shoals,” *History of Jasper County* (Monticello, Ga.: Jasper County Historical Foundation, Inc., 1984), 42.

not properly clear their reservoir site. Workers cut trees, trimmed vegetation, and left piles behind with abandoned structures on the reservoir bottoms, and they did not clear the shoreline adequately. Then the reservoir filled and lifted decaying matter to the surface, or pushed the debris to the heavily vegetated shoreline. These conditions – still water and debris around the rim of the full reservoir presented mosquito larvae with a prime breeding habitat, ample food, and cover from predatory minnows. And, as historian Margaret Humphreys has explained, if even one human infected with malaria living near the reservoir carried the disease, the conditions were ripe for a malaria epidemic. All of these conditions aligned, and Jackson Lake indeed became an early site of “hydroelectric malaria.”<sup>89</sup>

The reservoir and human conditions made a malarial epidemic possible, but the residents did not understand the mechanics. According to the *Covington News*, “Reports come from the lower section of the County that the odor from decaying vegetation [was] very bad and that that [was] the primary cause of the epidemic of malarial fever in” the vicinity of Jackson Lake and Lloyd Shoals. Another column in the newspaper explained how “the Power people [had] told many stories about how the reservoir would be cleaned, and everything would be delightful and healthy as creation had made it before the dam was built.” But to the contrary, when the reservoir filled, the “water’s surface was a mass of floating timber.” According to one community historian, the *Covington News* reported on malaria-related deaths in the community and on how those conditions forced many families to move from the reservoir area to higher ground near Stewart, Ga. By the end of the month, the local paper reported that a Newton County Grand Jury had indicted the Georgia Power Company for failing to adequately clear the reservoir. Residents and the grand jury blamed the decomposing organic material, vapors, and

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<sup>89</sup> Margaret Humphreys, *Malaria: Poverty, Race, and Public Health in the United States*. (Baltimore, Md.: Johns Hopkins University Press, 2001), “Hydroelectric Malaria,” p. 87-93.

stagnant water as the cause of the malarial outbreak. Despite the indictment at the county level and an additional nuisance lawsuit, the Central Georgia Power Company did not face sanctions, appear before a higher court, or drain the reservoir. While the Central Georgia Power Company escaped judicially mandated damages to reservoir area residents, the company did eventually implement mosquito control methods. In 1915 families began moving back to the Jackson Lake area after the power company applied oil to the surface of the lake to control mosquito reproduction and introduced *Gambusia* minnows to feed on mosquito larvae.<sup>90</sup> The Georgia energy company was not the only company to face public health challenges or malarial conditions.

A strikingly similar mosquito and malarial situation developed in Alabama, but in this instance, malarial outbreaks between 1913 and 1915 landed the Alabama Power Company in a jury trial. And the Alabama Power Company case and resolution influenced how all energy companies managed reservoir clearing and operations in the future.<sup>91</sup> After Alabama Power workers cleared timber for the Lock 12 reservoir and engineers began filling it with water, reservoir residents claimed that rising Coosa River water and decaying organic matter produced “vaporous emanation, illness, and malaria in families who lived near the lake,” according to company historian Leah Atkinson. Alabama Power Company executives consulted with a University of Alabama engineer, representatives from the Central Georgia Power Company who managed Jackson Lake, and Alabama public health officials to determine how much of the reservoir needed to be fully cleared and about mosquito life-cycles. After conducting their own surveys, the company employed an Alabama native and well known public health expert to investigate the situation. Dr. William Crawford Gorgas, who served as the chief sanitary officer

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<sup>90</sup> Newspaper reports cited from and quoted in, Homer F. Sharp, Jr., “Jackson Lake,” in *History of Newton County Georgia* (Newton County Historical Society, 1988), 74-96.

<sup>91</sup> Humphreys, *Malaria*, 89.

for the Panama Canal project and as the nation's Surgeon General, toured the Alabama reservoir area for three days before concluding that local conditions around homes caused highly localized mosquito and malarial outbreaks. Mosquitoes did not travel far from their breeding grounds, he explained to the court in 1914 as an expert witness, and the reservoir was too far away from those who raised law suits. Gorgas found water in ditches, farm ponds, equipment, and trash on the claimants' properties, and declared that the malarial problem was not the Alabama Power Company's responsibility. Based on his testimony and professional heft, the court decided in the company's favor and dismissed the remainder of the cases.<sup>92</sup> The mosquito problems however, did not go away, and many southerners continued to interpret mosquitoes, malaria, and artificial reservoirs as dangerous new environmental conditions. While water and power companies might have dodged responsibility in court, the companies proceeded to work closely with United States Public Health Service staff to develop and deploy new technological tools and health care services to reduce mosquito breeding conditions in private reservoirs and protect human health. Like the Central Georgia Power Company, Alabama Power also used oil and minnows to control mosquito breeding in the company's own artificial reservoirs, and eventually learned how to manipulate reservoir water levels to kill larvae.<sup>93</sup>

The health and environmental conditions that new artificial reservoirs created did not stymie or constrain new construction or bold engineering projects in the Savannah River valley. When the Georgia-Carolina Power Company's \$2.5 million Stevens Creek project began operations in 1914, the dam stretched over 2,000 feet across the river to create a 4,000 acre

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<sup>92</sup> Jackson, *Putting "Loafing Streams" To Work*, chap. 2, "Almost Done in by a Mosquito"; Atkins, "Developed for the Service of Alabama," 48-52.

<sup>93</sup> Jackson, *Putting "Loafing Streams" To Work*, 186-187; Atkins, "Developed for the Service of Alabama," 307; Humphreys, *Malaria*, 88-9.

artificial lake behind the twenty-seven foot tall dam.<sup>94</sup> Stevens Creek stood as the fourth major dam – after, Gregg Shoals, Rocky River, and Portman Shoals – built in the Savannah River watershed in seventeen years. Each of these individual projects, plus the nineteenth century Augusta Canal diversion dam, continued to serve small markets, cities and towns in the Savannah River watershed or within twenty-five miles. But a new set of projects from one company would soon export massive amounts of electricity outside of the watershed to even greater and more distant urban markets.

### **Georgia Water and Power**

One last example illustrates the scale and scope of corporate power and environmental manipulation in the American South before the genesis of the Tennessee Valley Authority. The Georgia Power Company's water conservation and management projects transformed the Tallulah and Tugaloo Rivers into a series of six artificial lakes and dams.<sup>95</sup> The Georgia Power Company captured the Savannah River's headwaters' energy behind dams to generate electricity before transmitting that new energy far away. During the Tallulah-Tugaloo project's formation stage in the early 1900s, one journalist explained the benefits of water conservation and hydroelectric power: "It has been predicted that within the next decade Atlanta, Ga., will be a smokeless city" because of the "abundant water power available within a radius of 100 miles" and the ability "to hold back" the region's water resources.<sup>96</sup> Another noted that the company planned a "vast network of interconnected hydroelectric power systems...along lines similar to

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<sup>94</sup> "Great Hydro-Electric Power Development at Stevens Creek Attracting Attention of Many," *Augusta (Ga.) Chronicle*, November 17, 1912, p. 8; George G. Shedd, "Two Recent Southern Hydro-Electric Developments," *Power* 39, no. 3 (January 20, 1914): 83-86; "Georgia-Carolina Power Company; Its Birth and Development," *Augusta (Ga.) Chronicle*, February 15, 1914, p. 4; South Carolina Electric & Gas, *Stevens Creek Hydroelectric Project: Significant Historic and Archeological Resources* ([n.p.]: [n.d.] possibly 1999), available online, <http://www.sceg.com/NR/rdonlyres/25DD5351-2826-478B-9691-BE26A3F1CEB3/0/StevensCreekReport.pdf> (accessed March 4, 2010).

<sup>95</sup> Wright, *History of the Georgia Power Company*.

<sup>96</sup> Warren O. Rogers, "Tallulah Falls Hydro-Electric Development," *Power* 39, no. 4 (January 27, 1914): 114-119, see p. 114.

those of the” Duke Power Company.<sup>97</sup> Georgia Power’s ventures on rivers throughout the state were not unlike other companies’ projects in Alabama and throughout the Carolinas: Georgia Power’s projects required external capital, transnational engineering expertise, and legal defense when they encountered resistance.

Putting the Georgia Power Company’s vast hydraulic system into place fell on the shoulders of New York engineer Charles O. Lenz and Georgia Power engineer Charles G. Asdit. The two men designed the company’s first Tallulah River unit at Tallulah Falls where they incorporated many existing engineering designs in addition to new features when construction began in 1910. Big dams that diverted water into long pipelines and powerhouses were not new – many California companies stored and delivered water in a similar way.<sup>98</sup> But the scale of Georgia Power’s project was unique for the southeast. Water held behind the 100-foot tall diversion dam and in the artificial Tallulah Falls Lake flowed into a massive 6,600-foot long tunnel (about ten feet in circumference) before it was diverted into one of six 1,200-foot long pipes (penstocks five feet in diameter) for delivery to the powerhouse’s six turbines to generate electricity. This system garnered national attention because the project derived energy from water falling over 600 feet in elevation, at the time “the highest head...east of the Rocky Mountains,” according to company literature.<sup>99</sup> A second component of the Tallulah River unit was the Mathis Dam. With water conservation and storage on their minds, the engineers designed Mathis and the artificial Lake Rabun, located about seven miles upstream from the Tallulah Falls diversion dam and at the extreme upstream edge of the Tallulah Falls Lake,

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<sup>97</sup> Eric A. Lof, “The Hydro-electric Development of the Georgia Railway and Power Company at Tallulah Falls, Georgia, Part I,” *General Electric Review* 17, no. 6 (June 1914): 608-621, see p. 608.

<sup>98</sup> John Birkinbine, “Hydroelectric Development on the Tallulah River, Georgia,” a paper delivered to the Engineer’s Club of Philadelphia (1914), p. 27-28, Box 79, Access 76E342, Folder: Power Dam at Gregg Shoals, Box 79, Accession 76E342, Records of the Corps of Engineers, Record Group 77, National Archives Southeast Region, Morrow, Ga.; Williams, *Energy and the Making of Modern California*, see chap. 9.

<sup>99</sup> Georgia Railway and Power Co., *Water Power Developments in North Georgia* ([n.p.], 1924).

primarily “for the purpose of impounding sufficient water to carry the Tallulah Falls station through the dry months of the year, usually September, October, and a part of November.”<sup>100</sup>

After completing the Tallulah Falls and Mathis dams and powerhouse in 1915, the Georgia Power Company continued to build four more dams and artificial lakes along the Tallulah and Tugaloo Rivers upstream and downstream of the Tallulah project in the upper-Savannah River’s tributaries. When the company completed the final dam and reservoir project in 1927, Georgia Power’s Tallulah-Tugaloo system utilized “the most completely developed continuous stretch of river in the United States,” according to company historian Wade Wright.<sup>101</sup> The company’s artificial reservoirs conserved nearly eight billion cubic feet of southern Appalachian surface water to produce electricity on demand, as one company executive claimed, for “many thousands” of industrial employees and for over sixty-five Georgia municipalities.<sup>102</sup> More than 800 miles of transmission lines strung throughout Georgia connected the Tallulah-Tugaloo hydraulic machine’s falling water to these consumers. To see a map of this hydraulic system, or to see it from the air, was to peer into the future into another southern river valley just a few miles away on the other side of the Eastern Continental Divide. Georgia Power – like other private utility companies across the South – developed multiple dam projects that looked like a proto-type for what would later symbolize one of the New Deal’s regional planning legacies: the Tennessee Valley Authority (1933).

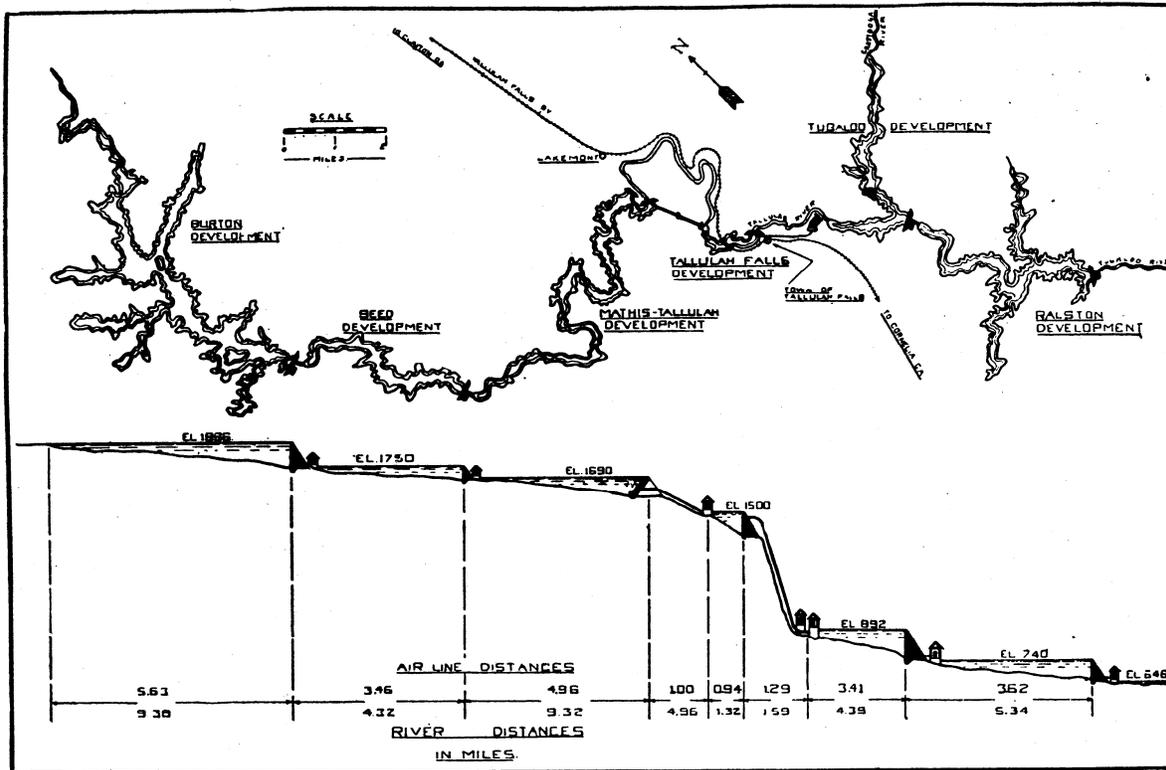
Preston S. Arkwright recognized the power that he wielded as a broker of water and energy. In his estimation, the Tallulah-Tugaloo hydraulic system’s integrated benefits directly

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<sup>100</sup> Charles G. Asdit and W. P. Hammon, “Construction Elements of the Tallulah Falls Development,” paper presented before the 313th Meeting of the American Institute of Electrical Engineers (October 11, 1915), published in *American Institute of Electrical Engineers Proceedings* 34 (July-December, 1915): 2497-2546, see p. 2591.

<sup>101</sup> Wright, *History of the Georgia Power Company*, 183.

<sup>102</sup> H. M. Atkinson, “Georgia Railway and Power Co.: Power Development on Tallulah and Chattooga Rivers,” *Manufacturers Record* (November 2, 1922): [n.p.].



MAP AND PROFILE OF TALLULAH AND TUGALOO RIVERS, SHOWING PLAN OF DEVELOPMENT BY THE GEORGIA RAILWAY & POWER COMPANY. THE TOTAL HEAD OF THE SIX DEVELOPMENTS (ONLY THREE OF WHICH ARE NOW COMPLETED) IS 1220 FEET. STORAGE CAPACITY 8,687,000,000 CUBIC FEET, GENERATING CAPACITY 234,000 CONTINUOUS HORSE POWER.

Figure 2.1: Tallulah and Tugaloo Project (1921). Hall and Hall, *Third Report on the Water-Powers of Georgia* (Atlanta: Byrd Printing Company, 1921).

benefited Georgia’s citizens and the region’s textile employers. The Georgia Power president explicitly linked consumers to the northeast Georgia project’s water supply and electrical production. Arkwright – born in Savannah, Georgia, and reportedly a distant relative of Richard Arkwright who invented a water powered spinning frame in late eighteenth century England – declared that “electricity puts at the finger tips the force of the mountain torrents and the energy stored” for centuries.<sup>103</sup> This energy, he continued, was “a silent and unobtrusive servant in the home – always ready, without rest, vacation, sick leave or sleep; eager for its task, tireless, day and night.” Arkwright believed the water and electricity could “banish drudgery and bring

<sup>103</sup> “P. S. Arkwright, 75, Head of Utility,” *New York Times*, December 3, 1946, p. 31.

convenience and comfort and ease and cheer and joy to human beings.” As an instrument for consumers, hydroelectric energy was like having servants “on tiptoe” behind a wall waiting to spring “forth at your summons, waiting to do your bidding.”<sup>104</sup> Hydroelectricity, in Arkwright’s 1924 thinking, might create a labor system free of racial and class conflict. After the brutal 1906 Atlanta race riot left dozens of African Americans dead, and after post-World War I textile mill production and wages cuts led white mill workers to strike between 1919 and 1920 throughout the South, Arkwright was not the only person to pin the future on white coal. As Jacquelyn D. Hall and others historians have observed, companies mothballed New England’s cotton mills and “the Piedmont’s share of the total number of textile workers rose from 46 to 68 percent” in the decade before 1933.<sup>105</sup> The New South’s energy supply was clean and white, was more easily manipulated than human labor, and was a major factor in this re-centering of the American textile industry on the Great Depression’s eve. But even Arkwright’s assumption – and of his contemporaries in the energy, agricultural, and industrial sectors – that water resources could benefit his company’s customers and help solve the South’s race and labor problems would be tested. Future textile worker strikes in Elizabethton, Gastonia, and Marion in 1929 proved that white coal was no panacea for an industry that continued to squeeze energy out of people. In the near future, the company’s other customers also learned how a dependence on the Tallulah-Tugaloo system could be dangerous. But where Arkwright saw utility – or labor free of racial or class conflict – in water conservation at Tallulah Falls, others saw beauty. After all, the company’s six dams rendered two meandering Blue Ridge mountain rivers into near-motionless pools and dried up the popular tourist destination of Tallulah Falls.

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<sup>104</sup> Preston S. Arkwright, Sr., “Some of the Marvels of Electricity,” *Manufacturers Record* (December 25, 1924): 77.

<sup>105</sup> Jacquelyn Dowd Hall, James Leloudis, Robert Korstad, Mary Murphy, Lu Ann Jones, and Christopher B. Daly, *Like A Family: The Making of a Southern Cotton Mill World* (Chapel Hill: University of Chapel Hill Press, 1987), 197.

When the Georgia Power Company announced their plans for Tallulah Falls, not all New South citizens supported a development to harness “the falls to turn Atlanta’s wheels.” Tallulah Falls had been a tourist destination since the antebellum era and remained so after the Civil War. The high falls and deep gorge were unique for those traveling from South Carolina or Georgia. The gorge was up to 1,000 feet deep, had sheer rock walls and the waterfalls roared to a deafening pitch. Tallulah Falls certainly jolted any unsuspecting individual emerging from the Coastal Plain’s and Piedmont’s “lazy rivers,” cotton fields, rolling hills, pastures, and forests. Tallulah Falls was not a massive drop like Niagara, but was a series of falls that descended 350 feet in one mile. By 1880, developers evaluated Tallulah Falls as a potential source of waterpower for local industry, and the conflict over the falls’ beauty and utility emerged after California’s famous Hetch Hetchy valley clash between scenic preservationist John Muir and wise use conservationist Gifford Pinchot. In northeast Georgia, scenic enthusiasts and industrial promoters locked horns in a region where New South industrialists – loggers, miners, and industrial captains – promoted industry and natural resource extraction over natural resource enjoyment. The falls’ dual identity – as scenic beauty and as industrial utility – also divided Georgia residents who supported a seasonal tourist industry and those who envisioned employment possibilities connected to dam construction, power generation, and new local industries.<sup>106</sup>

Georgia Power’s executives and New South industrialists drew on wise use conservationists’ language to defend the company’s Tallulah and Tugalo River projects. Harlee Branch, when reflecting on the Tallulah Falls controversy, declared that the project moved

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<sup>106</sup> “Tallulah the Terrible,” *Madisonian* (Madison, Ga.), July 12, 1912, p. 4, originally quoted in Andrew Beecher McCallister, “A Source of Pleasure, Profit, and Pride: Tourism, Industrialization, and Conservation at Tallulah Falls, Georgia, 1820-1915” (M.A. thesis, University of Georgia, 2002), 14-15, 48. McCallister’s thesis is the only comprehensive treatment of the Tallulah Falls controversy.

forward in a period of “optimism” when engineers wanted to better use Georgia’s water, “then plunging uselessly to the sea.” The Tallulah River – properly conserved – better served all citizens since the water “could be yoked and made to serve” Georgia’s citizens.<sup>107</sup> Georgia Power Company Chairman Henry Morrell Atkinson argued in 1925 that the tourist industry, while important to the Tallulah Falls area, was inefficient because “more than 99 percent of the population of the State received no benefit whatsoever from the water which since the beginning of time had flowed down the river over the falls to the sea.” After the company’s lakes began filling, Atkinson explained how new residents and their new lake front homes would significantly increase local property tax collections and provide markets for local truck farmers. For Atkinson, the new artificial lakes enhanced the region’s tourist industry and local economy.<sup>108</sup> While talking about local benefits, company employees generally looked to the future rather than discuss the scenic value of the falls or the loss of the Burton, Ga. As the upper Tallulah River stopped at Burton Dam (completed in 1919) and slowly formed Lake Burton in 1920, the rising waters buried a post-office, a school-house-church, two general stores, and sixty-five homes, plus the project necessitated the relocation of two cemeteries. The company acquired sixty-three land parcels from fifty-four sellers, and all were apparently willing sellers who were offered “liberal” prices for their property. J. E. Harvey, the Georgia Power Company’s land agent, purchased the properties directly before bundling the properties together and re-selling them to Georgia Power.<sup>109</sup> Finally, one dam defender and creative

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<sup>107</sup> Harllee Branch, Jr., *Georgia and the Georgia Power Company: A Century of Free Enterprise!* (New York, N.Y.: The Newcomen Society in North America, 1957), 17.

<sup>108</sup> Henry Morrell Atkinson, Chairman of the Board, Georgia Railway and Power Co., “The Relation of Electric Power to Farm Progress: Georgia’s Need - More Industries and Less Politics,” an address before the Eighteenth Annual Farmers’ Week Conference, Athens, Georgia, January 28, 1925, pp. 14-16.

<sup>109</sup> I reconstructed Burton, Georgia’s history from many sources, including the following: Wright, *History of the Georgia Power Company*, 179-180; Chasity Grant, Lori Lee and Ashley Lesley, “Burton: The Town and Its People,” *Foxfire* 25, nos. 3 & 4 (Fall-Winter 1991): 181-193; and Andrew Jackson Ritchie, ed., *Sketches of Rabun County History, 1819-1948* (Chelsea, Michigan: Rabun County, Georgia Historical Society, 1995), 341-345. See

conservationist-booster claimed, “The burning of coal is wasteful,” and harnessing rivers was better since “the electric companies are helping to conserve the earth’s coal.”<sup>110</sup> The Georgia Power Company’s executives and the Tallulah Falls dam proponents clearly understood the conservationist rhetoric, and private companies like the Georgia Power Company shaped southern conservation to promote company financial success, industrial modernization, and electrical consumption in urban markets. According to the company, what was good for Georgia Power was apparently good for Georgians.

The utility boosters did not easily persuade everybody. The Tallulah Falls Conservation Association (TFCA) formed after a northeast Georgia representative failed to persuade the state legislature to acquire property to protect the falls in 1905. But in 1915, new blood faced a more complicated task since the Georgia Power Company dam construction process was well advanced and near completion. Helen Dortch Longstreet, widow of the famous Confederate general, led an organization whose membership lived throughout Georgia and not in the immediate area around Tallulah Falls. Most of Tallulah’s residents were farm families working small worn out farms, or who worked seasonally to cater to tourists in area hotels. Longstreet’s protest to save the beautiful falls from the “soulless waterpower trust” and “the mighty corporation,” originated in the voices of outsiders like herself who were intent on preserving the magnificent Tallulah Falls’ scenic beauty. To save the falls and gorge, Longstreet took two paths. First, she honored the falls as a distinctive southern environment representative of a lost old South. Second, Longstreet based TFCA’s protest campaign on the premise that Georgia Power’s land surveys were incorrect and derived from faulty county surveys dating to the 1820s.

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also the following items located at the Rabun County Historical Society, Clayton, Ga.: “Burton Property Owners Who Sold to Georgia Power, 1917-1918,” spreadsheet, [n.d.]; and Liz Ethridge, “Burton, A Forgotten Town?” Clayton (Ga.) *Tribune*, June 10, 1982, p. B-1.

<sup>110</sup> Louis E. Moore, *Electricity: Its Story Simply Told, A Study of its Development and Application to Present and Future Needs in Georgia* (Atlanta, Ga.: Utilities Information Committee of Georgia, 1924), 7.

After lobbying the state legislature, Longstreet succeeded in winning support for a legal suit against the company, but ultimately failed to save the falls. The suit worked its way to the Georgia Supreme Court on appeal and was eventually a lost case given the construction progress at the Tallulah Falls dam site.<sup>111</sup> By 1913, Longstreet's crusade to save beauty came to a conclusion, Tallulah Falls no longer existed in a free flowing state, and the Georgia Power utility company began operating the Tallulah Falls powerhouse.

The energy generated from the Georgia Power Company's Tallulah-Tugaloo hydraulic machine moved across rural northeast Georgia from the state's hinterland to the busy hive of Atlanta through a network of high-tension transmission lines. Transmission networks evolved over time as voltage requirements increased, and the high-voltage lines, like those connecting the Tallulah-Tugaloo generation stations with substations near Atlanta, consisted of copper wire strung between tall steel towers. After the electricity arrived at substations, the transformers reduced the voltage, and then fanned electricity out on lower-voltage lines strung between an orderly forest of poles. Linemen labored, without modern cranes, to place thirty-five foot long pine, cypress, juniper, or chestnut poles with fourteen inch-butts into holes at least five-and-a-half feet deep. The poles' cross arms were often yellow pine with porcelain insulators mounted on locust tree pins.<sup>112</sup> Like other regional hydro-projects that separated mills and cities from electrical generation sites, the Tallulah-Tugaloo project sent power to Atlanta in a process that collapsed space between the pools of capital necessary to produce energy and pools of capital in factories that consumed energy.

When Henry Grady's New South was hitched to white coal, falling water nearly one hundred miles away benefitted urban dwellers increasingly dependent upon electricity. For

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<sup>111</sup> Longstreet quoted in McCallister, "A Source of Pleasure, Profit, and Pride," pp. 62 and 67.

<sup>112</sup> "A Hydro-electric Power Development on the Catawba River, Near Rock Hill, SC," *Electrical World and Engineer* 44, no. 4 (July 23, 1904): 129-132.

instance, electric elevators served Atlanta's skyscrapers beginning in the late 1890s, and when elevators failed, Atlanta's busy bees did not let such inconveniences go unreported.<sup>113</sup> Atlanta's streetcar companies had already shifted from mule-drawn street cars to electric streetcars and trolleys after 1890, hastening the development of the Georgia Power Company.<sup>114</sup> The city also increasingly turned away from natural gas to electrical lighting like most major urban areas in the late nineteenth century. By the early 1900s, electrical generation and transmission made commercial and residential consumption possible for ice-making, electric sewing machines, bakeries, and printing offices.<sup>115</sup> These applications enabled southern entrepreneurs and boosters to enthusiastically partner electricity and industrialization with a new modern South in the pages of the *Manufacturers Record*, *Electrical World*, and *Engineer News Record*. Georgia Power's renewable energy and hydraulic electrical-generation system not only connected the state's hinterland resources with Atlanta, but also had greater consequences for a far larger constellation of New South hinterlands and hives.

### **New South Super Power and Drought**

The major southern energy companies – Alabama Power, Georgia Power, and Duke – began interconnecting their power grids in 1912 and they were fully connected by 1921. According to North Carolina hydraulic and conservation professional Thorndike Saville, the southern “Super Power” system was “a more complete integration of power-producing and transmission capacity” than any other system in the world before 1930.<sup>116</sup> Private industry slowly amassed Super Power over a decade and they championed the system. In 1924, the

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<sup>113</sup> J. A. Morris, “Scientific and Industrial,” Atlanta (Ga.) *Constitution*, April 26, 1896, p. 5; “Elevators in Skyscraper Stop for Thirty Minutes,” Atlanta (Ga.) *Constitution*, February 4, 1910, p. 6.

<sup>114</sup> “Thomson-Houston,” Atlanta (Ga.) *Journal Constitution*, February 10, 1889, p. 19.

<sup>115</sup> Kohn, *Water Powers of South Carolina*, 45, 53.

<sup>116</sup> “Hydro-Electric Developments ‘Unparalleled in the World,’” *Manufacturers Record* 65, no. 21 (May 28, 1914): 41-42, see p. 41; Thorndike Saville, “The Power Situation in the Southern Power Province,” *Annals of the American Academy of Political Science* 153, The Coming of Industry to the South edition (January 1931): 94-123, see p. 116.

Southeastern Power & Light holding company reorganized the Alabama Power Company and other utilities, including two predecessors to the Georgia Power Company. Then in 1929, the New York City based Commonwealth & Southern Company assumed a forty-percent ownership of the Southeastern Power & Light and all of its subsidiaries including Alabama Power and Georgia Power. The Duke Power Company also consolidated energy utilities in North Carolina and South Carolina, but was never financially connected with the larger regional or national holding companies. Super Power proponents, such as Alabama Power Company President Thomas Martin, defended this massive corporate and electrical infrastructure by equating Super Power with the railroad systems that moved people “across the continent without change of cars,” and he likened individual power companies to independent railroads that shared railroad tracks. Each private power company, Martin argued, was “independent, assumes a duty to its own customers, provides its own management, adopts and pursues its own policies, attends to its own financial affairs and is subject to the authority where it operates as to rates and service and security issues. The component companies merely draw from and contribute surplus energy to others which otherwise would go to waste and benefit no one.”<sup>117</sup> By 1924, the southeastern interconnected power grid relayed electrical power over 3,000 miles of high-voltage transmission lines, and served about 6,000,000 people in a 120,000 square-mile region.<sup>118</sup>

Critics condemned the early interconnections and the vast Super Power network. They shifted their criticism from railroads to electrical utilities since the new enemy was a natural monopoly like the old enemy. Industry proponents considered these utilities “natural monopolies” because competitors recognized there was no economic incentive to duplicate

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<sup>117</sup> Thomas W. Martin, “Hydroelectric Development in the South,” in *The South’s Development: Fifty Years of Southern Progress, A Glimpse of the Past, the Facts of the Present, A Forecast of the Future, Part II*, 86, no. 24 (Baltimore, Md.: Manufacturers Record, December 11, 1924), 242-262, see pp. 237 and 243.

<sup>118</sup> Joseph Hyde Pratt, “The Southeastern Power System and Its Tremendous Industrial Value to the States It Serves,” *Manufacturers Record* 76, no. 4 (July 24, 1924): 83-84.

service and capital intensive infrastructure in the same market territories. A congressionally-approved 1916 study by the Department of Agriculture confirmed many critics' early claims. Based on a comprehensive study of the nation's public and private electrical generation installations and ownership patterns, the report concluded: "There are several lines of evidence which show a continuously increasing tendency toward concentration in the control of the development, distribution, and sale of electric power. Each year shows a greater percentage of electric power being produced by" privately owned entities. The report illustrated that some companies like Duke Power, controlled distinct regions, while others like Boston-based Stone & Webster, "spread their operations widely...controlling smaller groups of operating companies in many distinct territories," as the company did throughout Georgia and other states. "Sometimes the character of the control is definite and distinct through actual ownership of properties or majority holdings of the stock of operating companies; sometimes it is indistinct and indefinite through representation on boards of directors."<sup>119</sup> The individual energy companies may have operated independently, as Thomas Martin of Alabama Power claimed, but their interconnected grids looked a lot like the railroad or Standard Oil octopi that were the targets of Progressive era reformers. In 1913, the *Southern Farming* periodical superimposed a "Water Power Trust" octopus over a map of the United States, and offered a rallying cry: "Do not let the New Octopus Monopolize the inexhaustible supply of white coal in our Southern States."<sup>120</sup> According

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<sup>119</sup> U. S. Senate and U. S. Department of Agriculture, *Electric Power Development in the United States. Letter from the Secretary of Agriculture Transmitting a Report, in Response to a Senate Resolution of February 13, 1915, as to the Ownership and Control of the Water-Power Sites in the United States,* Part I (of III) (Washington, D.C.: Government Printing Office, 1916), 53. See also: Stone & Webster, Incorporated, *Electric Lighting, Gas, Water Power, Ice, and Transportation Properties* (Boston, Mass.: Stone & Webster Building, 1926), Trade Catalog Collection, National Museum of American History, Smithsonian Institution, Washington, D.C.

<sup>120</sup> Image from *Southern Farming* (January 4, 1913) found in Atkins, *Developed for the Service of Alabama*, 54.

historian Jay Brigham, “by the 1920s, the electrical power industry had replaced” late nineteenth century “railroads as the primary target of reformers.”<sup>121</sup>

In turn, the Progressive reformers offered an alternative to Super Power, most visibly expressed by Pennsylvania Governor Gifford Pinchot and Morris L. Cooke as “Giant Power.” Giant Power emerged in 1924 as a public power program that would theoretically check monopolistic utilities, electrify rural areas, and use energy resources more efficiently. The program envisioned publicly owned coal-fired power plants in coal mining areas and high tension transmission lines that would link the mouth-of-mine coal plants with rural and urban customers. But Giant Power eventually went down in flames, derided as a fantasy, as communistic, and as purportedly ignoring the fact that electrical networks moved into markets more than utilities created them.<sup>122</sup> The Super Power boosters neglected to consider a legacy where James B. Duke and private companies actually created electrical markets and consumers. While Giant Power never materialized as originally conceived, it did influence the New Deal’s Rural Electrical Administration (REA) and TVA. Until that time, and in the American South, Super Power was indeed a powerful regional tool for large utility companies as time and environmental circumstances soon demonstrated.

Water conserved and run through turbines in one state’s watershed produced energy that could be transferred over high-tension power lines across another state to facilitate energy delivery to yet a third state hundreds of miles away. In fact, the Alabama and Georgia utilities exported a high percentage of excess power to the Carolinas where textile mill growth was greatest in the early twentieth century South, thanks in part to James B. Duke’s subsidies and

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<sup>121</sup> Jay L. Brigham, *Empowering the West: Electrical Politics Before FDR* (Lawrence: University Press of Kansas, 1998), 4.

<sup>122</sup> Jean Christie, *Morris Llewellyn Cooke: Progressive Engineer* (New York, N.Y.: Garland Publishing, Inc., 1983), 78-79; Sarah T. Phillips, *This Land, This Nation: Conservation, Rural America, and the New Deal* (New York, N.Y.: Cambridge University Press, 2007), 25.

incentives that convinced mill owners to locate in North Carolina or upgrade power systems. Because of this transmission and delivery system, Atlanta became “the chief city on this system and a center of utility activity” by 1928, according to hydropower booster L. W. W. Morrow.<sup>123</sup> According to a Georgia Power Company board member, the company occupied the central “hub” of this vast hydraulic system, and the company linked an elaborate hydraulic hinterland stretching across Mississippi, Alabama, Florida, South Carolina, North Carolina, and Tennessee.<sup>124</sup>

**The Southern Super-Power Zone and Proposed System of Development and Transmission.**

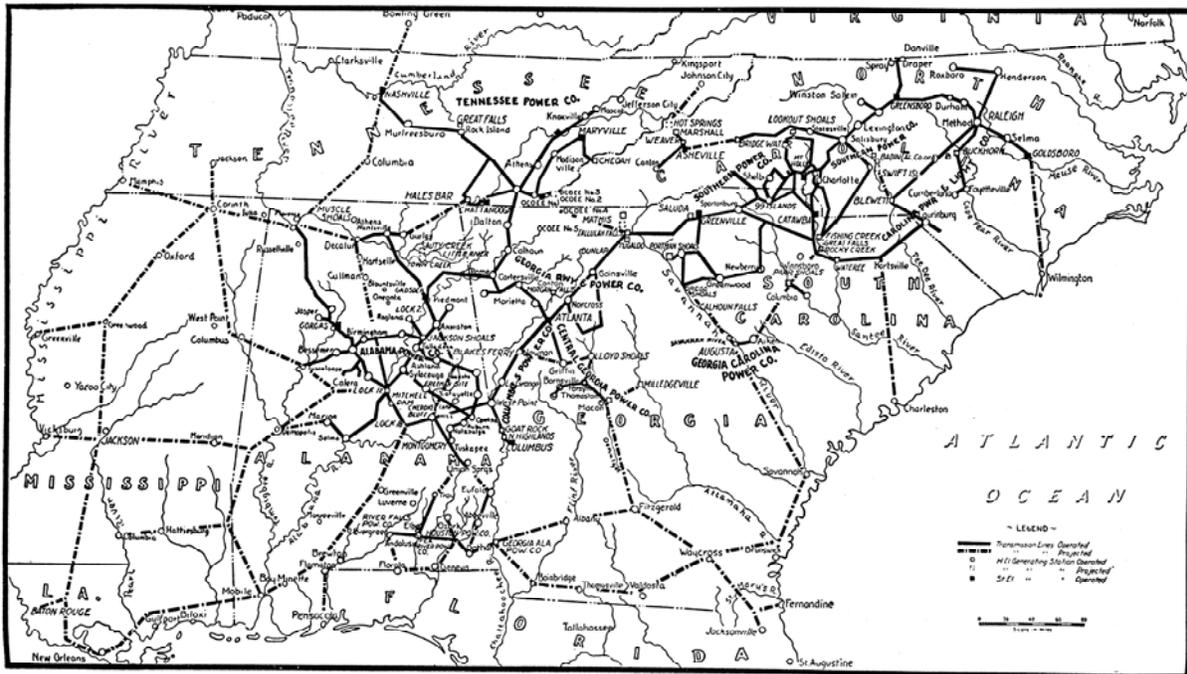


Figure 2.2: Transmission network (1924). Image from *Blue Book of Southern Progress*, 1924 Edition (Baltimore, Md.: Manufacturers Record, 1924). Courtesy of Conway Data, Inc.

<sup>123</sup> L. W. W. Morrow, “The Interconnected South,” *Electrical World* 91, no. 21 (May 26, 1928): 1077-1082, see 1081.

<sup>124</sup> The interconnected companies included: Southeastern Power & Light Co. (Alabama Power, Georgia Power, and Mississippi Power Cos.), the Carolina Power & Light Co., the Duke Power Co., the Florida Power & Light Co., the Tennessee Electric Power Co., the Appalachian Power Co., and the Virginia Public Service Co, see: Morrow, “The Interconnected South,” 1079.

The southern power grid, however, did more than connect multiple states and a half-dozen different energy companies capable of producing over one million horsepower. First, the grid supported a regional power structure that was more influential than individual states, politicians, planters, and industrialists, and facilitated concentration of capital and labor in specific places. The individual energy companies did not rule an empire, but they provided a service and a product that became indispensable and anonymous in business dealings and leisurely enjoyment. In the process, corporate power and technology wove energy production and water supply into an invisible relationship from which consumers were detached. From this point forward, consumers increasingly lost sight of the energy-water nexus, or the direct relationship between energy and water. Second, the southern power grid functioned as a tool for these energy companies to coordinate rainfall in “separate and distinct water sheds.”<sup>125</sup> These interconnections provided more than a means to transport surplus electricity or as symbols of monopoly, as these interconnections also served as lifelines: the interconnected systems quickly justified themselves when region-specific droughts struck the South and significantly reduced hydroelectric generation between 1921 and 1925. Despite claims from company officials in 1920 that dams such as those in the Tallulah-Tugaloog project could conserve water supply through “the severest drought,” the 1920s circumstances proved otherwise.<sup>126</sup>

The late summer drought of 1925, according to the Atlanta (Ga.) *Constitution*, led to “one of the greatest power shortages in the history” of South.<sup>127</sup> Droughts had affected cities and towns like Atlanta and Augusta before. For example, the Savannah River’s water flow itself had

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<sup>125</sup> Harry M. Atkinson, “Georgia Railway and Power Co.: Power Development on Tallulah and Chattooga Rivers,” *Manufacturers Record* (November 2, 1922).

<sup>126</sup> For quote: “New Dam to Protect Industries Against Drought,” Atlanta (Ga.) *Constitution*, May 23, 1920, p. 17K. For sources pertaining to the droughts, see: Durden, *Electrifying the Piedmont Carolinas*, 23; and Thorndike Saville, “The Power Situation in North Carolina,” *Manufacturers Record* 86, no. 26 (December 25, 1924): 68-70, p. 70. On interconnection, see: Martin, “Hydro-Electric Development in the South,” 247-248.

<sup>127</sup> “Alabama Sending Power to Georgia Because of Drouht,” [sic] Atlanta (Ga.) *Constitution*, August 23, 1925, p. 9.

dropped precariously in 1918, and threatened “a general close down” of industrial and commercial operations in Augusta because the Stevens Creek hydroelectric dam and other small plants along the Augusta Canal could not generate enough energy to keep factories running.<sup>128</sup> These isolated cases threatened only individual urban areas, while the droughts of the 1920s presented an altogether different scenario and solution. “To the relief of Georgia industries,” the state’s power companies imported electricity generated in Tennessee and Alabama in August 1925.

At the time of the 1925 crisis, Georgia Power declared only a mere four weeks’ supply of water remained in the Tallulah-Tugaloo project’s “giant hydro-electric reservoirs” of northeast Georgia. While generating every kilowatt of energy they could from the company’s operable hydro facilities and auxiliary coal plants, Georgia Power imported “hundreds of tons of coal...to meet any emergency which might be caused” if operations exhausted the limited remaining supply of renewable energy. Georgia Power discussed the situation with executives from “textile mills, brick, marble, granite mining and other industries,” and the companies agreed to limit their energy use “as much as possible and to operate at nights” for the duration of the drought induced “crisis.”<sup>129</sup> Atlanta’s consumers agreed to follow restrictions in place between August 21 and September 7, and full street car service did not resume until October. Nineteenth century textile mills sitting on river banks and dependent on local river flows frequently ceased production when water levels exceeded or dropped below operable levels.<sup>130</sup> But the option of shutting down twentieth century operations or not providing expectant urban customers with reliable electrical or street car service was unacceptable. When Atlanta consumers faced crisis, the

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<sup>128</sup> “Mills Close Down Today Due to Low Water in the Canal,” *Augusta (Ga.) Chronicle*, September 19, 1918, p. 3.  
<sup>129</sup> “Alabama Sending Power to Georgia Because of Drouht,” [sic] *Atlanta (Ga.) Constitution*, August 23, 1925, p. 9.  
<sup>130</sup> Jacquelyn Dowd Hall, Robert Korstad, and James Leloudis, “Cotton Mill People: Work, Community, and Protest in the Textile South, 1880-1940,” *American Historical Review* 91, no. 2 (April 1986): 245-286, see p. 258; Hall, et. al., *Like A Family*, 47-48; Tullos, *Habits of Industry*, 16-17.

interconnected southern transmission network – with power leased to Alabama Power from the federally-owned steam plant in Sheffield, Alabama near Muscle Shoals – ultimately averted difficult choices, and kept production, manufacturing, and consumption schedules going in Georgia.<sup>131</sup> The droughts of the 1920s threatened New South water conservation plans, but the grid enabled electricity to move seamlessly from one state to another, often facilitating the transfer of electricity and power over hundreds of miles. This technological network linked wet hinterlands and coasts with drier neighbors, and thus allowed energy dependent consumers to continue living without thinking about the energy sources and infrastructure that sustained the New South. The Super Power grid integrated the region, but did not integrate the region into the nation as railroads did or as regionalists like Vance hoped. Additional technological interconnections would take place during the New Deal that tied the southern grid into other regional grids, and these new connections would also serve as future lifelines. During the 1925 drought, however, energy companies learned the hard way for the first time that southern rivers, not unlike mill workers, could, in fact, go on strike.

The droughts of the 1920s not only highlighted the utility of interconnected grids, but they also illustrated a water supply problem, a progressive conservation ethic, and a technological plateau. James B. Duke and other power company executives had championed “white coal” as a solution to southern economic development and energy independence, but after the 1925 drought Duke no longer accepted hydroelectric dams as the energy-generating standard.<sup>132</sup> Both Georgia Power’s and Duke Power’s hydroelectric expectations shifted radically in the following years, particularly as coal-fired steam technology became increasingly

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<sup>131</sup> Harry M. Atkinson, “Georgia Railway and Power Co.: Power Development on Tallulah and Chattooga Rivers,” *Manufacturers Record* (November 2, 1922); Joseph Hyde Pratt, “The Southeastern Power System and Its Tremendous Industrial Value to the States It Serves,” *Manufacturers Record* 76, no. 4 (July 24, 1924): 83-84; Saville, “The Power Situation in North Carolina,” 68-70.

<sup>132</sup> Durden, *Electrifying the Piedmont Carolinas*, 63-4.

efficient. Despite continued investment in hydroelectric dams and interconnected transmission grids, the 1925 southeastern drought led the companies on a technological path back to coal-fired steam generation plants. One North Carolina water-power promoter noted that any future hydro-developer in the state needed to consider three important elements – “storage, steam auxiliary and interconnection” – before investing in southern hydroelectric generation systems.<sup>133</sup> The shift away from renewable energy and back to ‘black coal’ as the primary energy source might look like an abrupt about-face, but when the companies transitioned back to coal, they never distanced themselves from southern rivers, existing artificial reservoirs, or water conservation. Energy production altered from a primary dependence upon water falling on a turbine to produce power, to burning coal and turning liquid water into pressurized steam in order to spin a turbine.<sup>134</sup> Throughout the remainder of the twentieth century, southern energy companies – specifically Duke Power – began building coal fired power plants on the shores of the same reservoirs built to conserve water for hydroelectric generation, or they built new reservoirs for new coal plants. After the 1925 drought, Georgia Power’s chief executive abandoned plans to build new hydroelectric white coal projects on North Georgia’s Chattooga and Coosawattee Rivers, and instead invested in black coal plants on the Chattahoochee River upstream of metro Atlanta and on the Ocmulgee River near Macon.<sup>135</sup>

Engineers who maintained this elaborate hydraulic system increasingly learned how to conserve and utilize water to maximize their company’s profits while also protecting an expensive infrastructure. After nearly thirty years of dam, artificial reservoir, and auxiliary steam plant management, Duke Power employees understood that “the principal problem is to

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<sup>133</sup> Saville, “The Power Situation in North Carolina,” 68-70.

<sup>134</sup> Durden, *Electrifying the Piedmont Carolinas*, 63-4.

<sup>135</sup> Wright, *History of Georgia Power*, 212. The company began operating Plant Atkinson upstream of Atlanta on Chattahoochee River in 1930, and in 1941 began operating Plant Arkwright near Macon on the Ocmulgee River. The company retired and began dismantling both plants in 2003.

operate” the combination of storage reservoirs and run-of-river hydroelectric plants “in connection with the steam plants so as to secure the maximum kilowatt-hour output from the available river flow.” The region’s climate and rivers’ behavior made it clear that not only was there great “variation in river flow from wet to dry season,” but there was “also a considerable variation from year to year,” making “it very difficult to map out” energy production schedules and “secure the maximum output from the hydro plants.” Playing the seasonal calendar, Duke employees typically filled artificial reservoirs during the wet season (January through May), kept them partially filled between May and September because summer or tropical storms could produce flooding during this time of year, and then drew the reservoirs down during the dry months between September and January.<sup>136</sup> On average, the lowest period of rainfall occurred in the late summer through fall, but “even this phase has no regularity,” engineers observed. Evidence illustrated that North Carolina’s early 1920s droughts were followed by “exceptionally heavy precipitation” and “one of the greatest floods” in the Catawba River’s recorded history in late 1920s.<sup>137</sup> The private power company executives and engineers learned how fickle southern rivers straight-jacketed with multiple dams had become by 1930. Private conservation and water managers in the American South had almost fully controlled the region’s rivers and thus the region’s white coal energy sources without major disruption. But the companies’ success also pointed to a new southern problem. The pre-TVA American South – a humid region assumed to have plenty of rain – had a “water problem” and required water resource management and engineering on a scale associated with water-poor regions of the arid American West.

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<sup>136</sup> C. B. Hawkins and W. W. Eberhardt, “Method of Handling Interconnected Operation,” *Electrical World* 92, no. 13 (October 13, 1928): 725-731.

<sup>137</sup> “Power Possibilities of Catawba River Highly Developed Through Stream Control,” *Engineering News-Record* 104, no. 25 (June 19, 1930): 1007-1012.

## Conclusion

The “hydro” systems corporations built from the Carolinas to Florida, and across Georgia to Mississippi changed the New South’s rivers and economy. The private energy systems also influenced the shape and character of the region’s more-well documented water management institution: the Tennessee Valley Authority. When the TVA emerged in 1933, Army Corps and other federal engineers could look across the American South at a vast privately organized, financed, and managed water conservation and electrical generation system that was over three decades old. Once the TVA and the Army Corps embarked on their own New Deal-style hydroelectric projects, they solicited advice from the academic experts, company executives, and professional engineers.<sup>138</sup> Rupert Vance was one of these advisors. On the eve of TVA’s creation, Vance continued to talk about water power possibilities for the region more than he acknowledged the range of consequences of depending upon a fickle renewable energy source. Vance had identified water as a primary energy source to fuel economic engines, but he was not ready to fully accept the prospect of water scarcity or the “Piedmont Crescent of Industry’s” technological shift in 1925. Three years after Vance published *Human Geography*, he collaborated in an unpublished Catawba River valley study for the TVA in 1935. He acknowledged that a “tremendous consumption of coal in 1927” reflected the Duke Power company’s response to “a drought which affected” rivers in North and South Carolina. In an appendix, titled “The Consumption of Coal in Relation to the Development of Hydroelectric Power in the Carolinas,” Vance expressed the belief that despite the dire drought conditions at

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<sup>138</sup> The TVA also acquired private electric companies and their management staff outright according to Lynn Nelson, “‘Harassed by the Floods and Storms of Nature’: Remembering Private Hydro-Power and Rural Communities in Tennessee,” paper read at the American Society for Environmental History Conference, Tallahassee, Florida, February 2009.

that time and the shift back to coal, “the Carolinas had to develop hydro power or nothing.”<sup>139</sup> Vance still believed in hydropower ten years after the region’s worst drought underscored the South’s water problem. While he advised the TVA – a regional planning exercise that revolved around large hydroelectric dams as primary energy generators – the private power companies turned to coal to generate the majority of their customers’ energy. TVA was so clearly influenced by a legacy of private “white coal” projects that TVA initially embarked on a program that was behind a technological curve from the beginning. Private energy companies never abandoned their old hydroelectric facilities or stopped building them, but renewable hydro sources increasingly functioned as “peak power” sources. Operators could bring hydro facilities online immediately during moments of high energy demand while coal plants burned at a steady clip to generate a “base load.” After World War II, TVA followed private companies’ technological lead again and began building coal plants to satisfy customer demand and keep up with the New South’s fast growing industrial, commercial, and residential demands.

Consumers express indifferent interest in where energy and water come from unless there is a problem. Early twentieth century white, pink, and blue collar workers enjoyed electric street cars, elevators in skyscrapers, the early vestiges of air conditioning, and electrified machinery.<sup>140</sup> In a region that boosters and consumers always assumed had more water than the arid American West, the New South’s environmental conditions – artificial reservoirs and drought – reached a point where diminished water supplies threatened the region’s daily industrial and commercial functions in urban settings. Urban drought years not unlike 1925 emerged frequently throughout

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<sup>139</sup> See unpublished typescript: Rupert Vance, “The Consumption of Coal in Relation to the Development of Hydroelectric Power in the Carolinas,” Appendix D, pp. 399, 408, in Harriet L. Herring, [J. Herman Johnson,] Rupert B. Vance, and T. J. Woofter, Jr., *A Survey of the Catawba Valley: A Study Made By The Institute For Research in Social Science For the Tennessee Valley Authority*, two volumes (Institute for Research in Social Justice at the University of North Carolina, Chapel Hill, 1935), Volume II, North Carolina Collection Manuscript Department, University of North Carolina, Chapel Hill.

<sup>140</sup> Raymond Arsenault, “The End of the Long Hot Summer: the Air Conditioner and Southern Culture,” *Journal of Southern History* (November 1984): 597-628.

the twentieth century, and continued to shape private and federal conservation and energy regimes in the American South well after 1945. Rivers and falling water were powerful instruments for New South developers and conservationists who used hydroelectricity to concentrate labor for the benefit of the textile and other industries. These utilitarian boosters and energy sector leaders consistently transformed tumbling water falls into waterwheels; rocky shoals where migratory fish used to spawn into turbines; and free flowing rivers into “slack-water,” artificial reservoirs.<sup>141</sup> The New South’s artificial waterscape conserved water to generate electrical power and created a new environment for southerners to utilize, enjoy, and forget. Private energy companies’ executives and engineers thought they had tamed southern rivers and solved regional water problems while marching across a new industrial landscape. Southern rivers, however, displayed a persistent capacity to function by their own rules, to trump the romantic beauty of waterfalls and the efficient utility of corporate turbines with an unwelcome reality of dry riverbeds or raging floods.

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<sup>141</sup> “Slackwater” quote, see: Thomas E. Murray, “The Improvement of the Tennessee River and Power Installation of the Chattanooga and Tennessee River Power Company at Hale’s Bar, Tenn.,” *Transactions of the American Society of Mechanical Engineers*, vol. 27 (May, 1906): 521-555.



ELECTRIC POWER LINES THROUGH AN ALABAMA COTTON FIELD WITH A COTTON MILL BACK OF THE CLUMP OF WOODS, THE INSERT AT THE LEFT SHOWING HOW POWER IS CARRIED UPHILL TO MILLS IN THE DISTANCE

Figure 2.3: Transmission lines, cotton pickers, and cotton mill (1928). Image from L. W. W. Morrow, "The Interconnected South," *Electrical World* 91, no. 21 (May 26, 1928): 1077-1082.

## CHAPTER 3

### STILL “FOR THE GREATEST GOOD:” NEGOTIATING POWER AND RISK IN THE SAVANNAH RIVER VALLEY, 1930-1944

*“Georgia is generally deficient in natural lakes and ponds.”<sup>1</sup>*

The Savannah River valley’s residents were accustomed to the river running high or dry during the twentieth century. Previous droughts had led Augusta’s factory managers to shut down for weeks and the 1908 flood alone had done enough damage to convince the city government to investigate, finance, and construct an eleven-mile levee to keep the Savannah River’s almost annual flood surges out of the city after 1912.<sup>2</sup> For those residents who had lived through and remembered those high or dry years, the prolonged, heavy, and cold September 1929 rains surely looked threatening to the communities of Augusta, Georgia, and Hamburg, South Carolina.<sup>3</sup>

The Savannah River valley’s climate swung hard in the direction of rain after the South’s 1925 drought of record. Over the course of thirty-six hours beginning September 26, 1929,

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<sup>1</sup> State Planning Board and the National Park Service, *Report on Outdoor Recreation in Georgia* (Atlanta, Ga.: [n.p.], February, 1939), 13.

<sup>2</sup> A. L. Dabney, “Report on Flood Protection for the City of Augusta, GA” (April 30, 1912), and H. T. Cory, “Report on Flood Protection at Augusta, Georgia” (May 20, 1912), Folder SR 824.02, Box 80, Accession 76E342, Records of the Corps of Engineers (RG 77), National Archives Southeast Region, Morrow, Georgia, hereafter NAS.

<sup>3</sup> “Two Georgia Towns Imperiled as Dams Loose Torrents Into Valley; Battle of Workers to Save Augusta Levee Is Believed Successful,” Atlanta (Ga.) *Constitution*, October 3, 1929, p. 1; Ralph Howard, United States Army Corps of Engineers, “Augusta Flood 1929, Report of Emergency Work” ([n.d.?] possibly December 12, 1929), Mis. 10059/43-62, Box 75, Accession 76E342, RG 77, NAS.

nearly nine inches of rain fell across the upper Savannah River valley's landscape. Countless dry gullies, numerous small creeks, and broad rivers swelled beyond capacity and sent a forty-six foot flood crest down the Savannah River. The surge breached the city's levee a few miles below the central business district and water began to flood industrial and residential sections of the city. As water flowed through the breach from the river into the city, the city's stormwater sewers began to backup, and these rising backwaters flooded the first floor of many homes and businesses. The first flood-wave passed and the rain briefly abated. Then on October 1 and 2 a second storm – this time the tropical remnants of a Category One Gulf of Mexico hurricane – moved across the southeast from Apalachicola Bay in the Florida panhandle to Augusta and dropped another eight inches of rain on an already saturated landscape. Unable to absorb any more water, the land shed the deluge, and the Savannah River rose again to send a second larger flood crest downstream to the Augusta metro-area. The Great Flood of 1929 plowed through the Piedmont, easily surged over low dams at Gregg Shoals, Stevens Creek, and the Augusta Canal intake, but broke the Augusta Canal's bank above the city and washed away bridges loaded with heavy freight trains. Across the Savannah River from Augusta, William Gregg's antebellum Graniteville and other Horse Creek valley mill dams broke lose and washed a handful of South Carolina factory homes from their foundations. Despite fears that the saturated and compromised Augusta Levee might fail catastrophically during the flood, it did not.<sup>4</sup>

The small town of Hamburg, immediately across the Savannah River, was not so lucky.

The South Carolina community had nearly surpassed Augusta in an economic rivalry over which

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<sup>4</sup> Telephone conversation notes, October 2, 1929, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, Records of the American National Red Cross, 1917-1934 (RG 200), National Archives II, College Park, Maryland, hereafter NAI; E. D. Emigh, USDA Weather Bureau, *Report of the Floods in the Savannah River, September and October, 1929* (October 18, 1929), Mis 10059/43.30, Box 75, Accession 76E342, RG 77, NAS; Ralph Howard, U.S. Army Corps of Engineers, *Augusta Flood 1929, Report of Emergency Work* ([n.d.?] possibly: December 12, 1929), pp. 5-6, Mis. 10059/43-62, Box 75, Accession Number 76E342, RG 77, NAS; United States Army Corps of Engineers & Secretary of War, *Savannah River Georgia, South Carolina, and North Carolina* (Washington, D.C.: GPO, 1935), 36-46.

town would serve as the upper valley's commercial and transportation hub before the Civil War. Henry Shultz – a white German immigrant – founded the small town in the 1820s, named it after his German birthplace, and invested significant personal capital to promote its economic development. He secured exclusive rights to operate the Savannah River's only riverboat between his town and Savannah, Georgia, and the town eventually served as the terminus for the Charleston and Hamburg (South Carolina) Railroad before an 1834 bridge carried trains directly into Augusta.<sup>5</sup> After the Civil War, Hamburg's demographics shifted and the town soon lost its economic luster in the shadow of Augusta. Hamburg became known as a "center of black Republicanism," according to historian Kathleen Clark, and was the site of a race riot in July 1876. The Great Flood's second crest – nearly forty-five feet of water – settled the rivalry between the two towns once and for all, and completely swept the un-leveed "negro [sic] settlement" away after the residents had abandoned the South Carolina town. Multiple facilities associated with brick manufacturing, a store, two churches, three filling stations, a rail road yard, and "many of the houses of Hamburg...were carried away" or damaged, thereby rendering the "occupants...homeless."<sup>6</sup>

The southeast's historic droughts and floods of the 1920s illustrate not only dramatic seasonal swings, economic dislocation, and human sacrifice, but also the environmental challenges and risks involved in managing a single river valley such as the Savannah River valley to meet private needs and serve public goods. The Savannah River valley and its residents

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<sup>5</sup> Edward J. Cashin, *The Story of Augusta* (Augusta, Ga.: Richmond County Board of Education, 1980), 72.

<sup>6</sup> "Black Republicanism." Kathleen Ann Clark, *Defining Moments: African American Commemoration & Political Culture in the South, 1863-1913* (Chapel Hill: University of North Carolina Press, 2005), 126-130. "Many houses:" Emigh, *Report of the Floods in the Savannah River, September and October, 1929*, 8. "Negro settlement:" "Augusta Levee Breaks; Six Cities Isolated," Atlanta (Ga.) *Constitution*, September 28, 1929, p. 1; and Charles W. Carr, *Proposed Plans for Rehabilitation in Hamburg, S.C.* (November 18, 1929), Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI. See also: Timothy Cox, "Residents recall life in black community," Augusta (Ga.) *Chronicle*, November 10, 2002. For hurricane and tropical storm histories, see: National Oceanic and Atmospheric Administration Historical Hurricane Tracking, <http://maps.csc.noaa.gov/hurricanes/index.jsp>.

had clearly experienced natural disasters, but these disasters were only partly natural. As environmental historian Ted Steinberg has argued, natural disasters like floods, tornados, hurricanes, and earthquakes reveal “human complicity” in constructing a landscape subject to nature’s furry and whim where the human victims in earthquakes, tropical storms, and flooding were often poor and the beneficiaries were often economically powerful. There are many historical interpretations of flooding in the American South, yet there are surprisingly few published histories of urban or agricultural drought.<sup>7</sup> All too often, Georgians considered inland flooding, tropical storms, and punishing droughts only as localized natural disasters that wreaked havoc, thereby threatening levees, reservoir capacity, human life, and economic progress. Augusta’s citizens accepted some of these inconveniences as temporary – as they had lived through these events in the past – and adjusted personal behavior as necessary or initiated narrowly focused projects like the levee to deal with localized flooding. Levees – either funded by community or federal sources – represented one form of technology for risk management and, as Steinberg would note, “risk production.”<sup>8</sup> In the interwar years, Georgians and South Carolinians searched for structural solutions to manage flooding and drought risks. Multiple purpose dams that could perform a variety of functions – produce hydroelectricity, provide flood control, improve navigation, and conserve water supply – emerged as new technological risk

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<sup>7</sup> Disaster histories include the following: a history of a private dam’s failure, David G. McCullough, *The Johnstown Flood* (New York, N.Y.: Simon and Schuster, 1968); a history of an agricultural drought, Donald Worster, *The Dust Bowl* (New York, N.Y.: Oxford University Press, 1979); a history of flooding exacerbated by failed levee technology, Pete Daniel, *Deep’n as it come: The 1927 Mississippi River Flood* (New York, N.Y.: Oxford University Press, 1977) and John M. Barry, *Rising Tide: the Great Mississippi Flood of 1927 and How It Changed America* (New York, N.Y.: Simon & Schuster, 1997). I am only aware of two historical accounts of drought in the American South. The first addresses Arkansas, Kentucky, Louisiana, Mississippi, Tennessee, and West Virginia in the 1930s, see: Nan Elizabeth Woodruff, *As Rare as Rain: Federal Relief in the Great Southern Drought of 1930-31* (Urbana: University of Illinois Press, 1985). The second addresses drought and irrigation history in Mississippi and Alabama after 1970, see: Valerie Grim, “The High Cost of Water: African American Farmers and the Politics of Irrigation in the Rural South, 1980-2000,” *Agricultural History* 76, 2 (2002): 338-53.

<sup>8</sup> Ted Steinberg, “Do It Yourself Deathscape: The Unnatural History of Natural Disaster in South Florida,” *Environmental History* 2, 4 (1997): 414-438, p. 415; Ted Steinberg, *Acts of God: The Unnatural History of Natural Disaster in America* (New York, N.Y.: Oxford University Press, 2006; first edition 2000), xx.

management techniques in the interwar years. But as the United States entered the Great Depression, a great debate emerged over who was best suited to manage risk on the nation's rivers to meet private needs or to achieve public goods. The American South's water problems remained central to this debate.

This chapter will address two major questions. First, how did valley residents, who lived in widely fluctuating environments, interpret, plan, and manage a valley as equally prone to droughts as it was prone to flooding? And, second, who would do the managing? These questions occupied the minds not only of people interested in the Savannah River valley but people interested in developing valleys all over the United States. Three specific historic episodes imposed limits on the parties interested managing river valley risks and developments across the nation: the stock market crash, the Great Depression and New Deal response, and critical United States Army Corps of Engineers surveys completed in 1930s. As private and public institutions negotiated who would do the developing, another implied question arose: who would the projects benefit? Whereas water conservation in the American South remained firmly in the hands of private enterprise before the New Deal, inter-war conservation and economic debates soon erased clear divisions between private initiatives and public goods. Valley residents reconsidered the droughts and floods of the 1920s, and they looked to the federal government in the wake of the Great Depression for water conservation structures to manage complex risks and old water problems.

### **Looking at the Savannah Valley**

A long history of high water and floods led Augusta residents, Congressional representatives, and federal agents to consider local flood control solutions in the late nineteenth century. Augusta – located at the fall line that divides the Piedmont and the upper Coastal Plain

– had experienced high water as far back as 1800. Early Corps surveys, including Lt. Oberlin Carter’s 1890 investigation, studied flood control and dam options throughout the Savannah River valley in conjunction with the Corps’ primary function: navigational improvement. Congress had officially tasked the Corps, back in 1824, with a civil works mission in addition to maintaining coastal defenses and executing battlefield engineering. In the early national period, the Corps surveyed new roads, mapped new territories, maintained navigation channels, and improved harbors. But the Corps’ primary civil works responsibility was to grease the wheels of commerce by keeping the nation’s water ways open for boats and barges by clearing debris, dredging channels, and battling shifting sand bars.<sup>9</sup>

Carter, and his assistant George Brown, hedged when they considered separating the human and natural activity they identified as agents responsible for land and water problems in along the Savannah. They reported in 1890 that “it does not lie within the power of man to remove the causes of the destructive floods in the Savannah River Valley, although their evil effects” could be “lessened” with improved agricultural and forestry practices. Their 1890 report noted river bottoms covered in willow, poplar, and sycamore with dense island cane breaks, in addition to the river’s obvious shift from clear to muddied water. The “small gullies” that evolved into “deep gorges” produced turbid water and eliminated “many varieties of fish.”<sup>10</sup> Beyond recommendations they could never enforce, like improved agricultural and forestry programs upstream from Augusta to combat erosion, the two men recommended structural engineering solutions: deeper river channels below Augusta to move high water more quickly, protective levees around the city, and flood control reservoirs in tributary streams above Augusta

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<sup>9</sup> Jeffery K. Stine, “United States Army Corps of Engineers,” in Donald R. Whitnah, ed., *Government Agencies*, Greenwood Encyclopedia of American Institutions (Westport, Conn.: Greenwood Press, 1983), 513-516.

<sup>10</sup> U.S. Congress, House, *Survey of the Savannah River Above Augusta*, 51<sup>st</sup> Cong., 1<sup>st</sup> sess., February 18, 1890, House Executive Document 213, pp. 2-6, 11.

if such structures could be economically justified. However, these federal risk assessments and risk management suggestions resulted in no action on the federal or local level. Federal flood control costs had to improve navigation and benefit national economic growth, and the Corps could easily justify these developments on major rivers such as the Mississippi more than they could on the Savannah. And local support for flood control did not materialize, leaving Augusta's citizens to ponder their own water problems and solutions. After a fall 1907 drought led to thirty days-worth of factory shutdowns, Augusta residents waited until their next major reckoning with moving water in 1908 before exploring their own options for flood proofing the city.<sup>11</sup> The 1908 flood, following the last major flood by a decade, provided Augusta's leadership with enough justification to plan, finance, and complete city's levee by 1915.<sup>12</sup> The Augusta levee protected the city in 1918 from a thirty-five foot flood surge, and nearly failed catastrophically during the great flood of 1929, but the city's levee institution did their job managing risk: the Augusta Levee Commission built, maintained, and reinforced a functional levee with occasional Congressional funds distributed through the Corps.<sup>13</sup>

The Corps leadership had historically refrained from levee and multiple purpose projects to manage flooding risks if such improvements did enhance navigation, serve national defense objectives, or meet basic cost-benefit evaluations. In 1908, Colonel Dan Kingman of the Savannah District engineers' office echoed the Corps' general opinion that multiple purpose developments did not adequately coordinate dams and artificial reservoirs to achieve navigational and flood control aims. Like other Corps colleagues, Kingman rejected multiple

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<sup>11</sup> *Mayors Message and Official Reports of the Department of the City of Augusta, For the Year 1907* (Augusta, Ga.: Phoenix Printing Company, 1908), 62-63. I accessed these "city yearbooks" through the Clerk of Commission, Municipal Building, Augusta, Ga.

<sup>12</sup> The 1908 flood claimed sixteen lives, see: *Mayors Message and Official Reports of the Department of the City of Augusta*, for 1908 (Augusta, Ga.: Phoenix Printing Company, 1909), 16, 42.

<sup>13</sup> *The City Council of Augusta, Ga., Yearbook 1910* (Augusta, Ga.: Williams Printing Company, 1911), 25, 41; *Nineteen Eleven Year Book of the City Council of Augusta, Ga.* (Augusta, Ga.: Phoenix Printing Company, 1912), 104.

purpose flood control options in the Savannah River valley because they were “enormously expensive, and their effect uncertain.”<sup>14</sup> Numerous scholars have demonstrated how the Great Mississippi Flood of 1927 helped clear the way for Congress to empower the Corps to move – on a national scale – beyond single purpose navigational work and into the realm of multiple purpose navigation and flood control work. Congress reassessed Col. Kingman’s and his Corps colleagues’ risk management responsibilities after the Mississippi flood, and they passed the Flood Control Act of 1928. This new legislation empowered the Corps to take direct responsibility for planning, constructing, and maintaining the Mississippi and Sacramento valley’s flood control apparatus from localized levee and flood control districts. Col. Kingman and the Savannah River District, however, did not move as quickly into flood control in Savannah River valley as they did in other valleys despite the fact that private dam and reservoir projects ground to a halt in the Savannah River valley at the same time.<sup>15</sup> In the Corps’ collective mind, the Piedmont and the central Savannah River valley was not important to the national economy.

For example, the Savannah District engineers had recommended a single-purpose flood control levee at Augusta prior to the 1908 flood but did not recommend federal action and spending after the Great Flood of 1929 because the improvements would only serve Augusta’s

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<sup>14</sup> Col. Dan Kingman, Savannah, Ga., to Chief of Engineers, Washington, D.C., September 9, 1908, 5, Folder: Mis. 10059/1 to 10059/42, Box 75, Accession 76E342, RG 77, NAS.

<sup>15</sup> Daniel, *Deep’n as it come*; Barry, *Rising Tide*; Karen M. O’Neill, “Why the TVA Remains Unique: Interest Groups and the Defeat of New Deal River Planning,” *Rural Sociology* 67, 2 (2002): 163-182; Karen M. O’Neill, *Rivers By Design: State Power and the Origins of US Flood Control* (Durham, N.C.: Duke University Press, 2006); David P. Billington and Donald C. Jackson, *Big Dams of the New Deal Era: A Confluence of Engineering and Politics* (Norman: University of Oklahoma Press, 2006). Karl Brooks observed the same trend in the Pacific Northwest where “For more than a decade following 1935, when construction of gigantic New Deal federal dams began in earnest, no private electric utility in the Columbia Basin added a single kilowatt of new generating capacity,” see, *Public Power, Private Dams: The Hells Canyon High Dam Controversy* (Seattle: University of Washington Press, 2006), 34.

interests as opposed to national interests.<sup>16</sup> This did not sit well with Augusta's Congressional representative Carl Vinson, who served as a conduit between Augusta's commercial interests and the Corps. Vinson sat on the Flood Control Committee and specifically asked the Corps to assess Augusta's flood risk and protections so he could lobby for additional federal funding on behalf of the city.<sup>17</sup> But Major D. L. Weart's findings could not have helped Vinson's cause. Weart listed numerous critical engineering suggestions after the Great Flood of 1929 and concluded "that due to the fact that the benefits from protection of the City of Augusta from floods will not be widely distributed, the Federal Government should not participate in the cost of such works."<sup>18</sup> Since the Corps and the city continued to focus on levee engineering and to think about single-purpose structural solutions, Augusta's residents and those with no levee protection proceeded to live under the threat of future flooding.

Engineers in the Corps and the private sector thought narrowly about their water projects, and after all, had a limited number multiple purpose dams to study as examples. Engineers and water conservation advocates argued that multiple purpose projects could provide flood control, navigation, and power benefits, but there were only a few existing models.<sup>19</sup> The first was actually one of the Corps' own: the Upper Mississippi River Headwaters navigation project. In an effort to improve navigation on the Mississippi River, Congress approved construction of six dams in Minnesota – three on the river's main headwater stream and three more on tributaries.

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<sup>16</sup> Col. W. M. Black, Board of Engineers for Rivers and Harbors, *Savannah River at Augusta, Ga.*, December 7, 1915, pp. 1-4, Box 76, Project 803025, RG 77, NAIL.

<sup>17</sup> Rep. Carl Vinson to the Board of Engineers, River and Harbor Committee, Washington, D.C., May 15, 1916, Box 76, Project 803025, RG 77, NAIL.

<sup>18</sup> *Report of Flood Study on Savannah River at Augusta, Georgia, Savannah Georgia, District*, December 18, 1929, pp. 33-37, Box 1111, Project 803017, RG 77, NAIL.

<sup>19</sup> See *Electrical World* (May 26, 1928) edition for reports on regional development around the United States. The Rhine River's alpine headwaters saw hydroelectric development primarily after 1892, see: Mark Cioc, *The Rhine: An Eco-Biography, 1815-2000* (Seattle: University of Washington Press, 2002), 62-64 and 131-132. In 1895, the Folsom project on California's American River set new standards for generation and transmission, see: James C. Williams, *Energy and the Making of Modern California* (Akron, Ohio: The University of Akron Press, 1997), 176. British Columbia's multiple-dam development occurred after 1913, see: Matthew Evenden, *Fish versus Power: An Environmental History of the Fraser River* (Cambridge, 2004), 56-69.

The Corps built the dams between 1880 and 1912 at the outflows of glacially formed lakes to regulate river levels and improve navigation for St. Paul, two hundred miles downstream.<sup>20</sup>

Another example of multiple, single purpose dams was the Miami Conservancy District's flood control project. Drainage engineer Arthur E. Morgan – who was one of the future Tennessee Valley Authority's three founding directors and responsible for TVA's engineering – designed five single purpose dams and basins in the Miami River valley to protect Dayton and other Ohio towns from major flooding. The Miami program gained national attention after completion in 1918 because the Conservancy financed the flood control scheme without federal funding.<sup>21</sup>

Finally, there were multiple dam developments like the Georgia Power Company's Tallulah-Tugaloo project and the Duke Power Company's Catawba River projects [chapter 2].<sup>22</sup> As single purpose hydroelectric dams, Georgia Power's dams did not provide navigational or flood control benefits – in flood conditions, excess water poured over the dams' crests, down spillways, and flowed downstream, the consequences of which included Augusta's Great Flood in 1929. In this example, Georgia Power's private interests – storing water to generate electricity for urban centers like Atlanta – could never provide public services like flood control or improve navigation for the Savannah River valley. Early twentieth century civil engineers clearly understood how to build multiple dam projects to manage specific risks or benefits, but not necessarily multiple dams to serve multiple purposes.

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<sup>20</sup> United States Army Corps of Engineers, *Mississippi River Headwaters Reservoir Operating Plan Evaluation (ROPE): Upper Mississippi River Headwaters Bemidji to St. Paul, Minnesota, DRAFT Integrated Reservoir Operating Plan Evaluation and Environmental Impact Statement* (St. Paul, Minn.: United States Army Corps of Engineers, St. Paul District, August 2008), 20-32, available online: [http://www.mvp.usace.army.mil/docs/projs/rope/eis/ROPE\\_DEIS\\_no\\_appendix.pdf](http://www.mvp.usace.army.mil/docs/projs/rope/eis/ROPE_DEIS_no_appendix.pdf) (last accessed: March 4, 2010).

<sup>21</sup> "Dayton Flood-Protection Ready for Adoption," *Engineering News* 75, no. 10 (March 9, 1916): 485-486; "Final Flood-Protection Plan for Miami Valley," *Engineering News* 75, no. 14 (April 6, 1916): 674-675; Arthur Morgan, *The Miami Conservancy District* (New York, N.Y.: McGraw-Hill Book Company, 1951).

<sup>22</sup> Major C. R. Pettis, Chief Engineer, United States Army Corps of Engineers, "Flood Control Lecture," presented at the Company Officers Course, Engineer School, Fort Humphreys, Virginia (possibly January 21, 1928), p. 3, see: Mis 10059/35, Box 75, Accession 76E342, RG 77, NAS; Morris Knowles, "Hydro-Electric Development and Water Conservation," *The Electric Journal* 10, no. 7 (July 1913): 631-636.

Corps and private engineers began more serious experiments with the United States' first two modern, multiple purpose dams in Arizona and Tennessee. The Salt River Valley Water Users' Association, in conjunction with the Bureau of Reclamation, completed the Salt River and Roosevelt Dam project between 1909 and 1911, which was the Bureau's first multiple purpose reclamation (irrigation) and power project.<sup>23</sup> The Tennessee River Power Company's Hales Bar project, completed in 1913, was the country's first example of a combined hydroelectric dam and a Corp of Engineers maintained navigation lock.<sup>24</sup> But the capital required for multiple multi-purpose dams was simply beyond the reach of private investors, and the federal government remained non-committal to public-private power projects due to the construction and environmental challenges encountered at Hales Bar [chapter 2]. And as long as rail transport remained a viable and cost effective means of moving freight long distances at low cost, waterborne navigation could only justify itself in major corridors like the Mississippi River. Given these realities, engineers in the private and public sectors had yet to combine multiple dams with multiple purposes anywhere in the United States before 1933. The Corps did not want to manage the Savannah River valley on the scale found in Arizona or Tennessee, nor did the Corps desire to radically reshape the valley's waterscape in the 1930s. Furthermore, managing flood risks remained a peripheral objective the Corps met with levees, not with dams. What, then, dramatically changed the dam-adverse Corps leadership and encouraged the Corps to build massive multiple purpose risk management structures that exist today in the Savannah River valley?

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<sup>23</sup> Billington and Jackson, *Big Dams of the New Deal Era*, 28-46.

<sup>24</sup> For more on Hales Bar, see Chapter 2. Hales Bar was closely followed by another privately financed and constructed facility at Keokuk, Iowa on the Mississippi River. The Mississippi River Power Company completed that dam, hydroelectric facilities, and navigation lock in 1913 soon after Hales Bar, and delivered power to St. Louis 144 miles away, see: Eric A. Lof, "The Mississippi River Hydro-electric Development at Keokuk, Iowa, Part I," *General Electric Review* 17, no. 2 (February 1914): 85-98.

The 1929 stock market crash created unfavorable economic conditions for the private companies who initially completed dam and reservoir projects. Some energy utilities – suddenly facing an uncertain future and shrinking service demand – eventually put hydroelectric power projects on hold for at least a decade or tabled plans indefinitely.<sup>25</sup> The Georgia Power Company, for example, continued to make use of the region’s water after completing the well publicized Tallulah-Tugaloo River projects in the early 1920s. While the company completed those projects, Georgia Power had simultaneously acquired land for potential dam and reservoir sites along the Chattooga River – a tributary of the Tugaloo River – in 1911.<sup>26</sup> But rather than reproduce the Tallulah and Tugaloo hydroelectric dams and reservoirs along the Chattooga River as the company originally had intended to do, the Georgia Power Company shifted construction to the Piedmont in a decision that proved to be a fortuitous choice for the company and the future Chattooga Wild and Scenic River. The company also moved out of the mountains and into the Piedmont to diversify geographically and diversify the company’s quiver of generation facilities. For example, the company’s massive Atkinson fossil fuel plant on the Chattahoochee River seven miles upstream of Atlanta went on-line in 1930. While the plant burned coal or natural gas to generate electricity, the plant’s boilers consumed 90,000 gallons of water to produce steam. And the plant’s condensers also used “over FIVE MILLION gallons of water an hour to cool the steam, four times as much water as the entire city of Atlanta” used in a few hours according to *Snap Shots*, the company’s in-house magazine.<sup>27</sup> Fossil fuel plants looked more reliable and efficient than hydroelectric dams after the south’s droughts of the 1920s, but even shifting to

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<sup>25</sup> For parallel but different case study in the American West, see: Brooks, *Public Power, Private Dams*, 34.

<sup>26</sup> *Georgia Power Company to United States, Warranty Deed*, Deed Record E-4, page 109-120, Rabun County Courthouse, Clayton, Georgia.

<sup>27</sup> Emphasis original, “Vast Plant Atkinson, Peerless in U.S., Shown as Place of Engineering Marvels,” *Snap Shots* 3, no. 8 (August, 1912): 1. *Snap Shots*, a Georgia Power Company publication, can be found in the Georgia Room of the Hargrett Rare Book and Manuscript Library, University of Georgia, Athens, Georgia. Georgia Power began deconstructing and demolishing Plant Atkinson in 2003.

black coal technology was risky. The region could never escape its dependence on river water to generate electricity, lure industry, and grow jobs.

The Georgia Power Company, in addition to purchasing Chattooga valley water power sites and completing the Atkinson steam plant, also turned to Furman Shoals and the Oconee River to balance the company's energy mix. In 1929, the company began building this Piedmont and fall-line dam, now known as Lake Sinclair and Dam, about four miles north of the state's old capital of Milledgeville. In September, Company president Preston S. Arkwright, Sr., announced plans for a 3,000 foot long and ninety-foot tall dam to create the state's largest artificial reservoir (12,000 acres of surface area) and to house the company's third largest hydroelectric generation facility.<sup>28</sup> One of the company's press reporters believed the dam was necessary "to make the waters of the Oconee pay toll for Georgia's progress," and to "imprison" a great "inland sea."<sup>29</sup> One month later, Black Tuesday wiped out Wall Street in October and the company newsletter made no mention of the downward economic spiral. Instead, the company pressed on with Furman Shoals' land clearing and construction activities, and the Dixie Construction company erected a small worker-camp at the site before the end of the year.<sup>30</sup> By April, 1930, workers began pouring the concrete spillway and remained on schedule with plans to complete the project in less than eighteen months. Furthermore, and despite the emerging depression, the company announced plans to spend \$16,000,000 on new projects in 1930 "to keep constantly in step with the progress of the state," according to *Snapshots* writers.<sup>31</sup> Almost a full year would pass before the Georgia Power Company abandoned the Furman Shoals project on the Oconee River

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<sup>28</sup> "Huge Hydro Plant Planned," *Snap Shots* 3, no. 9 (September, 1929): 3.

<sup>29</sup> "Construction Is Begun at Furman Shoals," *Snap Shots* 3, no. 10 (October, 1929): 1, with picture of the shoals.

<sup>30</sup> "Harnessing Oconee for Georgia's Progress," *Snap Shots* 3, no. 11 (November, 1929): 1, with picture of the shoals; "550 Dixie Men Will Begin Dam in Icy Oconee," *Snap Shots* 3, no. 12 (December, 1929): 3.

<sup>31</sup> "Power Company Plans \$16,000,000 Building Program," Atlanta (Ga.) *Constitution*, December 8, 1929, p. 11; "\$16,000,000 Program Sets State Record," *Snap Shots* 3, no. 12 (December, 1929): 1.

on November 30, 1930 because the company could no longer ignore the global Great Depression. As if in a media blackout or vacuum, the company's newsletter and Atlanta's major daily newspaper made no mention of the project's termination.<sup>32</sup> The world's and state's economy not only stalled Georgia Power's plans for Furman Shoals but also had repercussions for the company's other projects in the Savannah River valley. When Georgia Power placed Blue Ridge and Piedmont projects on hold during the Great Depression, the door opened slightly for another party – the United States Army Corps of Engineers – to take part in shaping the South's waterscape and managing drought and flood risks.

The federal response to the Great Depression in 1933 merged comprehensive and regional planning to achieve economic recovery, and stands as a second event of the late 1920s and early 1930s that presented Savannah River valley residents, regionally inspired planners, and the Corps of Engineers with new opportunities to manage risk and water problems. The Tennessee Valley Authority – for better and worse – soon demonstrated how multiple purpose dams could serve as tools to reshape river valley life as well as manage flooding and droughts. Human geographer Karen O'Neill recently argued that historians, sociologists, political scientists, and geographers have studied the Tennessee Valley Authority “in isolation.”<sup>33</sup> Indeed, the immense TVA historiography and literature focuses upon the regional planning and state power myths that have championed the TVA as a high modernist success story.<sup>34</sup> O'Neill,

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<sup>32</sup> “Concrete is Placed At Furman Shoals; Begin Vast Wall,” *Snap Shots* 4, no. 4 (April, 1930): 5; “Georgia Power Will Complete Oconee Plan,” *Atlanta (Ga.) Constitution*, July 20, 1942, p. 3; Wade H. Wright, *History of the Georgia Power Company, 1855-1956* (Atlanta, Ga.: Georgia Power Company, 1957), 250 and 332. The company eventually completed the dam in 1954.

<sup>33</sup> O'Neill, “Why the TVA Remains Unique,” 164.

<sup>34</sup> The TVA historiography is immense, for example, see: Clarence Lewis Hodge, *The Tennessee Valley Authority: A National Experiment in Regionalism* (New York, N.Y.: Russell and Russell, 1968; first edition, Washington, D.C.: American University Press, 1938); Judson King, *The Conservation Fight: From Theodore Roosevelt to the Tennessee Valley Authority* (Washington, D.C.: Public Affairs Press, 1959); Preston J. Hubbard, *Origins of the TVA: The Muscle Shoals Controversy, 1920-1932* (Nashville, Tenn.: Vanderbilt University Press, 1961); John R. Moore, ed., *The Economic Impact of TVA* (Knoxville: University of Tennessee, 1967); Thomas K. McCraw, *Morgan vs.*

in an effort to explain why the TVA concept was not reproduced, begins with the typical story about the TVA's origins: the Muscle Shoals controversy pit Senator George Norris against a deep-pocketed and corrupt private power lobby in the American South. This World War I-era history of anti-monopolists and regional planners versus the capitalists is an important part of the scholarly assessment of the TVA's genesis. But this historiography clearly omitted important actors responsible for shaping the southern waterscape, or caricatured private interests simply as the 'water power trust.'

Before the TVA's creation in 1933, private power companies around the country engineered river valleys much as the TVA, the Bureau of Reclamation, the Soil Conservation Service, and other countries would emulate throughout the twentieth century. The TVA no doubt had a significant impact on industry and settlement patterns in the Tennessee River Valley, but industrialists throughout the New South had implemented similar water control projects to promote decentralized industrial development and provide isolated factory towns with electrical energy. High modernist New Dealers were not the only people who thought they could rationalize a river (or river basin) for hydroelectric production and decentralized industry. The most popular history of TVA places the institution's origin with the Muscle Shoals controversy – where comprehensive planners dreamed of building a massive dam to control flooding and improve Tennessee River navigation, but more importantly to use hydroelectric energy to stimulate rural economic growth and produce fertilizer for farmers. Even this idea to produce

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*Lilienthal: The Feud Within the TVA* (Chicago, Ill.: Loyola University Press, 1970); Thomas K. McCraw, *TVA and the Power Fight, 1933-1939* (Philadelphia, Pa.: J.B. Lippincott Company, 1971); Arthur Earnest Morgan, *The Making of the TVA* (London: Prometheus Books, 1974); North Callahan, *TVA: Bridge Over Troubled Waters* (South Brunswick and New York: A.S. Barnes and Company, 1980); Philip Selznick, *TVA and the Grass Roots: A Study of Politics and Organization* (Berkeley: University of California Press, 1980); Michael J. McDonald and John Muldowny, *TVA and the Dispossessed: The Resettlement of Population in the Norris Dam Area* (Knoxville: University of Tennessee Press, 1982); Erwin C. Hargrove and Paul K. Conkin, eds., *TVA: Fifty Years of Grass-Roots Bureaucracy* (Chicago: University of Illinois Press, 1983); Margaret Lynn Brown, *The Wild East: A Biography of the Great Smokey Mountains* (Gainesville: University Press of Florida, 2000).

nitrate fertilizer in conjunction with hydroelectric power had been proposed by private investors in Alabama eyeing the Coosa River and by North Carolinian James B. Duke. While the former never got off the ground in the United States, Duke did apparently build and operate a nitrogen processing plant in 1911 before closing the plant five years later because water supplies were apparently inconsistent.<sup>35</sup> The TVA, far from operating in isolation or as a “pioneer” as historian Sarah Phillips has argued, was only one of many actors responsible for shaping the modern American South’s waterscape. But as a federal response to the Great Depression, the TVA made waves and motivated other federal agencies to re-evaluate their missions and re-act accordingly.<sup>36</sup>

The Army Corps of Engineers “308 Report” provides a third and final illustration as to why the late 1920s and early 1930s was a turning point for people intent on managing the Savannah River valley’s water problems. In the preceding three decades, Congress had approved multiple hydrologic, geographic, and forestry investigations by federal agencies to efficiently catalog the Savannah River valley’s environmental resources. These professionals looked at the landscape with lenses configured to see flood control mechanisms, navigation structures, and facilities to generate electricity. To grasp the range of the basin’s environmental resources, Congressional committees relied upon the eyes of trained specialists and engineers to catalog the actual and potential assets, as well as the liabilities, of the Savannah River Basin. Where would dams produce the most electricity, provide adequate flood control, and promote industrial development? At what physical point on the river did a cost-benefit analysis render

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<sup>35</sup> Henry J. Pierce, *Looking Squarely at the Water Problem* (Seattle, Washington: [n.p.], 1915), 8, 17-20; Robert F. Durden, *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001), 41; Leah Rawls Atkins, “Developed for the Service of Alabama.” *The Centennial History of the Alabama Power Company, 1906-2006* (Birmingham, Ala.: Alabama Power Company, 2006), 21, 42, and 59.

<sup>36</sup> Sarah T. Phillips, *This Land, This Nation: Conservation, Rural America, and the New Deal* (New York, N.Y.: Cambridge University Press, 2007), 106.

navigational improvements cost-prohibitive? Where did flooding create the most problems and who was effected? Who lived along the riverbanks? Ultimately, how might the state intervene? The Corps' "308 Report" provided Congress with legible answers to these and other inquiries.<sup>37</sup>

The Corps of Engineers continued to harbor institutional skepticism – as previously noted – of multiple purpose dams and reservoirs as viable technologies well into the 1930s. The Corps did begin to think systematically beyond single purpose water management technology, but only when forced by Congress to explore navigation, waterpower, flood control, and irrigation possibilities in comprehensive river development.<sup>38</sup> Congress acted in response to mounting evidence that utility monopolies were growing not just in Georgia, Alabama, South Carolina, and North Carolina, but across the country.<sup>39</sup> In order for the federal government to participate in this water management and conservation boom, Congress instructed the Corps to estimate the costs for a national river and hydroelectric power survey in 1925. Working within this national framework, the Corps and the Federal Power Commission lumped Virginia, North Carolina, South Carolina, and Georgia watersheds together, and estimated they would need \$826,600 to adequately survey those states' twelve river basins. In what was also known as "House Document 308," the Corps recommended that Congress move quickly so that the federal government could get a head start, or perhaps work in conjunction with private enterprise, in order "to secure adequate data to insure that waterway developments by private enterprise would

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<sup>37</sup> For example, see: U.S. Congress, House, *Savannah River [between Augusta and Savannah], Georgia*, 51<sup>st</sup> Cong., 2<sup>nd</sup> sess., House Executive Document No. 255, p. 4-6; Horace Beemer Ayres and William Willard Ashe, *The Southern Appalachian Forests*, Professional Paper No. 37 (Washington, D.C.: GPO, 1905), 13-26, 252-253; Benjamin Mortimer Hall and Max R. Hall, *Third Report on the Water-Powers of Georgia*, Geological Survey of Georgia, Bulletin No. 38 (Atlanta: Byrd Printing Company, 1921).

<sup>38</sup> U.S. Congress, House, *Estimate of Cost of Examinations, Etc., of Streams Where Power Development Appears Feasible*, 69<sup>th</sup> Cong., 1<sup>st</sup> sess., April 13, 1926, House Document 308.

<sup>39</sup> U. S. Senate and U. S. Department of Agriculture, *Electric Power Development in the United States. Letter from the Secretary of Agriculture Transmitting a Report, in Response to a Senate Resolution of February 13, 1915, as to the Ownership and Control of the Water-Power Sites in the United States*, Part I (of III) (Washington, D.C.: GPO, 1916).

fit into a general plan for the full utilization of the water resources of” any study river. Congress approved these funds in 1927, and over the next decade, representatives of the conservation-state cataloged rivers around the country and produced reports affectionately called “308 Reports” in reference to the Congressional document that initiated the survey process. Congress required the Corps surveys to account for navigation, waterpower (potential dam sites, generation capacity, and markets), flood control (reservoir sites), and irrigation requirements on nearly every river in the United States including the Savannah.<sup>40</sup>

To complete the Savannah River’s “308 Report,” the Savannah District’s engineers reached out to corporate executives and engineers in an effort to better understand pre-TVA dam and reservoir projects in the southeast. Major D. L. Weart contacted Duke’s Chief Engineer in 1930 for information on the company’s management of multiple hydroelectric dams to attain flood control benefits for downstream residents. William States Lee, a fixture with Duke Power since the company’s creation in 1904, briefly explained how the company managed the thirty-five mile long Catawba Station “pond” in North Carolina. Lee explained to Weart how Duke’s multiple Catawba River hydroelectric dams and reservoirs regulated floods through coordinated water releases.<sup>41</sup> These releases were necessary to flatten “the flood peak” since water “could not be controlled simply by complete holding back of the water” behind the company’s low run-of-river dams that were only marginally designed to store flood waters. River flows downstream of dams did increase during flood periods, according to Lee, but the river often remained within its historic banks and the flows were less destructive.<sup>42</sup> Ralph F. Rhodes, another Senior

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<sup>40</sup> U.S. Congress, House, *Estimate of Cost of Examinations, Etc., of Streams Where Power Development Appears Feasible*, 69<sup>th</sup> Cong., 1<sup>st</sup> sess., April 13, 1926, House Document 308, page 71. The river basins were: the Savannah, Roanoke, Pee Dee, Meherrin, Neuse, Tar, Cape Fear, Yadkin, Santee, Altamaha, Satilla, and St. Mary’s Rivers.

<sup>41</sup> Correspondence between Major D. L. Weart and William States Lee, July 29 and 31, 1930, Folder: Copy of Savannah River 308 Report, Mis. 500/31-82-250, Box 53, Accession 76E342, RG 77, NAS.

<sup>42</sup> “Power Possibilities of Catawba River Highly Developed Through Stream Control,” *Engineering News-Record* 104, no. 25 (June 19, 1930): 1007-1012, p. 1009.

Engineer with the Savannah District, contacted W. E. Sanford of Allied Engineers to inquire about sedimentation rates in southern reservoirs. Allied Engineers – an engineering contractor for the Georgia Power and Alabama Power companies – replied that two of company’s low Chattahoochee dams did show signs of siltation.<sup>43</sup> Major D. L. Wert also corresponded with Augusta engineer Elroy Smith about siltation in the Stevens Creek reservoir, which was located about twelve miles up-river from Augusta. Smith, who once worked as an engineer on the Stevens Creek project offered no systematic siltation data, but he did claim to have local knowledge of formerly silt-free reservoir areas.<sup>44</sup> Beyond correspondence over flood control operations and sedimentation at privately managed artificial reservoirs, the Corps and private companies also shared blueprints, topographic maps, and soil-core samples related to proposed Savannah River valley dam sites.<sup>45</sup> Allied Engineers and Corps staff also shared data regarding stream flow and potential dam sites in the Chattooga River and Seneca River watersheds.<sup>46</sup> Private and public engineers appear to have communicated freely and openly in the 1930s as the Corps gathered “308 Report” information and the correspondence did not stop with technical or hydraulic data.

As the Savannah District engineers prepared their “308 Report,” they also asked the Georgia Power Company to re-evaluate their own water conservation plans for the Savannah

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<sup>43</sup> Correspondence between Ralph Rhodes, W. E. Sanford, and C. James, July 18 and 23, 1930, Mis. 500/31-134 to 500/31-171, Box 53, Accession 76E342, RG 77, NAS.

<sup>44</sup> Elroy G. Smith to Major D. L. Wert, August 1, 1930, Mis. 500/31-134 to 500/31-171, Box 53, Accession 76E342, RG 77, NAS.

<sup>45</sup> I should note that the private sector, federal foresters, and Corps engineers took siltation and sedimentation seriously. The Ocoee River, flowing from north Georgia into southeastern Tennessee, carried significant amounts of silt and sand due the mining and smelting operations in Ducktown, Tenn. See: William Willard Ashe, “The Place of the Eastern National Forests in the National Economy,” *Geographical Review* 13, 4 (1923): 535; and correspondence between C. James, Allied Engineers, to Ralph Rhodes, Senior Engineer, Savannah District, July 23, 1930, Mis. 500/31-134 to 500/31-171, Box 53, Accession 76E342, RG 77, NAS.

<sup>46</sup> Ralph S. Howard, Associate Engineer, to Major D. L. Wert, Savannah District Engineer, March 31, 1930, Mis. 500/31-82 -51 to 500/31-82-131, Box 57, Accession 76E342, RG 77, NAS; Correspondence between J. E. Parker, Assistant Engineer, Allied Engineers, Inc., and Major D. L. Wert, Savannah District Engineer, July 29, 1931, August 19, 1931, September 5, 1931, and October 7, 1931, Box 53, Accession 76E342, RG 77, NAS.

River. One particular site, known as Clarks Hill and soon to become a major locus of public and private institutional attention, generated real estate related correspondence between Major C. Garlington and J. B. Parker of the Commonwealth & Southern Corporation. Since 1926, the Savannah River Electric Company, a subsidiary of the Georgia Power Company (and the Commonwealth & Southern Corporation) had planned to build a ninety-foot tall and 2,400 foot long dam about twenty miles up-stream from Augusta, possibly with a navigation lock, and a reservoir capable of holding nine billion cubic feet of water and inundating 45,000 acres.<sup>47</sup> Major Garlington wanted to know how much land the company had acquired, how much money the company had spent on property acquisition, and if the company had initiated any condemnation proceedings. Finally, did the company know if the Clarks Hill project would “be undertaken when” the market demanded more electricity after 1933. Parker, perhaps keen to the implications of his answers, replied that the company had acquired about “two thirds of the necessary” land for the reservoir but claimed “it is impossible for us to supply the” financial information as requested. And given the nation’s economic status in early 1933, Parker also noted that “a present overcapacity” of available electrical supply made it impossible for the company “to tell when the” Clarks Hill “development will be needed” since it was entirely dependent on the pickup in business” and demand.<sup>48</sup> The “308 Report” process clearly revealed how the Great Depression required utility executives and Corps engineers to rethink and re-evaluate hydroelectric projects from planning to financing, and from management to land acquisition in a risky economic environment.

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<sup>47</sup> Savannah River Electric Company Application for License, Federal Power Commission, November 11, 1926, Box 78, Accession 76E342, RG 77, NAS; Savannah District, “Report on application for license by Savannah River Electric Co. of Edgefield, S.C., Project No. 798” (July 27, 1927), Box 78, Accession 76E342, RG 77, NAS.

<sup>48</sup> Correspondence between J. E. Parker, Assistant Engineer, Commonwealth & Southern Corporation of New York, and Major C. Garlington, U.S. Army Corps of Engineers, Savannah District, March 18 and 27, 1933, Box 53, Accession 76E342, RG 77, NAS.

Congress received Major C. Garlington's official "308 Report" – *Report on the Savannah* – in 1935 as the Tennessee Valley Authority's first four multiple purpose dam projects moved through planning and construction phases.<sup>49</sup> The Corps' *Report on the Savannah* reached some predictable and striking conclusions as the Great Depression deepened. In a seemingly minor decision that would only affect the region in the future, the Corps determined that "there was no need for irrigation" in the Savannah River valley because of the valley's high precipitation rate, and because the associated costs would exceed benefits. Thus the Corps never included irrigation as a potential benefit or need for this southern valley. The report provided an extensive flood history, but absolutely no discussion about drought history bar one reference to drought and river navigation. On flood control, the Corps determined that Augusta was the only city vulnerable to major flooding, but that "local interests" were already maintaining the Augusta levee which "should provide adequate protection" in the future. A little more than five years after the Great Flood of 1929 nearly wiped out Augusta, the Corps continued to view the Augusta Levee Commission's locally managed eleven-mile levee as satisfactorily maintained but also in need of improvement.<sup>50</sup> Next, the Corps lumped hydropower and navigation together in the report. First, Corps engineers simply recapped what Georgia Power executives had concluded months earlier: "certain power developments may be economically justified when and if a suitable market" emerged. Then the report identified eighteen potential multiple purpose dam sites throughout the Savannah River basin above Augusta along the Savannah itself and in tributaries such as the Chattooga, Tugaloo, Broad, Horsepasture, Seneca, and Keowee Rivers. Perhaps most striking, the Corps determined that comprehensive federal flood control, navigation, and power projects in the Savannah River valley were unnecessary and not cost

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<sup>49</sup> Wheeler, Norris, Pickiwick, and Guntersville were either completed or under construction in 1935.

<sup>50</sup> Major D. L. Weart, Savannah District, "Report of Flood Study on Savannah River at Augusta, Georgia, Savannah Georgia, District," December 18, 1929, Box 1111, Project Number 803017, RG 77, NAIL.

effective as the Great Depression deepened. Instead, the Corps recommended a coordinated “power and navigation” project at Clarks Hill between a private power company and the federal government. The Corps envisioned a slightly taller dam and larger reservoir than previously proposed by the private sector; the new proposal would inundate fifty-two square miles and a total of 60,000 acres of the Savannah River Valley. Regardless of the final size and capacity of Clarks Hill, the Corps hoped private interests would develop the Clarks Hill hydroelectric dam and storage reservoir, which then would regularize river flows to facilitate navigation downstream between Augusta and the port of Savannah. But in the end, Major C. Garlington recommended “that there be no participation by the United States in the problems of irrigation and flood control” on the Savannah River; that any power projects include navigation improvements; and finally, “that no improvement of the Savannah River below Augusta be undertaken at the present time.”<sup>51</sup> Private enterprise and local municipalities successfully managed the water problems, and manipulated the river’s erratic water supply to serve their industrial and residential customers.<sup>52</sup> The Corps determined that all of this localized water conservation activity and financing, even during the Great Depression, made the Corps of Engineers unneeded. In conclusion, the Corps’ engineers believed federal involvement in the Savannah River Basin was “unwarranted.” The stock market crash, the New Deal and TVA, and the Corps 308 study limited private and public development of the Savannah River valley’s water conservation projects, and would leave the river nearly unchanged for almost twenty years. Private and public debate over Clarks Hill’s fate disrupted this relative calm, and brought the Corps onto center stage at a time when southerners grew increasingly frustrated with the South’s water problems.

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<sup>51</sup> United States Army Corps of Engineers & Secretary of War, *Savannah River Georgia, South Carolina, and North Carolina* (Washington, D.C.: GPO, 1935), 2, 19, 50-51, 71-72, 103, and 132-134.

<sup>52</sup> *Ibid.*, 21-40.

## Boosting Public Works

Some of the Savannah River valley's power brokers, however, found the Corps an extremely relevant water manager given the valley's historic droughts and floods. In August, 1935, about seven months after the Corps released the *Report on Savannah River*, Augusta Chamber of Commerce president Lester S. Moody mobilized his city's boosters to woo New Dealers and their federal dollars. Moody moved from Jacksonville, Florida, to Georgia in 1926, assumed leadership of the Augusta Chamber of Commerce, and he would always link the river to Augusta's economic future. He would later be anointed as the "Father of Savannah River Development."<sup>53</sup> Moody, Augusta's mayor, and other representatives of the Savannah River Improvement Commission formally asked President Franklin D. Roosevelt to appoint a Public Works Administration Commission to investigate some of the "308 Report's" specific findings. Moody's cohort hoped for a quick re-evaluation of the Clarks Hill project as a tool for "flood control, navigation, prevention of soil erosion, and power development." Citing reports from the Federal Power Commission (FPC), Moody and his team informed the President about a reported 10% electrical generation deficit in Georgia, and a 5% to 10% gap in South Carolina. Refuting earlier claims made by the Corps and the Georgia Power Company in correspondence pertaining to the "308 Report's" research, Moody used the Corps and FPC reports to make another case. According to Moody, the Savannah River Electric Company, a subsidiary of the Atlanta-based Georgia Power Company had acquired the Clarks Hill dam site and 50% of the necessary land in the 1920s. The company had planned "to proceed with this development" after obtaining a FPC license in 1926. Unlike the Georgia Power Company's abandonment of the partially constructed

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<sup>53</sup> Kay Dockins, "River Basin Development Team is Set," *Augusta (Ga.) Chronicle*, January 19, 1966, p. 1; Paul Garber, "City booster's influence felt in many areas," *Augusta (Ga.) Chronicle*, June 21, 1996, available online: <http://chronicle.augusta.com/history/moody.html> (last accessed February 19, 2009); Mary Beth Reed, Barbara Smith Strack, et. al., *Savannah River Site at Fifty* (Washington, D.C.: U.S. Department of Energy and GPO, 2002), 101; Edward J. Cashin, *The Story of Augusta* (Augusta, Ga.: Richmond County Board of Education, 1980), 236.

Furman Shoals project on the Oconee River, the company abandoned the Clarks Hill project before construction began, and surrendered the Clarks Hill FPC license “on account of financial conditions and anticipated decreasing demands for electrical power in the years immediately following 1930.”<sup>54</sup> Once again, the Great Depression provided a wedge for the Corps of Engineers to move into the valley, and people like Moody took advantage of FDR’s interest in public works projects to move the Savannah River’s development forward by any means possible.

President Franklin D. Roosevelt, eager to see New Deal programs benefit southerners, wasted no time re-evaluating the Corps’ “308 Report” or the Clarks Hill situation. Less than one week from the date on Moody’s initial letter, FDR requested representatives from the War Department, the Federal Power Commission, and Department of the Interior to organize a joint Savannah River Special Board to determine Clarks Hill’s fate in mid-August, 1935. The Special Board concluded six months later in February 1936 that the Clarks Hill project would provide the Savannah River valley with “the benefits of navigation, the control of floods, the development of hydroelectric power, and the relief of unemployment.” The Special Board presented four ways to move the project from discussion to operation, ranging from valley authorities administered by the state or federal government, to joint public-private options. The Board concluded, however, that if the goal was to build the dam to provide immediate unemployment relief and electrical production within three years, FDR should consider either the public-private option or a federally administered project to proceed quickly with the Clarks Hill

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<sup>54</sup> Draft letter, Lester Moody, Augusta Chamber of Commerce, to President Franklin D. Roosevelt, August 8, 1935, Folder 1, Box 3, Lester Moody Collection, 2002.036, Augusta History Museum, Augusta, Georgia, hereafter LMC.

program.<sup>55</sup> Even Lester Moody initially recommended that FDR, “the Federal Government and the Savannah River Electric Company, through the Georgia Power Company,” enter a joint public-private arrangement whereby the federal government would construct the Clarks Hill water-power project and lease the power generation facilities to private companies.<sup>56</sup>

The recommended public-private option may have been the best choice since the Georgia Power Company still retained title to one of a few potential Clarks Hill dam sites after relinquishing its FPC license in 1926. But the Georgia Power Company – and its Commonwealth & Southern Corporation (C&S) holding company, one of the nation’s largest, was comprised of more than ten utility companies all over the country – had more to lose than the physical property at Clarks Hill. As Georgia Power navigated the Clarks Hill situation, C&S president and future Presidential-hopeful Wendell Willkie engaged TVA’s directors on multiple fronts to limit TVA’s expansion into C&S subsidiaries’ – namely the Alabama Power Company’s and the Tennessee Electric Power Company’s – customer territory. Alabama Power had acquired significant land and water power holdings in the Muscle Shoals area before the Great War, begrudgingly donated the Wilson Dam property to the federal government in 1918, and then entered into short-term contracts to purchase federally generated hydroelectric power from the site after 1925. Soon after Congress and the President created TVA, Willkie negotiated additional short-term contracts and agreed to sell specific utility properties including Alabama Power’s Wheeler dam site to TVA for \$2.9 million. This agreement set off the Alabama Power shareholder-led law suit – *Ashwander v. Tennessee Valley Authority* – in 1936. Given these complicated relationships between private utilities, their shareholders, and emerging public

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<sup>55</sup> Savannah River Special Board, *Clark Hill Navigation-Flood Control-Power Project, Savannah River, Georgia-South Carolina, Report to the President* (Washington, D.C.: [n.p], February 29, 1936), p. 44-48, National Archives II, College Park, Md., Record Group 77, Project 803017, Box 1109.

<sup>56</sup> Draft letter, Lester Moody, Augusta Chamber of Commerce, to President Franklin D. Roosevelt, August 8, 1935, Folder 1, Box 3, LMC.

utilities like TVA, the Georgia Power and other energy companies, not to mention Corps engineers, across the country all watched Willkie and the TVA board of directors engage in a private power versus public power war that had implications for the New Deal, the nation's rivers, and the Savannah River valley's Clarks Hill site.<sup>57</sup> Lobbyists on both sides continued to fight over water, who would protect private needs and public goods, and how to manage environmental risks.

Georgia Power president Preston S. Arkwright, Sr. walked a fine line as a powerful lobbyist involved in the region's water management. Arkwright did not publicly reject a federally financed Clarks Hill project, and he eventually back-peddled on his company's claim that no utility would purchase the federal project's electricity. He asserted that the Georgia Power Company would at least be ready to buy all the electricity since the company served about 80 percent of Georgia's population in about 75 percent of the state. When the Special Board held a 1936 public hearing, Arkwright revealed that Georgia Power operated twenty-four hydroelectric and thirty-two steam plants throughout the state. He also countered arguments made by rural electrification proponents within FDR's administration. TVA power projects and the Rural Electrification Administration (1935) subsidized electrical service in rural markets that private power companies refused to enter because rural customers rarely repaid capital investment costs. Arkwright – perhaps disingenuously – claimed the Georgia Power Company primarily served rural customers: “It is a rural company. It is a rural state. It is substantially a rural supply company.” Georgia was predominantly rural and the company did indeed serve rural customers, but Arkwright's company primarily envisioned Clarks Hill as a means to serve urban and industrial consumers. Given the timing of the Great Depression, the Georgia Power

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<sup>57</sup> Thomas K. McCraw, *TVA and the Power Fight, 1933-1939* (Philadelphia, Pa.: J. B. Lippincott Company, 1971), 63-65; Atkins, “*Developed for the Service of Alabama*,” 80-84, 93-103, 175-189, 193-195.

Company faced the favorable prospect of buying federally generated power without investing the capital necessary for a major project like Clarks Hill. Furthermore, if Georgia Power offered to purchase the energy and used the company's distribution lines, the federal government would not have to invest in a separate transmission system. From the company's glance into the future, when the country pulled out of the Great Depression, the company would have an established customer base and access to generation. But did Arkwright really value rural customers?

The Georgia Power Company and the Alabama Power Company primarily operated in rural states, and the companies did experiment with rural service and retail sales. Alabama Power installed its first rural line to serve ten farmers in 1920, but the customer that probably motivated extension of that particular line was a cotton gin operator. The company also worked with Alabama extension agents to study the prospects for rural electrification. By 1924 the company and the Auburn Agricultural Station's agents built three experimental rural lines, helped farmers install new equipment, wired homes, and installed new appliances to gauge rural electrical consumption. They concluded that diversified farmers were more interested in adapting to electricity than cotton growers. The agents thought cotton farmers – more specifically tenants and sharecroppers – would be difficult customers to nurture given their tentative labor contracts, and housing conditions that were not conducive to electrical wiring. Between 1924 and 1926, Alabama Power Company lines classified as rural increased from 40 to 350, and the rural customer base increased from 240 to 3,618.<sup>58</sup>

Preston Arkwright cited retail appliance sales to further defend the Georgia Power Company. He claimed that the Georgia Power Company's Home Sales and Home Service Divisions – both within the Sales Department and roughly in operation since 1926 – sold more refrigerators than “any company in the United States, regardless of size; the second largest

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<sup>58</sup> Atkins, *Developed for the Service of Alabama*, 125-128.

number of ranges...the largest of water heaters of any company in the United States....And taking all appliances of every kind in dollar volume, we sold the second largest amount of any company during the year 1934.” Impressive numbers, no doubt, considering FDR’s New Deal programs did little to protect those without an economic life raft as the Great Depression’s tide advanced.<sup>59</sup> But company officials’ proclamations about serving rural customers at this juncture would have illustrated a massive shift in a corporate culture that consistently rejected servicing rural areas. The companies, after all, were born to serve industrial customers, not residential customers in cities or the countryside.<sup>60</sup> Private power company representatives continued to play a role in the evolving Clarks Hill discussion, often using rural customers as pawns, but they were not the only voices.

Lester S. Moody continued to coordinate the voices of un-elected river promoters interested in the Savannah River valley’s water, power, and risks. He cultivated a relationship with Georgia Senator Richard Brevard Russell, Jr., who soon became the most powerful elected politician associated with the Savannah River valley’s transformation. Russell and other members of the Georgia state and Congressional delegations rarely wavered in their support for federal water projects on the Savannah River. Individuals like Moody filled another tier, and Moody did not shy from communicating with many of the era’s formative personalities and

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<sup>59</sup> Preston S. Arkwright’s (Sr.) statement was conveyed via correspondence from Lester S. Moody, Chamber of Commerce Secretary, Augusta, Georgia, to Senator Richard B. Russell, November 25, 1936, Correspondence and Materials, 1936, Rivers and Harbors Series, Richard B. Russell, Jr. Collection, Richard B. Russell Library for Political Research and Studies, University of Georgia Libraries, Athens, Georgia, hereafter RRC. Alabama Power Company also maintained a home retail and appliance division, and electrified the nation’s first movie theater in 1935, see Atkins, *Developed for the Service of Alabama*, 206-207. See also: Martha Elrod and Julie Groce, *Energizing Georgia: The History of Georgia Power, 1883-2004* (Macon, Ga.: Indigo Custom Publishing, 2004), 43-48.

<sup>60</sup> Preston S. Arkwright, President, Georgia Railway and Power Company, “Threatened State Control of Water Powers,” an address before the Association of Edison Illuminating Companies, White Sulphur Springs, W.Va., October 11, 1922; Henry Morrell Atkinson, Chairman of the Board, Georgia Railway and Power Co., “The Relation of Electric Power to Farm Progress: Georgia’s Need - More Industries and Less Politics,” an address before the Eighteenth Annual Farmers’ Week Conference, Athens, Georgia, January 28, 1925, p. 19; Allen Tullos, *Habits of Industry: White Culture and the Transformation of the Southern Piedmont* (Chapel Hill: The University of North Carolina Press, 1989), 164.

institutions, including University of North Carolina sociologist Howard W. Odum and the *Manufacturer's Record* journalist H. L. Clark. Howard W. Odum, perhaps best known for his book *Southern Regions of the United States* (1936), explained to Moody what change in the South might look like. Odum stated that the South's population would continue to outpace the rest of the nation and southerners would be least likely to migrate out of the area. Like other boosters in the region, Odum promoted a "fine balance between" industry and agriculture, hopefully through appropriately scaled industrial sites that did not simply bulldoze farmers. Odum supported the concept of the Clarks Hill project since the project could "make a real contribution to the" Southeast's industry and agriculture. Odum explained "that the old cotton economy in the South cannot continue as the sole master of the people and the land." Southerners, he contended, "must continue to grow cotton, better cotton...but it must be grown on better land" and in conjunction with diversified agricultural pursuits. Odum – a cattleman as well as an academic – declared that "livestock and dairymen must be one of the coordinate factors. The electrification of an area is one of the essentials for these developments."<sup>61</sup> H. L. Clark, an industrial writer for the *Manufacturers Record*, briefed Moody on the South's historical links between water, power, and industrial development. "Available power made possible by private enterprise played a major part in this increase of manufacturing within the past 25 years" in Georgia and South Carolina. "Every addition to the South's power opens new arenas to manufacturing opportunities and creates new wealth and employment by bringing in new plants and greater utilization of raw materials...In the next decade it is inevitable that power expansion on a sound basis must be undertaken if the region is to maintain its proper rate of

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<sup>61</sup> Howard W. Odum to Lester S. Moody, November 21, 1936, copy found in Correspondence and Materials, 1936, Rivers and Harbors Series, RRC.

growth with the rest of the South.”<sup>62</sup> Moody and his correspondents interpreted the South generally along parallel lines in terms of economic growth but not necessarily in parallel specifics. Odum envisioned water conservation as a way to power diversified agricultural and industrial development, while Clark maintained a more narrow industrial focus. Moody ultimately promoted Clarks Hill first and foremost as an industrial and commercial booster, but he was also realistic about Augusta’s rural environs and needs.

### **The Savannah River Valley Fishery**

Moody communicated with commercial interests who saw the Savannah River and Clarks Hill as powerful tools for industrial development. Other familiar voices also reemerged in the 1930s to speak for other aspects of the valley’s environment. Citizens of Elberton, Ga., who had loosely organized to improve Savannah River fisheries before and after the American Civil War, moved their advocacy from the editorial pages into Congressional and federal agency offices in 1937.<sup>63</sup> Attorney Z. B. Rogers contacted his Elberton neighbor and Congressional representative Paul Brown as well as Senators Richard B. Russell, Jr., and Walter F. George to request a fishway or fish ladder for the Augusta Canal diversion dam so that migratory fish might reach Elberton – a town on a Savannah tributary about sixty miles upstream from Augusta. Rogers explained that when the diversion dam was built, “no provision was made for passage of fish and as a consequence” the Savannah River had forever been almost “free of fish.” Residents in the valley above Augusta were “anxious to have this remedied,” particularly given his understanding that “the Government requires dams across streams to be equipped with some sort

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<sup>62</sup> H. L. Clark to Lester S. Moody, November 20, 1936, copy found in Correspondence and Materials, 1936, Rivers and Harbors Series, RRC.

<sup>63</sup> The city of Augusta previously built a “reinforced concrete fishway...over the [Augusta Canal Diversion] dam at the head of Bull Sluice according to plans furnished by the United States Department of Fisheries” in 1911, see: *Nineteen Eleven Year Book of the City Council of Augusta, Ga.* (Augusta, Ga.: Phoenix Printing Company, 1912), 32.

of fish-passage.” Rogers understood the dam’s larger commercial function: “We do not wish to interfere with the dam at all.” But Rogers was also speaking for himself and other fishermen when he said simply, “We just want a fish-way” since this was the dam “that did the damage” and prevented fish from getting “up our way.”<sup>64</sup>

Fishway requests like Attorney Z. B. Rogers’ were not isolated to Georgia’s Savannah River. The United States Fish Commission – an arm of the Commerce Department at the time – fielded similar inquiries and participated in Commerce’s and the Federal Power Commission’s (FPC) water-power application review process in the 1920s and 1930s. The Federal Water Power Act (1920) required all private parties interested in building water-power dams on the nation’s navigable waterways to submit applications for a FPC license. The act also required dam builders to provide fishways where necessary and practicable. Soon after the act became law, Secretary of Commerce Herbert Hoover clarified his department’s, and therefore the Fish Commission’s, authority. Hoover stated “the opinion of this office” in a case involving an Alabama Power Company project, and explained that “fishways over dams more than 25 or 30 feet high are seldom, if ever, effective. Furthermore, it does not appear that there are in this river any fish that are essentially migratory in their habits, or that would be likely to suffer seriously from the presence of a dam.” Rather than advocate for clean water and promote restoration of a migratory fishery, Hoover’s office found it more “probable that systematic plantings of suitable species of fish in the” artificial lakes “above the dam would compensate for any possible interference with the fish in the stream” by the dam. The Secretary of Commerce, apparently in collaboration with Fish Commission staff, concluded that “fishways of a greater height than 30 or 40 feet do not function properly.” Since these artificial conditions were less efficient than a

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<sup>64</sup> Z. B. Rogers, Attorney, Elberton, Ga., to Senator Richard B. Russell, Jr., Washington, D.C., May 3, 1937, and May 25, 1937, Folder 7243, Box 1556, Project 803017, RG 77, NAIL.

river's flow through rapids, "this Department feels that under the circumstances it would not be justified in asking that fishways be installed in dams where the fall of water or the height of the ascent of fish would be greater than 40 feet." With this directive, Hoover instructed the FPC to only request Commerce's opinion on fish ladders associated with dams under forty feet in height.<sup>65</sup> As such, FPC, Commerce, and Fish Commission staff continued to vet dam proposals that included fishway requests.<sup>66</sup>

In this context, Elberton's Z. B. Rogers waited on his request for fishways on the Savannah River's existing dams. Correspondence about the Augusta Canal diversion dam's fishway soon circulated among Georgia's Congressional delegation and engineers throughout the Corps' chain of command. Initially, the Corps thought Roger's concern stemmed from the most recently constructed dam on the river. After two years, the Corps had just completed the New Savannah Bluff Lock and Dam in 1937, one of many suggested projects from the 1935 "308 Report." The lock and dam, located about thirteen miles downriver from Augusta, was a Public Works Administration funded, single-purpose navigation project designed to facilitate navigation between Augusta and Savannah. Managed by the Corps, the lock and dam was not designed to provide flood control benefits nor was the dam capable of generating power.<sup>67</sup> Per Roger's fishway inquiry, the Corps initially concluded that the New Savannah Bluff dam might inhibit fish passage during periods of high water cascading over the low dam. But depending on those

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<sup>65</sup> Herbert Hoover, Secretary of Commerce, to Federal Power Commission, June 3, 1921, and Herbert Hoover, Secretary of Commerce, to Federal Power Commission, June 6, 1921, both located in Folder: Federal Power Projects – Miscellaneous, Records Concerning Fishways and Fish Protection Devices on Water Development Projects, 1919-35, Box 1, Entry 125, Records of the United States Fish and Wildlife Service (RG 22), NAIL.

<sup>66</sup> For example, see: "Power Development Roanoke River, NC/VA," Records Concerning Fishways and Fish Protection Devices on Water Development Projects, 1919-35, Box 1, Entry 125, Records of the United States Fish and Wildlife Service (RG 22), NAIL.

<sup>67</sup> Henry E. Barber and Allen R. Gann, *A History of the Savannah District U.S. Army Corps of Engineers* (Savannah, Ga.: United States Army Corps of Engineers, 1989), 118; United States Army Corps of Engineers, *New Savannah Bluff Lock and Dam Project, Savannah River, Georgia and South Carolina, Section 216, Disposition Study, Final Report* (Savannah, Ga.: Savannah District, September 8, 2000), pp. 1 and 4, available online: <http://www.sas.usace.army.mil/nsbld/DispositionStudy.pdf> (last accessed: March 4, 2010).

flows, only “very active game fish not found in the Savannah River” would pass over the new dam. Lt. Col. R. F. Fowler concluded that in the long run, “future operations of the dam will be such that the gates will never be entirely closed....During most of the year, however, fish should be able to pass the” new obstruction. Fowler did offer his assessment of three other dams – the Augusta Canal’s diversion dam, and the Stevens Creek and Gregg Shoals hydroelectric dams – above Augusta that had no fish ladders. “Except during very high stages when these dams are wholly or partially submerged,” Fowler explained, “it is not believed that fish of any kind can pass upstream. If there has been a scarcity of fish in the upper river due to the fact that fish cannot pass dams below, it certainly was not due to the [new] navigation lock and dam at New Savannah Bluff below Augusta.”<sup>68</sup>

All of this information filtered back up the chain of command, and the Chief of Engineers conveyed the information about the dams to Senators Russell and George, and Rep. Brown.<sup>69</sup> Rep. Brown soon clarified his request: Could the Corps “request the power company that built these dams to put fish ladders there, especially at the dam just above Augusta.”<sup>70</sup> Hard pressed at this stage, the Corps leadership reached their final conclusion: punt. After researching the three old dams’ legislative and licensing histories, Major General E. M. Markham determined that fishways were not the Corps’ responsibility. The Augusta Canal dam’s federal license stated fishways “may be prescribed by the Secretary of Commerce.” And when Congress approved the Stevens Creek Dam and Gregg Shoals Dam, both projects were subject to a 1906 law that stated private dams would be managed with “fishways as the Secretary of Commerce and Labor shall

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<sup>68</sup> Lt. Col. R. F. Fowler, Savannah District Engineer, to Chief of Engineers, U.S. Army, Washington, D.C., May 17, 1937, Folder 7243, Box 1556, Project 803017, RG 77, NAIL.

<sup>69</sup> Brigadier General M. C. Tyler, Acting Chief of Engineers, Washington, D.C., to Senator Richard B. Russell, Jr., Washington, D.C., May 21, 1937, Folder 7243, Box 1556, Project 803017, RG 77, NAIL.

<sup>70</sup> Rep. Paul Brown, Washington, D.C., to Brigadier General M. C. Tyler, Acting Chief of Engineers, Washington, D.C., Folder 7243, Box 1556, Project 803017, RG 77, NAIL.

prescribe.” As such, the Corps explained to Senators Russell and George, and Rep. Brown that “a request for the installation of fishways in these dams has been recently brought to the attention of the Secretary of Commerce.”<sup>71</sup>

The Commerce Department, in turn, sent R. M. Stevens of the U.S. Fish Commission to investigate the Gregg Shoals and Augusta Canal dams to evaluate fish ladder possibilities two months later. Stevens concluded that the ladders were “feasible” for both dams, but Stevens was not convinced of long-term shad recovery. First, the fishery expert expressed concern that the shad would not use the ladders, and second, the Commission did not foresee viable shad recovery unless the Georgia and South Carolina state legislatures protected the “fish from commercial fishers at the mouth of the Savannah.” He claimed to have “sympathy with the movement which Congressman Paul Brown” led, and would encourage the Fish Commission to continue doing “all it could to restore the Savannah river to...a fisherman’s paradise.” The Fish Commission’s final recommendation advocated for fish ladders in both dams.<sup>72</sup>

While he waited for somebody to take responsibility and install fishways in the Savannah River’s existing dams, Elberton attorney Z. B. Rogers must have also enlisted the Elberton Chamber of Commerce for assistance. This party then contacted none other than Lester S. Moody. Moody, in turn and much like the Corps’ engineers, may have missed Roger’s initial intention, since he inquired about his own pet project. Moody asked Senator Russell and the Corps about plans to install a “fish stairway” in the Clarks Hill dam. Moody, speaking for Augusta’s Chamber of Commerce, was “of course interested in preserving the natural resources

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<sup>71</sup> Major General E. M. Markham, Chief of Engineers, Washington, D.C., to Senator Richard B. Russell, Jr., June 7, 1937, Folder 7243, Box 1556, Project 803017, RG 77, NAIL.

<sup>72</sup> The Augusta City government completed a concrete fish passageway in the Augusta Canal diversion dam in 1911, see: “S.C. Game Warden Wynn Inspects New Fishway,” *Augusta (Ga.) Chronicle*, May 3, 1911, p. 8; “Fishway,” *Augusta (Ga.) Chronicle*, June 8, 1911, p. 10; *Nineteen Eleven Year Book of the City Council of Augusta, Ga.* (Augusta, Ga.: Phoenix Printing Company, 1912), 32. See also: “Savannah River Fishways Planned,” *Augusta (Ga.) Chronicle*, August 4, 1937, p. 6; “Savannah River Shad to be Given Ladders,” *Augusta (Ga.) Chronicle*, September 27, 1937, p. 1.

of the county.” Moody threw his support behind the Elberton Chamber of Commerce in their request for fishways in the Savannah River’s existing and future dams since it was his naive “understanding that the building of a fish stairway is not a very difficult undertaking, and I sincerely hope that we can persuade the Engineers to” install “a stairway” in the future Clarks Hill two-hundred-foot tall dam.<sup>73</sup> General E. M. Markham assured Russell and Moody “that if the construction of the Clarks Hill Dam is authorized, and this Department is charged with the preparation of plans, it will give careful consideration to the need for a fish ladder at the dam to include consultation with the Bureau of Fisheries, with a view to its incorporation in the plans for the dam.”<sup>74</sup> Lester S. Moody was willing to speak for the fish, but only within the context of securing the Clarks Hill dam. And like those interested in fish, water quality was never a part of the discussion; the number of fish and water storage remained more important topics. The comprehensive federal project at Clarks Hill, in Moody’s world, represented not only a balance between agriculture and industry, but also a promising prospect for natural resource conservation and recreation in an uncertain economic period where private industry’s single purpose projects alone appeared unable to serve the greater good and the public interest.

### **Georgia Water and Power**

In late 1939, local newspapers reported on a series of troubling developments for the massive Clarks Hill dam and water conservation project. One journalist classified the federal project on the Savannah River as a “modified TVA” that could provide many benefits, including navigation below Augusta, “a great recreational development in the way of a summer resort, and a federal forest, which would also include soil erosion and reforestation projects to control the

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<sup>73</sup> Lester S. Moody, Secretary, Augusta Chamber of Commerce, to Senator Richard B. Russell, Jr., Washington, DC, May 17, 1937, Folder 7243, Box 1556, Project 803017, RG 77, NAIL.

<sup>74</sup> Major General E. M. Markham, Chief of Engineers, Washington, D.C., to Senator Richard B. Russell, Jr., May 26, 1937, Folder 7243, Box 1556, Project 803017, RG 77, NAIL. There is no evidence as of yet that the Corps studied a fishway for Clarks Hill.

flood state” while also producing cheap electrical power.<sup>75</sup> Associating Clarks Hill with a new valley authority like TVA stirred at best a lukewarm response from some executives who were not interested in federal intervention in the southern economy or politics. Clearly not content with the direction Clarks Hill appeared to be moving, the Georgia Power Company launched a new discussion about plans to revive their own Clarks Hill project and re-apply for a Federal Power Commission license. The Augusta (Ga.) *Chronicle* continued to report that the federal plans revolved around a high multiple purpose dam for navigation, flood control, reforestation, recreation, and power. For those who understood the complexities of multiple purpose planning and engineering, “some of the Augusta supporters of the project were said to be doubtful” that private enterprise like the Georgia Power Company “could duplicate the vast program planned under the federal project since the latter involved development of the entire Savannah River valley.”<sup>76</sup> The Georgia Power Company, after all, still owned a half-completed hydroelectric dam at Furman Shoals on the Oconee River in 1939. Moody and others certainly asked: If the company could not complete Furman Shoals, once billed as the company’s third largest power project in the company’s portfolio, how could the Georgia Power Company again propose to start and finish an even larger and more comprehensive Clarks Hill project?<sup>77</sup>

The apparent conflict between those in favor of a federal power project and those in favor of a private power project was not new, and echoed the arguments surrounding the Tennessee River’s Muscle Shoals controversy. The Savannah River’s Clarks Hill project also illustrated the frustration President Franklin D. Roosevelt confronted when his New Deal administration attempted to right the ship of an overturned economy of the 1930s. As historian Bruce Schulman

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<sup>75</sup> “Leaders Asked About Private Development of Clarks Hill,” Augusta (Ga.) *Herald*, October 8, 1939.

<sup>76</sup> “G.P.C. Makes Bid for Clarks Hill,” Augusta (Ga.) *Chronicle*, October 9, 1939.

<sup>77</sup> The question was explicitly raised a few years later: John E. Stoddard, “Who Should Build the Clark Hill Dam?” *News-Reporter* (Ga.), April 24, 1947.

has argued, FDR commissioned the 1938 *Report on Economic Conditions of the South* because of frustration over southern intransigence toward New Deal programs and because the New Dealers saw no clear indication that the southern economy had improved. The Agricultural Adjustment Administration (AAA) injected cash into communities and reduced the total acreage in cultivation, but also adversely affected tenant farmers and sharecroppers. And, the AAA increased mechanization in planting but not in harvest times. If planters and landlords were able to make the AAA work for them, then southern industrialists found the National Recovery Administration (NRA) untenable. They disliked the NRA because it elevated wages for all labor – African American and white – and thereby threatened the racial status quo as well as company bottom-lines.<sup>78</sup> FDR turned primarily to southern liberals like Howard W. Odum to write the *Report on Economic Conditions of the South*, and the authors identified the South as the victim of extractive and colonial economic relationships with other regions, as well as a place of abundant but mismanaged resources. The report promoted massive federal spending programs to eliminate low wage labor, to provide federal funding for health and education, and to spur industrial development. As Schulman concluded, “Disguised as an objective analysis of the regional economy, the *Report on the Economic Conditions of the South* was a manifesto for the southern liberal program” justifying regional development. Industrial opponents to the report claimed the South was actually on an upward and not downward trajectory. Oppositional politicians likened the report and New Deal to another Reconstruction imposed on the South.<sup>79</sup> If there was one New Deal plan that they initially accepted, it was the Tennessee Valley

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<sup>78</sup> Donald Worster, *The Dust Bowl* (New York, N.Y.: Oxford University Press, 1979); Pete Daniel, *Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Cultivation since 1880* (Champaign: University of Illinois Press, 1985); Bruce J. Schulman, *From Cotton Belt to Sunbelt: Federal Policy, Economic Development & the Transformation of the South, 1938-1980* (First edition 1991; second edition Durham, N.C.: Duke University Press, 1994), 15-2.

<sup>79</sup> Schulman, *From Cotton Belt to Sunbelt*, 51-53.

Authority. Southerners had welcomed the idea to remake the Tennessee River Valley into a decentralized industrial heartland, to control the flooding, improve navigation, and to produce fertilizer to reclaim degraded farmland. The TVA initially looked like a set of programs targeting regional poverty and unemployment while also healing a sick land through “productive conservation.”<sup>80</sup> But Southern free enterprise advocates were not interested in more TVAs, and particularly not after the Supreme Court validated TVA’s Constitutional legitimacy. After 1935, TVA opposition increasingly tarred the organization as socialistic and anti-capitalist, and as an institution protected by government subsidies and insulated from competition.<sup>81</sup> The TVA solved some of the region’s water problems but remained a risky model.

After the first three years, the New Deal’s programs had not yet pulled the South, or the nation, out of the Great Depression. And still critics within and outside of FDR’s administration – particularly within the Department of the Interior and the Corps of Engineers – expressed concern over TVA’s expansion beyond electrical generation and river planning into forest and soil conservation. As FDR’s programs failed to deliver significant relief or threatened local political structures, navigation and flood control interests successfully lobbied for Congressional approval of what was becoming a near annual affair: another Flood Control Act (1936). This new act built upon the Flood Control Act of 1928, which had directed the Corps, not individual levee districts and state governments, to design, finance, and build all flood control projects. Congress designed the 1936 act to limit the expansion of additional valley authorities, and the act was an example of legislation born out of bureaucratic conflict. The new act divided flood control within river basins between the Corps and the United States Department of Agriculture’s Soil Conservation Service (SCS): the Corps retained flood control responsibilities on navigable

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<sup>80</sup> Phillips, *This Land, This Nation*, 216.

<sup>81</sup> McCraw, *TVA and the Power Fight*, chapter 6, “Living in the Courts,” and chapter 7, “The TEPCO sale and PWA.”

waterways, and the SCS assumed responsibility for the non-navigable streams and headwaters.<sup>82</sup> Most importantly, by dividing watershed responsibilities between the Corps and SCS within a given watershed, Congress dealt comprehensive river planning a mortal blow. By shying away from valley authorities after 1936 and dividing watershed responsibilities, Congress set the Corps up to emerge as the main river coordinator and multiple purpose water manager for the nation's rivers. And yet the Corps continued to move into the Savannah River valley slowly, fearful of upsetting an apple cart previously pulled by private enterprise and only marginally concerned about human welfare.

### **Evaluating and Preparing Clarks Hill**

The terms of the Flood Control Act of 1936 also called upon Corps engineers to complete another survey of the Savannah River valley's environmental resources.<sup>83</sup> Building on the Savannah River's "308 Report," the Corps conducted multiple investigations of the proposed Clarks Hill dam and reservoir sites, including updated regional power market surveys and construction cost estimates, as well as new geological surveys and real estate research. Edward B. Burwell, Jr., an Ohio River District geologist for the Corps, reported in 1942 that "the geological investigation" of fourteen potential Savannah River valley dam and reservoir sites was "of a preliminary character." The Clarks Hill site, however, involved "considerably more" detailed investigation, and Burwell determined that "all of the proposed reservoir area" was "underlain by granite, gneiss and schist." The Savannah River valley's earth – unlike the porous Hales Bar dam site in the Tennessee River valley – presented "no soluble rocks such as limestone or dolomite in which solution channels and cavernous structures might develop."<sup>84</sup> As

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<sup>82</sup> O'Neill, *Rivers By Design*, 146-147, 164-165.

<sup>83</sup> U.S. Congress, House, *Savannah River, GA*, 78<sup>th</sup> Congress, 2<sup>nd</sup> sess., June 9, 1944, House Document 657.

<sup>84</sup> See Chapter 2 for this story. See also Arthur Ernest Morgan's assessment of the Tennessee River's general geologic conditions, *The Making of the TVA* (Buffalo, N.Y.: Prometheus Books, 1974), 97.

such, “the geologic conditions of the reservoir rim with respect to water-tightness are favorable for the storage of water.” The Earth’s geologic history produced an exceptional location for a twentieth century multiple purpose dam, with “granite and granite gneiss of excellent quality...available for the foundations of all concrete structures at comparatively shallow depths.” In simple terms, the surveys said that the Clarks Hill site resembled a rock bathtub – the dam builders only needed to plug the drain with a dam to begin conserving billions of gallons of water that then tumbled easily to the Atlantic Ocean. The environmental conditions were perfect for a hydroelectric dam and artificial reservoir.<sup>85</sup>

While Burwell conducted a geological investigation to determine the water conservation value of Clarks Hill, two other Corps staffers completed a real estate investigation of the Clarks Hill project area’s human resources in 1942. J. S. Durant and B. H. Grant, from the Corps’ Atlanta Division, canvassed the Clarks Hill site and found “the entire area except for limited acreage of” bottomland in “an extremely poor agricultural” state. They considered the land “from sub-marginal to marginal” and as “having limited agricultural value.” Based on title searches and interviews, Durant and Grant discovered 521 land owners, and determined that the area was “sparcely [sic] tenant occupied, mostly colored, and restricted to not more than 50 families.”<sup>86</sup> As Andrew Sparks reported for the *Atlanta Journal Magazine* five years later, “Although some farm land will be inundated, there are remarkably few home sites in the vast

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<sup>85</sup> Edward B. Burwell, Jr., *Report on Geology of Dam and Reservoir Sites in the Savannah River Basin, Georgia and South Carolina* (Cincinnati, Ohio: War Department, Office of the Division Engineer, Ohio River Division, October 1, 1942), 2-13, Box 66, Accession 76E342, RG 77, NAS.

<sup>86</sup> J. S. Durant and B. H. Grant, *Real Estate Planning Report for Clark Hill Reservoir, Savannah River Basin, Georgia and South Carolina* (Atlanta, Ga.: War Department, U.S. Division Engineer, Real Estate Branch, October 1942), 4, Box 66, Accession 76E342, RG 77, NAS. A few years later and as the proposed reservoir area increased in size, the Corps determined a total of 450 individuals – white and African American – comprised the approximately 128 resident and tenant families who required physical relocation from an area that encompassed 96,000 acres, “Appendix IX, Real Estate,” in *Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*, Corps of Engineers, South Atlantic Division (Revised, May 1, 1946), pp. IX-2 and IX-3, Folder 821.2 “Clark Hill Dam,” Box 141, Entry #53a114, RG 77, NAII.

area” since most valley residents “built on high ground” above the valley floor.<sup>87</sup> Of the hundreds of “ownerships,” many were claimed by absentee individuals, family estates, and corporations such as Gibson Real Estate, the Bank of McCormick (S.C.), and the Union Central Life Insurance Company. Nearly fifty-percent of the total land required for the entire project was owned by three different power companies: the Savannah River Electric Company, the Duke Power Company, and the Twin City Electric Company.<sup>88</sup>

The Clarks Hill real estate situation was clearly different from one of the most well documented dam and reservoir clearing stories. The Tennessee Valley Authority acquired 153,008 acres and displaced about 3,500 families in preparation of Norris Dam and reservoir in the late 1930s.<sup>89</sup> In the Clarks Hill case, much of the land required for the dam and reservoir had been slowly consolidated by private power companies over the preceding decades, and would soon be doubled by the Corps. The Savannah River valley real estate surveyors claimed the tens-of-thousands of acres required for inundation consisted of “very sparsely settled agriculturally poor lands,” no valuable timber stands, no industrial operations, and were generally “of little...economic value to the agricultural situation of the South.” In addition to relocating more than fifty families, the Corps surveyors determined that state officials would also

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<sup>87</sup> Andrew Sparks, “Mile-Wide Dam for the Savannah,” *Atlanta Journal Magazine* (January 12, 1947): 8-9, Box 3, Folder 3, LMC.

<sup>88</sup> It is worth noting that a 1915 Corps map of the Clarks Hill reservoir area listed approximately eighty property owners including: named individuals (three listed as “colored”), named estates, and three separate energy companies, N180 1-62, “Savannah River at and Above Augusta, Ga.,” U.S. Corps of Engineers (May 9, 1916), in 39 sheets, Record Group 77, Civil Works Map File 330/1/29/3-62, National Archives, College Park, Maryland.

<sup>89</sup> For one reservoir project, TVA purchased 239 square miles (153,008 acres) and displaced about 3,500 families, see: Michael J. McDonald and John Muldowny, *TVA and the Dispossessed: The Resettlement of Population in the Norris Dam Area* (Knoxville: University of Tennessee Press, 1982), 70. Margaret Lynn Brown offers a critical assessment of TVA’s 1942 Fontana reservoir project and the removal of 1,311 families, see, *The Wild East: A Biography of the Great Smokey Mountains*, 145. See also: Darren Anthony Shuler, “On Our Land: Progress, Destruction and the Tennessee Valley Authority’s Tellico Dam Project” (M.A. thesis, University of Georgia, 2000); and Robert P. Shapard, who has also reached this conclusion based on analysis of oral histories, real estate files, and condemnation cases associated with the Clarks Hill project, “Building an Inland Sea: Clarks Hill Lake on the Upper Savannah and the Twentieth-Century Lives, Land, and River Hidden by its Waters” (M.A. thesis, North Carolina State University, 2009).

need to accept numerous highway and utility line relocations. But Durant and Grant thought this was a small local sacrifice for a regional conservation and war-time project: “These relocations can be made with comparatively little effect on the community life of people in the section, and without a large amount of disruption of service and transportation in these communities and between the states of Georgia and South Carolina.” As such, the Corps interpreted these property sacrifices as serving the “greatest good to the greatest number,” and the Clarks Hill project as providing “benefits” that “would outweigh the inconveniences brought about” by a massive federal land and water conservation project to solve southern water problems.<sup>90</sup>

### **Conclusion: Managing Risks and Hamburg**

Some Savannah River valley residents – at least those who had received no monetary benefit from levees, dams, and electrical generation – were familiar with sacrificing for the greater good in the 1920s and 1930s. South Carolina citizens who lived across the Savannah River from Augusta were relocated, but not by the federal government or for a massive structural flood control solution like Clarks Hill. The Hamburg, South Carolina, African Americans “rendered homeless” by the Savannah River’s Great Flood and Augusta’s levee were victims of racial politics, sacrificed personal property for the public good of Augusta, and participated in a non-structural flood control solution in 1929.

Prior to the Great Flood in the fall of 1929, two floods had inundated Hamburg and elicited a response from the Headquarters of the American National Red Cross and local chapters. After the first flood, when the Savannah ran from its banks in May 1928, the Aiken, S.C. chapter extended limited aid to about half of the eighty African American families and factory workers who lived in Hamburg. Most of the men worked in the brick factories, and many of the women cultivated large gardens to sell produce across the river in Augusta markets.

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<sup>90</sup> Durant and Grant, *Real Estate Planning Report for Clark Hill Reservoir*, 4-8.

After the second flood, the American National Red Cross provided aid again when a May 1929 flood inundated Hamburg. The Red Cross official who assessed Hamburg's flood damages in early 1929, took the time to explain why African Americans continued to remain in the community after floods. Residents did not like living in harm's way, but occupied their homes "practically rent free." Despite recognition of at least one reason behind the community's existence, Red Cross personnel were frustrated by what they perceived as African Americans' "indifference and insistance [sic] in residing in this constantly threatened territory." White observers missed African Americans' pragmatic and rational economic decisions, and instead were "not only out of sympathy with them but are really indignant," according to John T. McMullen.<sup>91</sup> While the Red Cross can be commended for responding to these events, they continued to blame the victims for maintaining residence in the flood plain without considering the broader racial, economic, and structural factors that influenced Hamburg's African American settlement and vulnerability. None of the responders identified Augusta's levee as a risk management device that produced the risk of flooding in Hamburg. And, Hamburg's African American residents had limited choices and reasons not to relocate after the spring floods of 1928 and 1929. The consequences of the double storms and Great Flood of 1929, however, were different.

As black and white citizens of Augusta and officers from the Army Corps of Engineers raced to save the Augusta levee from total collapse in September and October, the American National Red Cross again tended to people impacted by the Great Flood. The Red Cross provided food for over 1,000 people from Hamburg and Augusta who had been displaced by flooding. After the mayor evacuated Augusta, the Red Cross prepared to provide tents for over

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<sup>91</sup> John T. McMullen, Liaison Representative, American Red Cross, Atlanta (Ga.) Regional Office, to Colin Herrle, Assistant Director, Disaster Relief, American Red Cross, March 12, 1929, Folder DR 305 South Carolina, Hamburg Flood 2/28/29, Box 756, RG 200, NAIL.

20,000 people in the event of a catastrophic levee failure.<sup>92</sup> When the flood waters began to recede and the Augusta levee held, the Aiken and Augusta Red Cross Chapters balked at providing aid for Hamburg residents because community members did not want to encourage Hamburg residents to maintain homes on the flood plain. In a moment of solidarity, all levels of the Red Cross agreed that Hamburg residents should be relocated.

Less than one month after the Great Flood of 1929, a relocation solution emerged. After confidential consultation with Augusta's and Aiken's white business men, as well as with Augusta's African American business community, the American National Red Cross office struck a deal. Charles W. Carr, the Washington, D.C. Red Cross representative in Augusta, "approached several of the leading business men" regarding a plan to move "the people out of Hamburg" since all agreed "it is the only way to solve the problem." Carr also found Augusta's bankers and two local newspaper editors extremely receptive to the idea. Lee Hankinson, owner of the Hamburg Hankinson Brick Company, suggested that Carr contact a Mrs. Hitchcock, described as a "wealthy northern woman with a winter residence in Aiken." Hankinson certainly referred to, and suggested that Louise "Lulie" Hitchcock – wife of a New York horse trainer and polo player Thomas Hitchcock – might purchase "all the Hamburg property and just hold it to prevent any one else from going in there to build." Hankinson suggested that Carr approach Hitchcock because she apparently did "a great deal of work among the colored people." Hankinson himself also offered to purchase the land but was not convinced African Americans in

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<sup>92</sup> "Red Cross Feeds 1,000 Refugees in Augusta Flood," American Red Cross News Service, October 2, 1929, and Colin Herrle, Assistant Manager, Eastern Area, American National Red Cross, *Summary of Georgia - South Carolina Floods, October 1929*, both located in Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI.

Hamburg would sell to him. But rather than use the newspapers to promote the relocation idea, Carr “asked the papers to say nothing about” the plan for the time being.<sup>93</sup>

One week later, Carr presented the American National Red Cross office with a formal set of *Proposed Plans for Rehabilitation in Hamburg, S.C.* Since Hamburg had “received Red Cross relief three times in the past and” would undoubtedly call “upon the Red Cross for assistance in the future,” Carr recommended “that an effort be made to move or dispose of the buildings” that remained. He presented three plans and ultimately recommended that the Red Cross facilitate relocation of residents from Hamburg to Carpentersville on Shoats Hill, about one mile away and eighty-feet above the flood plain. The assumption was that the Red Cross could purchase six acres for \$350 per acre and subdivide the land into at least twenty-two individual properties. This plan would cost a total of \$6,500 and provide new residences for previous Hamburg owner-occupants. Given the options, the history of flooding, and the legacy of flood plain occupation, the American National Red Cross chose a decidedly non-technological option to remove people from the flood plain and re-create Hamburg in a new location.<sup>94</sup>

Newspapers soon began to report a new Hamburg on the plateau above the Savannah River’s flood plain after the American National Red Cross negotiated purchase of a few acres on the hill above the river that had been sub-divided by an unnamed “local real estate man.” The American National Red Cross then evaluated each Hamburg family on a case by case basis, awarded home-owners a stipend to cover a new lot purchase (\$75), plus the costs of moving the

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<sup>93</sup> Charles W. Carr, Disaster Relief Representative, American National Red Cross, Washington, D.C., to Colin Herrle, Assistant Director, Disaster Relief, American Red Cross, November 12, 1929, Folder DR-305 South Carolina, Hamburg Flood, 2/28/29, Box 757, RG 200, NAI.

<sup>94</sup> \$350 per acre would be an exorbitant price, and it’s possible the plan may have contained computational errors, see: Charles W. Carr, *Proposed Plans for Rehabilitation in Hamburg, S.C.*, November 18, 1929, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI.

old Hamburg home or building a new home. In total, the American National Red Cross provided \$9,300 of \$10,500 for metro-Augusta's rehabilitation and Hamburg's relocation after the 1929.<sup>95</sup>

In patronizing and erroneous language, an Augusta journalist explained that "the land on which these humble negroes [sic] have elected to call new Hamburg was given them through the generosity of the American Red Cross and the white people of Aiken county [S.C.]."<sup>96</sup> In truth, the Hamburg relocation was only possible with help from Augusta's African American community. Hamburg's eighty-two families had received food assistance from three sources over three weeks, including the Metropolitan Life Insurance Company, a group of North Augusta (S.C.) citizens, and William Carpenter, a prominent African American business man with an extensive network. Carpenter was an Augusta grocer, president of the Georgia Mutual Life & Health Insurance Company, and president of the Penny Savings and Loan Company.<sup>97</sup> Carpenter did more than provide groceries and food for Hamburg residents; he eventually received many of the construction contracts to build new homes with American Red Cross subsidies.<sup>98</sup> Perhaps most importantly, Carpenter owned the land under the new Hamburg. He served on the board of directors for the Southern Realty Company, a real estate firm in the African American community, and O. M. Blount, the company's president, was the unnamed

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<sup>95</sup> Charles W. Carr, *The Georgia-South Carolina Flood of 1929*, February 11, 1930, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI.

<sup>96</sup> John F. Battle, "New Hamburg, Now on a Hill, Rises From Ruins of the Old," *Augusta (Ga.) Chronicle*, January 20, 1930, p. 3; "Hamburg 'On Heights,'" *Augusta (Ga.) Chronicle*, January 27, 1930, newspaper clipping, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI.

<sup>97</sup> Charles W. Carr, *The Georgia-South Carolina Flood of 1929*, February 11, 1930, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI; "Insurance Firm Pays Tribute to Dr. Stoney," *Augusta (Ga.) Chronicle*, October 18, 1926, p. 8; Editorial, "A Negro Bank For Augusta," *Augusta (Ga.) Chronicle*, February 23, 1928, p. 4.

<sup>98</sup> Charles W. Carr, Disaster Relief Representative, American National Red Cross, Augusta, Ga., to J. C. Whatley, Purchasing Officer, Aiken County Chapter Flood Relief, North Augusta, S.C., December 17, 1929, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI.

“local real estate man” who subdivided the new Hamburg property, which was named Carpentersville.<sup>99</sup> The end of Hamburg’s story, however, is bittersweet.

The Savannah River valley’s water problems, Augusta’s politics, and the city’s levee technology manufactured risk in Hamburg and ultimately led to the community’s dissolution. The Augusta levee project protected the city’s public welfare but not the South Carolina families – the African American market gardeners and brick makers – that fed and built Augusta’s urban infrastructure. For those Augustans intent on managing the Savannah River in drought and flood, the obvious solution was to move Hamburg, thereby saving lives and money well into the future. This move was undoubtedly for the public’s – and Hamburg’s residents – best interest. The Hamburg post-flood resolution was significant because the National American Red Cross successfully engineered a community relocation project that moved an African American community out of harm’s way. The solution was not to build levees or other expensive flood control structures that many white communities and urban boosters have historically demanded elsewhere (i.e. New Orleans). Instead, the Red Cross successfully engineered a non-structural solution to eliminate future flood disasters within one minority community with material and financial assistance from local white and black businesses. The ending was bittersweet, no doubt, because the market gardeners would not have had access to the same fertile floodplain soil, and the brick factories were closed down. It is unclear how the new residents of Carpentersville made a living after the Great Flood of 1929 washed Hamburg away. The old Hamburg site, however, is currently the site of “executive homes” between the river front and the

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<sup>99</sup> “Southern Realty Company” source: Advertisement, Augusta (Ga.) *Chronicle*, June 2, 1929, p. D-5. Carpenter’s land ownership: Charles W. Carr, Disaster Relief Representative, American National Red Cross, Washington, D.C., to Colin Herrle, Assistant Director, Disaster Relief, American Red Cross, November 12, 1929, Folder DR-305 South Carolina, Hamburg Flood, 2/28/29, Box 757, RG 200, NAI.; and “Plat Showing Property Located in Schultz’s (66<sup>th</sup>) Township, Aiken County, South Carolina, Surveyed for O. M. Blount,” December 1929, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI. “Wealthy northern visitors:” Telephone Conversation, November 7, 1929, Folder DR 326 Georgia-South Carolina Flood, 9 & 10/29, Box 760, RG 200, NAI.

River Golf Club, and Carpentersville was eventually surrounded by industrial facilities and strip malls.

Hamburg's residents were not the only Savannah River valley residents subjected to sacrifice for the rest of the valley. Elberton's shad-enthusiasts who requested a fish ladder for the Augusta Canal diversion dam in 1937 also re-learned that the rivers and dams continued to serve commercial and industrial constituents in Augusta. The solution to the fishery problem included recommendations for fish ladders, regulation of commercial fishing, and eventually non-native hatchery programs. And the dams were not coming down anytime soon. Finally, the fifty families and small communities that faced buy-outs, condemnations, and public road and utility relocations in the Clarks Hill project area in the 1950s may never have heard the "greatest good" justification directly. All of these Savannah River valley residents shared an experience of sacrifice revolving around a complex attempt to manage the river's water in dry and high times. The powerful people who controlled the valley's water for industrial and commercial economies turned a handsome personal profit at the expense of others who sacrificed homes, occupations, and property.

Solving the American South's water problems remained a predominantly private enterprise until the Great Depression. The Wall Street crash in 1929 was the major turning point for the Savannah River valley's waterscape, the New Deal provided a wedge for federal agencies to participate in sculpting the American South's rivers and streams on a large scale, and managing risks and water would never be the same. Private companies manipulated southern waters to generate electricity primarily for urban, industrial, and commercial – not rural and agricultural – constituencies from Mississippi to Tennessee, and from Georgia to Virginia. The Tennessee Valley Authority presented an alternative for managing water and other resources, but

many Americans and Congress rejected the TVA model, leaving other federal agencies like the Corps to negotiate with multiple stakeholders over the fate of southern rivers. This chain of events presented all parties interested in southern waterscapes, water problems, and conservation – public and private, large and small – with very different circumstances and options in the post-World War II period.

## CHAPTER 4

### “EVERYONE IS FOR IT”: CLARKS HILL DAM AND AN ILLUSION OF POST-WAR UNITY, 1944-1954

Dry years and a lack of water left Georgians with a serious problem and equally grim choices in 1941. Like a broken record, different regions of the American South had rotated from drought to flood and back again since the 1920s. And not unlike a previous multiple year drought, observers in the 1940s could no longer pass this one off as an *agricultural drought*. By 1941, an *urban drought* threatened water and electrical consumption in homes, businesses, and factories at the very moment that the nation’s industrial machine mobilized to provide its European Allies with additional war material. Conditions were so bad that the Georgia Power Company began rationing electrical service to customers via controlled “blackouts” in Atlanta and Augusta.<sup>1</sup> In May 1941, the state Weather Bureau reported a “deficiency of 10 inches of rainfall, or only one-half the normal supply of rain which Georgia ordinarily” received in the first five months of the calendar year, making this drought the worst drought on record since 1904.<sup>2</sup> This lack of rainfall threatened the Blue Ridge and Piedmont South’s rivers, but more importantly, the drought jeopardized all of the region’s artificial reservoirs that private energy

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<sup>1</sup> “Sacrifices Being Made by Augustans To Avert Threatened Power Shortage,” *Augusta (Ga.) Chronicle*, May 30, 1941, p. 3; for “blackout” see: Public Service Advertisement, “Public Welfare Demands GREATER Power Savings,” *Atlanta (Ga.) Constitution*, June 13, 1941, p. 8.

<sup>2</sup> Weather Bureau statement: “U.S. Forester Warns of Fires,” *Atlanta (Ga.) Constitution*, May 18, 1941, p. 2D. For 1904 statement, Advertisement: “Save Electricity! The Response if Fine But - Not Enough Yet,” *Atlanta (Ga.) Constitution*, June 2, 1941, p. 5.

companies used to store water to produce hydroelectricity for consumers. These physiographic southern regions, after all, had no natural lakes and limited indigenous energy sources.

Southern and environmental historians have been slow to recognize these conditions and the full range of the southeast's water problems, and this is surprising since water has been a critical agent in the region's economic history.<sup>3</sup> After a half-a-century's worth of New South boosters' rhetoric that sold the region to industrial developers predicated on an abundance of water and cheap power, how could the region suddenly lack water?<sup>4</sup> How then, did post-World War II promoters intend to approach water conservation differently to avoid rationing the electrical supply in the future? The answer – massive artificial reservoirs – became the South's latest method of taking federal dollars to promote industry and leisure at the expense of agriculture in a battle to overcome environmental conditions like droughts and floods. The United States Army Corps of Engineers' Clarks Hill dam and lake on the Savannah River – located about twenty miles upstream from Augusta, Georgia where the river forms the state line

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<sup>3</sup> Southern utility companies have received only brief mention in southern history, see: C. Vann Woodward, *Origins of the New South, 1877-1913* (Baton Rouge: Louisiana State University Press, 1951), 128-130; and George Brown Tindall, *The Emergence of the New South, 1913-1945* (Baton Rouge: Louisiana State University Press, 1967), 71-79, 95-97. Professional historians and company employees have written several southern utility company-specific histories without clearly linking the companies' legacies to the region's history, see: Wade H. Wright, *History of the Georgia Power Company, 1855-1956* (Atlanta, Ga.: Georgia Power Company, 1957); Jack Riley, *Carolina Power & Light Company, 1908-1958* (Raleigh, N.C.: Edwards & Broughton Company, 1958); Erwin C. Hargrove and Paul K. Conkin, eds., *TVA: Fifty Years of Grass-Roots Bureaucracy* (Chicago: University of Illinois Press, 1983); Robert F. Durden, *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001); Martha Elrod and Julie Groce, *Energizing Georgia: The History of Georgia Power, 1883-2004* (Macon, Ga.: Indigo Custom Publishing, 2004); and Leah Rawls Atkins, *Developed for the Service of Alabama: The Centennial History of the Alabama Power Company, 1906-2006* (Birmingham, Ala.: Alabama Power Co., 2006). Other useful southern river and water histories include: Lynn Willoughby, *Flowing Through Time: A History of the Lower Chattahoochee River* (Tuscaloosa: University of Alabama Press, 1990); Harvey H. Jackson III, *Rivers of History: Life on the Coosa, Tallapoosa, Cahaba, and Alabama* (Tuscaloosa: University of Alabama Press, 1995); and Edward J. Cashin, *The Brightest Arm of the Savannah: The Augusta Canal, 1845-2000* (Augusta, Ga.: Augusta Canal Authority, 2002).

<sup>4</sup> For example, see: Joel Chandler Harris, *Life of Henry W. Grady Including His Writings and Speeches* (New York, N.Y.: Cassell Publishing Company, 1890), pp. 199-207 and "Cotton and Its Kingdom" (1881), 273; Broadus Mitchell, *The Rise of the Cotton Mills In the South* (Baltimore, Md.: Johns Hopkins University Press, 1921), 263; Rupert Bayless Vance, *Human Geography of the South: A Study in Regional Resources and Human Adequacy* (Chapel Hill: University of North Carolina Press, 1932), "Piedmont Crescent of Industry" chap. 12; and Gavin Wright, *Old South, New South: Revolutions in the Southern Economy Since the Civil War* (Baton Rouge: Louisiana State University Press, 1986), 43-47.

between Georgia and South Carolina – was the federal government’s answer to this question and salvation for the region’s boosters.<sup>5</sup>

Southern historians have spent a tremendous amount of time and energy discussing the rise of the New South, but few have paid attention to how southern industrialization and urbanization were built upon environmental manipulation before and after World War II. Post-1945 southern historians have demonstrated how boosters and local developers shared interests in positive economic growth and labor control. Some boosters promoted industrial development purely on a private level with liberal local incentives, and others wanted to use federal dollars to build the infrastructure necessary for the Sunbelt’s future economic growth. Scholars have addressed some of the environmental consequences that could no longer be avoided after 1945, but most southern historians have been pre-occupied with New Deal and Tennessee Valley Authority programs. They have not examined the Army Corps of Engineers’ role in the transformation of the cotton belt into the Sunbelt after 1945, or the consequences of the Corps’ transformation of the region’s rivers and valleys at the behest of local interests lobbying for non-navigational purposes. Not unlike other federal agencies – such as the Atomic Energy Commission, the Soil Conservation Service, and the Forest Service – the Corps was a major participant that reshaped the post-1945 South. In an agricultural landscape, the Corps created new structures that benefited industry and recreation, all in an attempt to manipulate the region’s environmental conditions.<sup>6</sup>

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<sup>5</sup> The dam and lake project that I will refer to as Clarks Hill throughout this dissertation has a storied “name” history. The water power site was known as Clarks Hill, a reference to an adjacent South Carolina rural community, throughout the nineteenth century. Due to a stenographer’s mistake in the initial Congressional authorization legislation, the Corps’ project became Clark Hill Dam and Lake. Between the 1950s and 1980s, the project was referred to as Clark Hill and Clarks Hills. In 1988, Congress changed the name to J. Strom Thurmond Dam and Lake at Clarks Hill. Today, people refer to the project as Thurmond Dam, Thurmond Lake, and Clarks Hill Lake.

<sup>6</sup> James Cobb, *The Selling of the South: the Southern Crusade for Industrial Development 1936-1990* (first edition 1982; Urbana: University of Illinois Press, 1993); James C. Cobb, “Beyond Planters and Industrialists: A New Perspective on the New South,” *Journal of Southern History* 54, 1 (February 1988): 45-68; Bruce J. Schulman,

Managing ever-shifting environmental conditions to meet human expectations, however, was no easy task, and the United States Army Corps of Engineers, ready or not, became the primary agency responsible for water conservation in the Savannah River valley after 1944. The Corps – empowered by Congress, operating under the terms of the 1944 Flood Control Act, and welcomed by local valley boosters – planned and completed the first major multiple purpose water project in the Savannah River valley. The Clarks Hill Dam and Lake – originally conceived as a private single purpose power project but later justified as a public works project funded by the tax-payer – became a valley symbol of post-World War II unity and possibility. Since the 1890s, energy companies built dam and reservoir projects throughout the southern Piedmont and Blue Ridge. These privately financed projects influenced the Tennessee Valley Authority, which followed suit beginning in 1933 on a much larger scale during the Great Depression. After 1945, regional boosters thought the Corps looked more acceptable as a water conservation institution and reservoir manager in comparison to those old private monopolies or any new valley authority. The Corps’ projects, after all, technically would not include the social planning that came with the TVA, and they initially wanted to leave power production to the private sector. The Corps’ post-1945 mandate, however, would not be that simple. Their Savannah River valley projects expanded to include recreation components that would test the boundaries of class and race in the Savannah River valley’s leisure landscapes, would require acquisition of tens-of-thousands of acres of private land and working landscapes, and would necessitate managing public health and state highway relocations. Lastly, the Corps’

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*From Cotton Belt to Sunbelt: Federal Policy, Economic Development & the Transformation of the South, 1938-1980* (first edition 1991; Durham, N.C.: Duke University Press, 1994); Bartley, *The New South*; Jeffrey K. Stine, *Mixing the Waters: Environment, Politics, and the Building of the Tennessee-Tombigbee Waterway* (Akron, Ohio: University of Akron Press, 1993); Scott H. Dewey, “The Fickle Finger of Phosphate: Central Florida Air Pollution and the Failure of Environmental Policy, 1957-1970,” *Journal of Southern History* 65, 3 (1999): 565-603; Kari Frederickson, “Confronting the Garrison State: South Carolina in the Early Cold War Era,” *Journal of Southern History* 72, 2 (2006): 349-378; Craig Colten, “Contesting Pollution in Dixie: The Case of Corney Creek,” *Journal of Southern History* 72, 3 (2006): 605-634.

hydroelectric projects became lightning rods as private utility executives derided public power as “socialist” in a bid to promote free enterprise and protect company coffers. Ultimately, the Corps was ill-prepared to manage the Savannah River valley’s Clarks Hill project given the wide range of required expertise to tackle these tasks. From the beginning, the Clarks Hill project appeared to have wide support, but it was a project that took promoters, engineers, private executives, elected officials, and residents into uncharted waters. The Corps was challenged to manage seemingly tangential new objectives and the social engineering required for projects like Clarks Hill. Crafting blue lakes from a land of red clay to avoid future droughts and floods proved more difficult than anyone could have anticipated. This new nature – artificial lakes and attendant recreational possibilities and public health responsibilities – invited conflict.

### **Same Problem, Different Time: The 1941 Drought**

Just as Augusta and the Savannah River valley pulled through the Great Flood of 1929, they would pull through the drought of 1941. To save the interconnected production and consumption network, the Georgia Power Company soon announced a “SAVE ENERGY Plan” and continued to run nearly full-page announcements in the Atlanta *Constitution* and other state newspapers throughout the second half of 1941. The Georgia Power Company – a powerful New South energy company in operation since the first decade of the twentieth century – communicated a serious message to urban residents: “This is not a ‘scare.’”<sup>7</sup> The Augusta *Chronicle* editors picked up the company’s energy conservation message and implored city officials, business leaders, and the general public to make “sacrifices” for national defense production since the “water in Lake Burton” – the largest of the Tallulah-Tugaloo River storage reservoirs “where the Georgia Power Company derives most of its hydro-electric power” in

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<sup>7</sup> Display Ad, “Public Welfare Demands GREATER Power Savings,” Atlanta (Ga.) *Constitution*, June 13, 1941, p. 8.

northeast Georgia – was reduced by forty-percent. The company and the editors clearly linked water conservation and electrical production with electrical demand and consumption in urban areas. For example, the company requested that business owners “raise the temperature to 83 degrees” in their air conditioned shops as a part “of the patriotic power thrift campaign.” The Augusta Merchants association asked members to sign pledge-cards to reduce consumption and promised that “Names will be published in the local newspapers.” One Georgia Power representative explained that city-wide controlled “blackouts” – which required shop keepers to turn off display window lights, reduced street light coverage, and cut elevator usage – were necessary to get through “the present serious situation” which had slowly “been approaching a crisis for two years.”<sup>8</sup> As the editors noted, “The electric power situation became critical not only because of the abnormal electric power requirements of defense plants” scattered across the southeast and connected by long-distance electrical transmission lines, “but also because of one of the most prolonged and excessive droughts this section has experienced in many years.”<sup>9</sup>

The urban drought “crisis” intensified before it abated while threatening the Georgia Power Company’s power. The company’s executives prepared Georgians to abandon the optional conservation measures and implement a more draconian plan because conservation had “*to work at once*” since water levels in the company’s Tallulah-Tugaloo project’s six artificial reservoirs continued to drop. In Lake Burton alone, the water level had dropped more than sixty feet below the normal summer water level. “Only heavy, widespread, protracted rains” could “correct this condition,” since the periodic “afternoon’s thundershowers won’t raise the level of the great storage lake appreciably.”<sup>10</sup> Thankfully, the region pulled out of the crisis for two

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<sup>8</sup> “Sacrifices Being Made by Augustans To Avert Threatened Power Shortage,” *Augusta (Ga.) Chronicle*, May 30, 1941, p. 3, emphasis in original.

<sup>9</sup> *Augusta (Ga.) Chronicle*, June 26, 1941, p. 2.

<sup>10</sup> Display Ad, “Monday’s The Deadline,” *Augusta (Ga.) Chronicle*, June 15, 1941, p. 10.

reasons. First, the southeast's and the nation's interconnected electrical transmission grid pooled power "from all directions" to save the day – much as it had in 1925 – as the nation fully mobilized after the December 7 Pearl Harbor attack. Second, the three-year drought ended in the spring of 1942 when the rains again began to fall across the mountains of north Georgia. The parched Peach State received an average of 43.10 inches of precipitation in 1941, while 1942 recorded an average total of 52.34 inches, which contributed to replenishing the dry Chattahoochee River and Savannah River watersheds, and busting the drought of 1941.<sup>11</sup>

### **The Corps Takes on the Water Problem**

Droughts – a natural disaster like flooding – provided an impetus for southern river valley residents to support dam and reservoir construction across the American South. And this time, the White House, Congress, and the Corps responded by reengaging a modified New Deal land, soil, and water conservation program, and promoting national defense to support the Clarks Hill project as a technological solution to outlast droughts and control floods. While the Corps may have downplayed their own 1935 "308 Report" – a survey that loosely recommended eighteen potential multiple purpose dams and reservoirs in the Savannah River valley – local boosters won support at various levels of the federal government and bureaucracy to achieve real commitments in 1944.<sup>12</sup> The Corps completed another round of surveys throughout the valley in the early 1940s and published the results in June 1944 while the Allied Forces prepared for the D-Day landing in Europe.<sup>13</sup> By the end of 1944, as Allied forces reclaimed significant territory from the Axis Powers and a European victory appeared on the horizon, Congress agreed to fund

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<sup>11</sup> Display Ad, "How Power Pooling Helps Relieve Shortage," Atlanta (Ga.) *Constitution*, November 16, 1941, p. 10A; "Trout Streams Likely to Reopen This Week," Atlanta (Ga.) *Constitution*, May 6, 1942, p. 15. Annual average precipitation data from the Southeast Regional Climate Center, [http://www.sercc.com/climateinfo/monthly\\_seasonal.html](http://www.sercc.com/climateinfo/monthly_seasonal.html), last accessed March 4, 2010.

<sup>12</sup> U.S. Army Corps of Engineers & Secretary of War, *Savannah River Georgia, South Carolina, and North Carolina* (Washington, D.C.: GPO, 1935), 49.

<sup>13</sup> U.S. Congress, House, *Savannah River, GA*, 78<sup>th</sup> Cong., 2<sup>nd</sup> sess., House Document 657.

construction for what would be the Savannah River valley's largest conservation scheme. Clarks Hill was ultimately a complex project, and the Corps could not please all parties because the development could not always deliver what promoters wanted or anticipated. Corps engineers discovered that building one of nation's largest artificial lakes at the time and designing Clarks Hill to fit seamlessly into the natural landscape, more challenging than they and valley residents expected.

The Clarks Hill site itself was, from an engineering perspective, not challenging. Situated in the rolling hill country of the Piedmont, the proposed dam location was about twenty miles upstream from central Augusta, and only thirteen miles upstream from the Stevens Creek dam. According to his grandson, Clarks Hill was named for John Mulford Clark who was born in 1813 in the mid-Atlantic and moved to Milledgeville, Ga., in 1835. A few years later, Clark moved to Augusta, and then again to Edgefield County (S.C.) in 1841 where he farmed and opened a general store in a community that eventually bore his name. Clarks Hill, S.C. was a short distance from the future water power site that would also carry his name.<sup>14</sup> At Clarks Hill, the valley funneled water collected from a 6,144 square mile watershed above the site, and the river bore down some 225 feet below the adjacent uplands (400' in elevation). There were multiple potential dam spots in the vicinity of Clarks Hill; the Georgia Power Company owned a dam site about half-a-mile downriver from where the Corps planned a 200 foot tall and mile-wide dam. The Corps' previous geological surveys established the presence of sound granite, gneiss, and quartz for the concrete gravity dam's foundations, and good soil for the rolled-earth embankments that would flank the concrete structure on the South Carolina side of the river.

The massive reservoir was to inundate fifty-two square miles of the valley (78,000 acres) and

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<sup>14</sup> John M. Clark, Jr., "John Mulford Clark, October 8, 1813 - January 8, 1880," March 25, 1952, p. 1-5, Legislation, 1952, Clarks Hill Project, Box 29, Olin DeWitt Talmadge Johnston Papers, South Carolina Political Collections, The University of South Carolina, hereafter OJP.

stretch nearly forty miles up-river to Trotters Shoals; it would be the largest south of Tennessee and east of the Mississippi River.<sup>15</sup> The Corps was cut out for technical engineering at a well-suited site, but Clarks Hill was more than a technological project.

Corps engineers and elected officials provided many reasons to rally behind and to justify federal financing for the massive Clarks Hill project. Before a Congressional hearing in 1943, Corps engineer Col. P. A. Feringa explained that “without Clarks Hill Dam we will never have year-round navigation in the Savannah River.” While defending the dam, Feringa sounded as if he was defending a valley authority whereby the Clarks Hill dam would “fit into any integrated scheme for the full development of the Savannah River.” And with a touch of misrepresentation or at least naiveté, the Colonel noted: “It is a remarkable dam and reservoir project in that everyone is for it. The reservoir area is composed largely of marginal lands. There is very little real value attached to the lands and a minimum amount of relocation will be necessary... There is no competition with private interests.” Even Georgia Power Company executives – who had challenged federal overtures to build at Clarks Hill in 1936 – supported the project in 1943 and continued to claim they were ready to take delivery on the excess power generated by the dam. The Georgia and South Carolina Congressional delegations, including South Carolina Governor J. Strom Thurmond, fully supported the Clarks Hill project.<sup>16</sup> Agricultural and industrial promoters beat a path to new federal dams and artificial reservoirs in a climate of depression, unemployment, and war. As the powerful boosters closed ranks, they nurtured a Sunbelt economy dependent on water and energy, and an infusion of federal dollars.

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<sup>15</sup> U.S. Congress, House, *Savannah River, GA*, 78<sup>th</sup> Cong., 2<sup>nd</sup> sess., House Document 657, p. 47-50.

<sup>16</sup> U.S. Congress, House, Committee On Rivers and Harbors House of Representatives, *Hearings before the Committee On Rivers and Harbors House of Representatives: On the Subject of the Improvement of the Savannah River, GA & Savannah River and Clarks Hill Reservoir*, 78<sup>th</sup> Congress, October 27, 1943, p. 2-3.

Georgia Senator Walter F. George – a tireless supporter of the Clarks Hill project who later had a large artificial reservoir on the Chattahoochee River named in his honor – articulated his interest in the Clarks Hill project for multiple reasons, including electricity for dairy farmers, and industrial development for local communities and markets. Senator George – more importantly, and like many other Americans – also worried that the end of World War II might bring about a labor shortage and an economic slowdown, so he “advocated taking all precaution through providing employment, by developing industry, and making use of the high resources of the country” to avoid another economic depression, according to one journalist.<sup>17</sup> By the end of 1944, other Congressional leaders also expressed concerns over how the war might wind down, how to convert war production to meet domestic needs, and how to employ millions of demobilized veterans. In this context, Congress approved of the Flood Control Act of 1944 in December (and had already approved what became know as the G. I. Bill in June). This mammoth public works legislation presented a blueprint for post-war employment, regional development, and a new round of economic stimulus to avoid a return to Great Depression economics. It was logical legislation that Senator George and other Americans could accept.

The Flood Control Act (1944) became an extension of late New Deal liberalism because Americans feared a post-war unemployment spike but favored a curtailed New Deal-like response. As historians Alan Brinkley and Jason Scott Smith have argued, rather than revive “social” Keynesian projects or create new federal agencies to deal with unemployment and economic decline, the post-war local leadership partnered with the federal government to pump-up regional economies through “commercial” Keynesian projects. These short-term public works projects subsidized private contractors, created employment primarily for white men, and

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<sup>17</sup> Edith Bell Love, “Senator George Discusses Clark Hill,” *Augusta (Ga.) Herald*, October 24, 1944, p. 1.

built a foundational infrastructure for the post-war Sunbelt.<sup>18</sup> Whereas New Deal public works projects like the TVA were designed as regional planning projects to create jobs and inject money into all levels of the economy, post-war multiple purpose river projects like Clarks Hill looked a lot more like vehicles for ‘pork barrel’ politics and constituent service. As a regional planning exercise, TVA attempted to create a modern industrial society without dismantling agricultural production. TVA’s dams generated energy for factories and contributed to production of fertilizer for farmers. The post-war Flood Control Act stripped the regional planning model down to what could be called techno-selective river planning. The Corps thought in comprehensive terms and about how multiple dams in a single valley could complement each other. However, the Corps’ techno-selective southern projects did not equally serve industrial and agricultural production, included no soil or forestry programs, and only half-heartedly supported navigation. By and large, boosters and the Corps could promote and tailor individual post-war power and flood control projects to meet locally specific needs in ways the TVA never did. By the end of the war, the Corps was poised to serve as the main agent responsible for placing dams and artificial reservoirs in nation’s watersheds, and the Corps began their post-1945 makeover in the Savannah River valley with the Clarks Hill dam and lake.<sup>19</sup>

In the Savannah River valley alone, the Flood Control Act (1944) adopted the Corps’ recommendations from June 1944 and included a general plan to build eleven dams and artificial reservoirs throughout the Savannah River Basin. Starting with the Clarks Hill project and a

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<sup>18</sup> Alan Brinkley, *End of Reform: New Deal Liberalism in Recession and War* (New York, N.Y.: Knopf, 1995); Jason Scott Smith, *Building New Deal Liberalism: The Political Economy of Public Works, 1933-1956* (New York, N.Y.: Cambridge, 2006), for terminology quote, 263.

<sup>19</sup> *Flood Control Act of 1944*, Public Law 534, 78<sup>th</sup> Congress, 2<sup>nd</sup> Session, Chapter 665, HR 4485 (December 22, 1944), p. 8. Of the eleven dams recommend by *Savannah River, GA*, House Document 657, 78<sup>th</sup> Congress, 2<sup>nd</sup> sess., and approved by the Flood Control Act (1944), the federal government (Army Corps of Engineers) built three between 1954 and 1985. Among the four dams the Duke Power Company constructed in the upper Savannah River valley after 1970, the company built two dams at sites originally recommended in these documents, using the two adjacent Newry-Old Pickens sites to create the giant Lake Keowee.

\$35,300,000 Congressional appropriation, the Corps set a course to reshape the valley's waterscape.<sup>20</sup> Benefits of this project included the ever-desirable year-round navigation below Augusta, flood protection for that same city, and cheap power for Augusta and the lower Savannah River region. Boosters hoped that the dam, like those in the Tennessee Valley erected by private institutions before 1933 and public agencies afterwards, would also attract the chemical or aluminum industry, which required access to raw water supplies and low-cost electricity.<sup>21</sup> As a pork project, Clarks Hill combined the holy trinity of southern water projects – flood control, hydroelectric power production, and navigational improvements – and made the project an easy sell to folks throughout the valley looking for salvation in federal spending. Not only would the Clarks Hill dam eliminate the long history of destructive seasonal floods in the Augusta region, according to Corps engineers, but the dam would also rationalize “low-water flows for navigation below Augusta” as well as “produce hydroelectric power for industrial purposes and rural electrification.” The dam might also conserve enough water to save the region from future electrical shortages such as those experienced during the severe 1925 and 1941 droughts. Furthermore, the Corps considered the dam “the keystone” – the first of eleven proposed dams in a coordinated project that might reorganize the valley's water, people, and economy as equally as the TVA had ordered that valley's resources.<sup>22</sup>

### **Free Enterprise or Socialism? Peddling False Choices**

The Tennessee Valley Authority idea may have died in the late 1930s, but that did not stop the President of the United States, or Georgia's and South Carolina's senators, from proposing new valley authorities. In January 1945, President Franklin D. Roosevelt declared in

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<sup>20</sup> *Flood Control Act 1944.*

<sup>21</sup> John Mebane, “Clarks Hill Project Would Mean Enormous Benefits for This Section of Two States,” *Augusta (Ga.) Herald*, January 21, 1944.

<sup>22</sup> For “keystone” quote, see: Hillary H. Mangum, “Interstate Cooperation Shown in Clark's Hill Development,” *South Carolina Magazine* 10, 1 (January 1947): 28.

his State of the Union speech: “our full-employment program requires the extensive development of our natural resources and other useful public works.”<sup>23</sup> As he had throughout the New Deal, Roosevelt again recommended river basin development as a means to provide regional economic stimulus. In an effort to capitalize upon the President’s public agenda, Georgia’s Senator Richard B. Russell and Senator Burnet Maybank of South Carolina introduced Senate Bill 737 to establish the Savannah Valley Authority. The Atlanta *Journal’s* editorial board, and Blanton Fortson, the chairman of the Georgia Agricultural and Industrial Board, endorsed the Senators’ mission.<sup>24</sup> Modeled after the TVA, the SVA would have provided “unified water control and resource development in the basin of the Savannah River in the interest of the control and prevention of floods, the promotion of navigation, and the strengthening of national defense, and for other purposes.”<sup>25</sup> The bill – similar to other bills pending for valleys across the country such as the Missouri River valley – floundered in committee as private energy corporations and the anti-TVA lobby successfully blocked expansion of public utilities after the war. The Senators again attempted to introduce similar legislation two years later, but their efforts met with the same result.<sup>26</sup> Federal spending and programs enjoyed some currency in the Savannah River Valley during the Depression and war years – including the creation of Long Cane District of the Sumter National Forest (1936) and the New Savannah Bluff Lock and Dam (1937) – but conflict between public and private power projects became more complicated after the war, illustrating that not everyone was “for” Clarks Hill as Corps engineer Col. Feringa intimated before Congress in 1943. Creating a shoreline, building parks, relocating the living and the dead,

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<sup>23</sup> U.S. Congress, House, *U.S. Presidential State of the Union Address, 79<sup>th</sup> Cong., 1<sup>st</sup> sess., Congressional Record* (January 6, 1945): 96.

<sup>24</sup> “An Inspiring Project,” Atlanta (Ga.) *Journal*, March 15, 1945; “Fortson Lauds Benefits of Savannah River Project,” Atlanta (Ga.) *Constitution*, March 15, 1945.

<sup>25</sup> U.S. Congress, Senate, *Savannah Valley Authority, 79<sup>th</sup> Cong., 1<sup>st</sup> sess., S. 737, Congressional Record* (March 14, 1945): 2168; “Bill Is Offered For Huge SRA,” Augusta (Ga.) *Chronicle*, March 15, 1945, p. 1.

<sup>26</sup> U.S. Congress, Senate, *Savannah Valley Authority, 80<sup>th</sup> Cong., 1<sup>st</sup> sess., S. 1534, Congressional Record* (June 30, 1947): 7876.

managing public health, and coordinating infrastructure relocations all challenged the will of the many residents who were indeed “for it.” After more than a decade, even the TVA was challenged to adequately manage these same tasks.

Many Savannah River valley residents supported the federally financed Clarks Hill multiple purpose project, but a vocal minority of industrial and corporate interest groups maintained an aggressive oppositional voice. The Georgia Power Company – and their subsidiary, the Savannah River Electric Company – did not support the federal project after 1944, and they created a firestorm when company spokesmen rallied to promote private enterprise and to sink the public power, navigation, and flood control project. The energy company had held its first license to build at Clarks Hill between 1928 and 1932, but surrendered the license during the Great Depression when the company could not afford to move the project forward and the Corps presented a viable plan to do so. The Georgia Power Company again publically floated the idea of re-applying for a second FPC license in 1939, but found little support in Augusta and dropped the idea.<sup>27</sup> At that time, the Corps and Georgia Power had tentatively agreed that the company would purchase all excess power generated by Clarks Hill from the Department of the Interior, the official agency responsible for distributing power produced at Corps facilities according to the Flood Control Act (1944). In 1946, the Georgia Power Company again waffled on its opinion of the Clarks Hill project for a third time and the company announced plans to reapply for yet another FPC license to build their dam. With depression and war-time sacrifice nearly behind the nation, the Georgia Power Company wanted to revive their version of capitalism – or, as critics would claim, a monopoly on energy production and distribution – through a private Clarks Hill project. More importantly, TVA and the private power companies battered one another in the courts during the 1930s and 1940s, and

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<sup>27</sup> “G.P.C. Makes Bid for Clarks Hill,” *Augusta (Ga.) Chronicle*, October 9, 1939.

Georgia Power took the emerging post-war period as a moment to reassert the fundamentals of private power as companies did elsewhere.<sup>28</sup> The Georgia Power Company – initially the prime builder of hydroelectric projects in the Savannah River Basin – received ample help in their quest to reclaim the region’s water, electrical grid, and consumers.

To fight these battles, the company enlisted supporters from around the state in an effort to return to the early twentieth century’s private power and water conservation legacy. Georgia newspaper editors used their pages to channel Georgia Power’s message and to express coherent opposition to federal projects like Clarks Hill. “As we see the project,” wrote the Claxton *Enterprise’s* editorial board from the Coastal Plain, “we are in favor of letting the Georgia Power Co. foot the bill for this development rather than the federal government.” Their opinion stemmed “from a selfish desire to see as much property remain on the state and county tax digests as possible, rather than having more tax exempt projects built by the federal government with the people’s money and then be taken off the tax digests of the state and counties.”<sup>29</sup> Nearly all of the editorials harped upon the same theme of private enterprise and favored tax-paying development over tax-spending and tax-exempt public projects. Many opponents to the plan argued that if private industry wanted to spend the money, the state should enable them to do so and then collect taxes. “We,” the Milledgeville *Union-Recorder’s* editorial board stated, “very definitely believe private capital should have its right to exercise free enterprise, the same kind of pioneering spirit that built this country into the greatest nation the world has ever known.” Milledgeville, it should be remembered, was the Piedmont town near the Georgia

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<sup>28</sup> Karl Boyd Brooks, *Public Power, Private Dams: The Hells Canyon High Dam Controversy* (Seattle: University of Washington Press, 2006).

<sup>29</sup> “All Citizens Are Concerned with Clark Hill Project,” Claxton (Ga.) *Enterprise*, September 5, 1946, sent to Russell from Georgia Power Company, Clark Hill Correspondence Materials, Rivers and Harbors Series, Richard B. Russell, Jr., Collection, Richard B. Russell Library for Political Research and Studies, The University of Georgia Libraries, Athens, Georgia, hereafter RRC.

Power Company's stalled Furman Shoals project on the Oconee River. The company started the project in 1929 and stopped in 1930 during the Great Depression, only to restart construction again in 1942. And when they completed Sinclair Dam in 1954, the company's operations at Lake Sinclair and local tax payments benefited Milledgeville. This was enough to justify the editor's opinion that the company was "in a position to develop this project" unlike the company's position in the 1930s.<sup>30</sup> Despite the crippling 1941 drought, the conversation on Georgia Power's side generally stuck to economic motivations and did not dare suggest that protecting water supply and water quantity was necessary for future economic development. Taxes and free enterprise, however, were not the only conversation topics.

The Georgia Power Company's move to re-license Clarks Hill took Lester Moody by surprise and frustrated him. Moody, the Secretary of the Augusta Chamber of Commerce, and Augusta's local merchants association rejected Georgia Power's proposal in 1946 and championed the federal project thereafter.<sup>31</sup> The Augusta business community supported the federal project not only for the obvious holy trinity of benefits – navigation, flood control and power – but also for the stated secondary benefits of recreation, soil conservation, reclamation, and reforestation. Moody and others also rebuffed their adversaries' attempts to parallel public power and socialism. After the Georgia Power Company announced it would seek a new federal license and called the federal project socialistic, Moody replied: "If working to improve the conditions of the people living in the Savannah River Basin area is socialistic, then I am a socialist." The socialist label, he continued, "was just another version of the old story that is

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<sup>30</sup> "The Clark Hill Power Development," Milledgeville (Ga.) *Union-Recorder*, September 5, 1946, p. 2; "Georgia Power Will Complete Oconee Plan," Atlanta (Ga.) *Constitution*, July 20, 1942, p. 3; Wright, *History of the Georgia Power Company*, 250 and 332. The company eventually completed the dam in 1954.

<sup>31</sup> "Trade Groups Decline to Back Power Firm's Plan for Clarks Hill," Augusta (Ga.) *Herald*, September 14, 1946.

always used when one attempts to do something to improve living conditions for a people.”<sup>32</sup>

One of Moody’s cohorts, Augusta (Ga.) *Herald* publisher William S. Morris, Jr. – the father of the Morris media empire’s current CEO William “Billy” Morris, III – endorsed the federal project over the private project. Like Moody, Morris likewise contested Georgia Power’s assertion that the federal project was akin to socialism: “We cannot support the power company’s argument that the development of the Savannah River constitutes Socialism, because the rivers and streams and all other natural resources belong to the people, and should be developed in a manner which would be most beneficial to all the people.”<sup>33</sup>

South Carolina state Senator Edgar Brown followed a similar line of reasoning when he declared, “The people of South Carolina want” the Clarks Hill project. South Carolinians apparently desired a federal version of Clarks Hill because they thought they were “entitled” to the holy trinity of benefits plus wildlife and recreational programs. Brown also believed South Carolina’s rural electric cooperatives, industries, and municipalities were “entitled to purchase...cheap power for the benefit of our people.”<sup>34</sup> Even South Carolina Democratic Governor J. Strom Thurmond blasted the private energy companies’ current turn on Clarks Hill, and he explained that between 1935 and 1946 the Savannah River Electric Company “didn’t hint that the [proposed federal] project was Socialistic.” Furthermore, the private energy company was apparently selective in calling federal projects socialistic, since Thurmond claimed that Georgia Power had not branded the Corps’ Allatoona project in northwest Georgia as

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<sup>32</sup> “L. S. Moody Traces History of Clarks Hill Development,” Augusta (Ga.) *Herald*, September 15, 1946, p. 12, Folder 3 “Clark’s Hill News Clippings,” Box 3, Lester Moody Collection 2002.036, Augusta History Museum, Augusta, Georgia, hereafter LMC.

<sup>33</sup> “Let the Government Build Clark Hill,” Augusta (Ga.) *Chronicle*, September 14, 1946, p. 4.

<sup>34</sup> “Brief of Edgar A. Brown, Chairman and General Counsel of Clark’s Hill Authority of South Carolina, in Opposition to H.R. 3826, 80th Congress - 1st Session,” Columbia, S.C., February 19, 1948, p. 4, Folder Legislation, 1948, Public Works, Clarks Hill Project, Box 15, OJP.

“Socialistic.”<sup>35</sup> Lifelong southern supporters of private enterprise, Moody, Morris, and Thurmond found fellow southern boosters’ and journalists’ “Socialism” and “socialistic” criticisms unfounded, and they recognized the language as a rhetorical leftover from the fight against fascism in Europe, fears of Soviet expansion, and a product of dropping temperatures at the onset of the Cold War. Moody, after all, was a chamber of commerce secretary and believed that a major multiple purpose public works project like Clarks Hill ultimately would improve the valley’s businesses climate in ways that a private project never could. Distrustful after years of private energy company monopoly, valley residents rejected the legacy of private hydroelectric dams that had generated power that was, as Gov. Thurmond’s hometown newspaper declared, “transmitted away” from the hinterlands “for the emolument of people elsewhere” in water and energy poor cores.<sup>36</sup>

Without a doubt, the Georgia Power Company’s upstream Tallulah-Tugaloo river projects had already demonstrated that a private company could develop and sustain multiple single purpose hydroelectric and reservoir projects to serve their customers and local tax commissioners in the Savannah River valley. However, private energy companies rarely pursued multiple purpose developments on southern rivers that included serious plans for navigation or dedicated flood control designs.<sup>37</sup> Regardless of their track record and plans, the Georgia Power Company reapplied for a license to operate a dam at Clarks Hill in 1946, and in January of the following year, the Federal Power Commission rejected the application because the federal project had already been authorized by various legislative layers, federal money appropriated,

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<sup>35</sup> *The Truth About the Clark’s Hill Project*, published by the Clark’s Hill Authority of South Carolina, [1946?], 20, Reese Library Special Collections, Augusta State University, Augusta, Georgia.

<sup>36</sup> “Will Our Hopes and Aspirations For Clark Hill Be Met?” *Edgefield (S.C.) Advertiser*, May 3, 1950.

<sup>37</sup> Alabama Power is an exception, and they attempted to incorporate navigation in some projects, see: Jackson, *Rivers of History*, 175-76.

and preliminary work completed by the Corps.<sup>38</sup> Clarks Hill, as a federal project, was no longer a question mark; it replaced Georgia Power's project and became a multiple purpose recipe for the valley's economic future.

### **Segregation and Outdoor Recreation in the South**

Clarks Hill moved forward not only as a project to minimize flood and drought induced damages, or as a power and navigation scheme, but also became a major tool for reshaping the Savannah River valley's recreation landscape. Recreation officially became an addendum to the traditional holy trinity of benefits by way of the Flood Control Act of 1944 as one of a host of secondary benefits that the developments might provide. If this trinity insulated humans from seemingly uncontrollable environmental conditions and raging rivers, then recreation – as a means to reconnect people with predictable environmental circumstances and benign lakes – also emerged on an alternate level. The recreating public increased in scale and scope during the interwar years, and ultimately influenced Georgia's and South Carolina's emerging state park systems. The Flood Control Act empowered the Corps to take a lead role in reshaping the nation's waterscape with multiple purpose dams and artificial lakes, and to join other federal agencies in providing recreational opportunities for all Americans. The Corps and other agencies discovered that providing recreational opportunities with artificial reservoirs for local, regional, and the highly-coveted out-of-state visitors at Clarks Hill was a top priority, but the process also included grappling with complex social questions and social engineering.

Public access to outdoor recreation emerged as an important national topic during the interwar period. After World War I, Americans turned to the open road and explored the great

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<sup>38</sup> Statement from L. S. Moody before the Civil Functions Appropriations Sub Committee, House of Representatives of the United States, June 11, 1947, p. 10, Clark Hill, Correspondence and Materials, 1946-1947, Rivers and Harbors Series, RRC; "Power Company's Appeal for Control of Clarks Hill Rejected by Federal Body," Augusta (Ga.) *Herald*, January 15, 1947.

outdoors and countryside in personal automobiles. State governments built roads and parks, and businesses emerged to cater to and provide roadside services for tourists. Recognizing that natural resource policies required a cousin in recreation policy, President Calvin Coolidge organized the first National Conference on Outdoor Recreation in May 1924 to discuss the contours of a national recreation policy. During the first two NCOR meetings (the second was in 1926), the participants generally agreed that recreational opportunities should provide democratic access, therapeutic experiences, and physical stimulation. Democratic access – or outdoor recreation for middle-class and working Americans – became a key flash point in these and future recreation discussions.<sup>39</sup>

Recreation promoters lobbied throughout the American South, but as environmental historian Paul Sutter argues, the early national conferences were only tasked with shaping national outdoor recreation policy for public lands in the American West. The discussion did not center on cities or places without public land. This, by default, left local and state outdoor recreation advocates in urban areas or places like the American South that lacked such lands to shape their own recreational plans. Like other regions, however, the New Deal provided southerners with help to create some enclaves of public land, but more importantly, provided dollars and labor. The Great Depression and New Deal response enabled President Franklin D. Roosevelt to funnel federal dollars and conservation work programs into a vast, national outdoor recreation network on state and federal lands. When combined with New Deal dollars, local political and economic organizations, such as southern chambers of commerce, fashioned

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<sup>39</sup> Paul S. Sutter, *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002), 41-48.

interwar outdoor recreation facilities to stimulate local economies while serving visitors of all means, from different geographical regions, and with diverse needs.<sup>40</sup>

Following this basic trajectory, Georgia's state and federal natural resource agencies worked together to acquire, improve, and plan for outdoor recreation areas and unique sites throughout the state during the interwar period. Between 1931 and 1937, the Department of Forestry and Geology acquired and managed approximately nine state properties, including a 1926 gift from Fred and August Vogel of the Pfister Vogel Leather Company. The company originally intended to use 65,000 acres of north Georgia forest to supply their Milwaukee leather tanning plant with bark, but abandoned this plan when the industry developed a synthetic tannic acid. Rather than sell all of the land to private investors, the brothers eventually sold two-hundred and forty-acres to the state of Georgia in 1927 to establish one of Georgia's first state parks.<sup>41</sup> After 1933, the National Park Service (NPS) and Works Progress Administration (WPA) regularly deployed Civil Conservation Corps (CCC) laborers into Vogel State Park – located at the base of Blood Mountain and adjacent to the growing Appalachian Trail. The CCC laborers literally set-up camp in Vogel and other evolving state park areas to improve or build picnic areas, visitor centers, monuments, hiking trails, camping sites, and artificial swimming lakes. None of this interwar outdoor recreation activity took place in the upper Savannah River valley, but the process influenced the long-term vision of public recreation throughout Georgia's and South Carolina's river valleys.

To more effectively manage this growing state park system, the Georgia State Legislature reorganized the state's natural resource bureaucracy in 1937, and created the Department of

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<sup>40</sup> Sutter, *Driven Wild*, see chap. 2 “Knowing Nature Through Leisure: Outdoor Recreation During the Interwar Years.”

<sup>41</sup> M. D. Collins, State Superintendent of Schools, *Natural Resources of Georgia: Georgia Program for the Improvement of Instruction in the Public Schools* (Atlanta, Ga.: State Department of Education, 1938), 11.

Natural Resources (DNR) with four new divisions. One division – State Parks, Historic Sites and Monuments – managed a growing list of properties around the state, as well as new ones that entered the system when “public spirited men and women,” associations, and estates sold or gifted land to the state, according to M. D. Collins, Georgia’s State Superintendent of Schools. Between 1937 and 1941, state park acreage tripled from less than 5,000 acres to more than 17,000 acres through these acquisitions.<sup>42</sup> Throughout the period, all of the Division of State Parks’ facilities and many Georgia communities benefited from CCC labor in ongoing coordination with the NPS and the state’s WPA office. By the end of 1941, the DNR claimed that “the Federal government had spent through the National Park Service and the Civilian Conservation Corps, \$6,300,000 on CCC camps working on State Park areas in Georgia.”<sup>43</sup> Local economies hit hard by the Depression benefited from the modest spending by CCC employees, supervisors, and suppliers. And, the Georgia park planners hoped, the gateway communities located near the new parks would benefit future visitors and tourists.

Amidst all of this physical activity and park-scaping, Georgia’s newly organized DNR, the State Planning Board, the NPS, the United States Forest Service, the United States Biological Survey, and the Soil Conservation Service assembled a state recreation survey in 1939. The report observed what many of the regionalists like Rupert Vance, Arthur Raper, and Howard W. Odum had previously observed throughout the American South: “Many acres of Georgia farm lands have been and are still wearing out, thus becoming unsuitable for agricultural use.” Rather than limiting themselves to building state parks simply out of the virgin lands or wilderness that Georgia generally lacked, Georgia parks advocates recommended that “land now used for

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<sup>42</sup> Ibid., 16.

<sup>43</sup> *Natural Resources: Georgia’s Vast Undeveloped Wealth*, ([n.d., likely 1941 or 1942]), Publications, Bulletins, and Circulars, Commissioner’s Office, Department of Game and Fish (025-01-002), Georgia Archives, Morrow, Georgia.

agricultural purposes should be devoted to recreation, conservation of wildlife and forestry.”

Certainly there were forested areas like Vogel State Park whose timber had not been harvested for industrial purposes, but future state park conservation efforts throughout the majority of the state would take place on formerly used or currently working land. After suggesting ways to professionalize natural resource management in the state and catalog general flora and fauna populations, the report highlighted the necessity of preservation and a state park system.

Acquiring or setting land aside earlier rather than later would ultimately save “large sums of money” needed to research, relocate, and establish state parks, monuments, and historical sites.

The authors wanted to learn from other states’ experiences, “where rapid development and growth of population, business and industry” had “outstripped the love for recreation.” The study’s authors concluded, “it appears entirely logical and feasible to anticipate future trends, and look ahead, by at least acquiring, preserving and partially developing areas, which future generations will need for recreation, and probably will appreciate even more than today’s generation.” Recreation, apparently, was “alive in the hearts of Georgians.”<sup>44</sup>

If Georgia’s state park report authors recognized that recreation was alive in Georgians’ hearts, they also acknowledged that those hearts were in black and white bodies. Recreation discourse – among leisure seekers, state planners, elected officials, and federal bureaucrats – always included discussions about race, class, or gender. One historian recently argued that recreational opportunities were central for the formation of African American identity and community throughout the Jim Crow era. Another has illustrated how white Americans provided or restricted access to swimming areas and pools based on social anxieties about race, class, and gender. Even the National Park Service (NPS) system planned to racially segregate users when

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<sup>44</sup> State Planning Board and the National Park Service, *Report on Outdoor Recreation in Georgia* (Atlanta, Ga.: [n.p.], February, 1939), pp. 4 and 57, located in the Department of the Interior Library, Washington, D.C.

they began building southern national parks – including the Great Smoky Mountains and Shenandoah – in the 1930s only to reverse course in 1942.<sup>45</sup> Inter-war and post-war state parks, an area not considered by these historians, maintained space for Jim Crow outdoor recreation that soon converged with the South’s water problem. State park systems throughout the south, from Maryland to Florida, and from Texas to Kentucky, choose different paths to exclude or include African Americans through segregated facilities. In doing so, segregated state parks limited the type and availability of recreational activity for African Americans. Plans for segregated state parks in Georgia and South Carolina – and eventually the Savannah River valley at Clarks Hill – were not without precedent.

North Carolinians may have operated the first state park in the American South that provided dedicated space for African Americans to regularly interact with the environment in a leisure setting. According to a North Carolina State Parks’ source, white visitors used Lake Waccamaw on July 4, and African Americans used the area on July 6. After 1939 the state was interested in a more permanent alternative to separating access within the same park. North Carolina officials found the solution in a National Park Service (NPS) sponsored Recreation Demonstration Area located on rehabilitated former Coastal Plain farm land around Jones Lake – technically a Carolina Bay located about twenty miles north of Lake Waccamaw and forty miles west of Wilmington.<sup>46</sup> The Resettlement Administration had utilized Civilian Conservation

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<sup>45</sup> Andrew W. Kahrl, “The Political Work of Leisure: Class, Recreation, and African American Commemoration at Harpers Ferry, West Virginia, 1881-1931,” *Journal of Social History* 41, 1 (2008): 57-77; Andrew W. Kahrl, “‘The Slightest Semblance of Unruliness:’ Steamboat Excursions, Pleasure Resorts, and the Emergence of Segregation Culture on the Potomac River,” *Journal of American History* 94, 4 (2008): 1108-36. On swimming pools, see: Jeff Wiltse, *Contested Waters: A Social History of Swimming Pools in America* (Chapel Hill: The University of North Carolina Press, 2007); Terence Young, “‘A Contradiction in Democratic Government:’ W. J. Trent, Jr., and the Struggle to Desegregate National Park Campgrounds,” *Environmental History* 14, 4 (October 2009): 651-682, 672.

<sup>46</sup> Carolina Bays are considered deflation features in the Coastal Plain. Europeans called these features “bays” due to the presence of “bay” tree species such as magnolias. Scientists have proposed at least 18 different mechanisms responsible for creation of the Coastal Plain’s wetland and open water lakes and bays, but “no clear consensus has been reached regarding the complex issue of the origin of Carolina Bays,” see: Thomas L. Crisman, “Natural Lakes

Corps labor crews to restore the former agricultural landscape around Jones Lake before turning the property over to the North Carolina state park system in 1939. North Carolina officials promptly opened Jones Lake July 1 as “the first state park for blacks.”<sup>47</sup> Beyond North Carolina, no other southern state legislatures or park systems appear to have created dedicated parks for African Americans before 1940.

Georgia planners thought a lot like the federal and state officials in North Carolina who created public recreation space for African Americans before 1940. Throughout the State Planning Board’s *Report on Outdoor Recreation in Georgia* (1939), the writers advocated for segregated recreational facilities based on racial and socio-economic categories. Earlier in the year, Congress empowered the NPS to work with state agencies to evaluate state parks, forests, and other recreational assets. Georgia Governor E. D. Rivers accepted the NPS offer, and then he directed the State Planning Board and the Division of State Parks, Historic Sites and Monuments to complete the co-operative report. The State Planning Board was comprised of one woman and seven men, including long-time Chattahoochee River valley booster Jim W. Woodruff. Based on Georgia’s demographics and Jim Crow history, the authors declared that “separate areas and facilities for education, welfare, recreation, and other activities were required for” white and African American residents.

Not unlike the North Carolina experience, Georgia’s planners envisioned the Plantation Piedmont Project, a “land utilization project” near Eatonton (and in the Oconee National Forest today), as a segregated, African American-only recreation area. In following North Carolina’s

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of the Southeastern United States: Origin, Structure, and Function,” *Biodiversity of the Southeastern United States: Aquatic Communities*, edited by Courtney T. Hackney, S. Marshall Adams, and William H. Martin (New York, N.Y.: John Wiley & Sons, Inc., 1992), 478.

<sup>47</sup> For quote, see: North Carolina State Parks, “Jones Lake State Park History,” available online, <http://www.ncparks.gov/Visit/parks/jone/history.php>, last accessed March 4, 2010. See also: North Carolina Department of Environment and Natural Resources, Division of State Parks and Recreation, “Lake Waccamaw State Park General Management Plan,” March 19, 2007, p. I-9 - I-10, available online, <http://www.ncparks.gov/About/plans/gmp/lawa/2007/desc.pdf>, last accessed March 4, 2010.

model, Georgia's plan did not call for racially integrated areas, but it did express the belief that "every citizen should be provided for." For white "land owners," prime destinations apparently included coastal and mountain destinations "during the warm summer months" and "especially when crop prospects" were favorable. But for the "the white tenant class of the farming population," the report observed, "recreation among the men and boys" consisted primarily "of hunting and fishing" and sports. Additionally, these white tenant families – perhaps white wives and girls more specifically – enjoyed "old fashioned church sociables [sic]...and special events" like barbeques. Finally, the authors assessed African Americans, who were not subcategorized as property owners or tenants, or by their sex. The report concluded that "there are very few recreational facilities for" African Americans in the state. The authors' racial stereotypes assumed that African American recreation was "peculiar to their racial characteristics" and only "centered around churches." African American recreation facilities only needed to include "simple local developments, such as playfields with barbecue grounds and swimming pools." African Americans, so the thinking went, would not like the beach or mountains, and this presumption limited African American exposure to particular types of outdoor recreation and new environments. Based on these combined demographic and assumed social characteristics, Georgia not only needed "two area systems, one for white people and one for" African Americans, but facilities for "low income groups" and men who did not have the money, time, or transportation resources to travel "very far in search of recreation."<sup>48</sup> According to the *Report*, Georgia had little public land like the American West and needed a recreational plan that played to the region's racial, socio-economic, and rural realities.

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<sup>48</sup> State Planning Board and the National Park Service, *Report on Outdoor Recreation in Georgia*, pp. 5, 22-23, 42, and 58.

The State Planning Board would have had a much harder time completing the *Report*, and choosing a racially inclusive but segregated public recreation path for Georgia's recreation system, without assistance from the National Park Service. Federal agency interest in national recreation was not new to the interwar period, and after World War II, Georgia recreation planners got another boost when the Department of Defense and the Corps became a national outdoor recreation partner with the Departments of Agriculture and Interior. The Corps could also lease property adjacent to new reservoirs to states interested in building new state parks. Georgia and South Carolina officials jumped at the chance, and they took the *Report on Outdoor Recreation in Georgia* recommendations seriously, as we will see. But the Corps also looked elsewhere, much as they had turned to private utility companies for multiple-dam and multiple purpose engineering ideas in the 1930s. When it came to recreation, the Corps leaned on Georgia's state parks division and the Tennessee Valley Authority for advice on what kind of recreation to consider and who might have access.

The Tennessee Valley Authority's artificial lakes created incredibly popular and segregated leisure playgrounds for the valley's residents and visitors. In 1945, Herman Clarence Nixon painted a picture of the valley's recreational achievements for other river valley developers. Nixon, one of the original "Twelve Southerners," eventually parted ways with the Nashville Agrarians because he rejected their romanticized agrarian past that clung to "Old South" racial standards. Nixon, in turn, adopted a vision more in line with Rupert Vance, Howard W. Odum, and the Regionalists. In "The Tennessee Valley: A Recreation Domain," which was effectively a TVA promotional piece, Nixon explained that fishermen, boaters, swimmers, and picnickers flocked to TVA's lakes during World War II. And, "like many other parts of the South, this valley is destined to become a land of playgrounds in peacetime to a

greater extent than it” had become a land of military campgrounds during the war. Nixon predicted, “A distinct expansion...for pleasure boating on the ‘Great Lakes of the South,’” after boating manufacturers located in the area and the concomitant use of boats on TVA lakes skyrocketed. Based on informal surveys, Nixon claimed that future fishing-related income was also destined to rise. One local service provider claimed that recreational fishing income totaled \$10,000 in a single year during the war. A more formal survey by the Tennessee Department of Conservation found that almost 8,000,000 people entered the state by car and spent over \$104,000,000 in 1941. But income and money alone did not interest river valley recreational promoters. Nixon, not unlike North Carolina State Park officials and Georgia’s state park survey authors, observed that “provision for outdoor recreation in the South is inadequate, not only for the rural population,” but also African Americans. Nixon, as if he was channeling interwar outdoor recreation advocates from twenty years previous, considered recreation “a human right” for black and white citizens regardless of income.<sup>49</sup>

Sunbelt boosters and politicians stumping for the Corps’ Clarks Hill project took this advice seriously. They widely publicized segregated recreation planning for the Savannah River valley’s multiple purpose dams in anticipation of a post-war recreation boom. By the late 1940s, Augusta’s Chamber of Commerce Secretary Lester S. Moody and South Carolina’s Governor J. Strom Thurmond campaigned tirelessly for Clarks Hill as a public source of industrial energy and flood control. Both also publically advocated for recreational opportunities that crossed racial and soci-economic lines. Moody, in particular, did not underestimate recreation as an economic engine for his region and looked at Clarks Hill as a destination for all overworked and “half sick” Americans. According to Moody, Americans’ “appreciation of parks” was growing

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<sup>49</sup> H. Clarence Nixon, “The Tennessee Valley: A Recreation Domain,” *Papers of the Institute of Research and Training in the Social Sciences*, no. 9 (Nashville, Tenn.: Vanderbilt University Press, June, 1945), pp. 1, 5-6, 20.

as people recognized recreation areas “as places where we can go and get away from the high pressure of modern life” to find a sublime nature. Singling out Clarks Hill, Moody envisioned the artificial reservoir as a “mecca” [sic] for “thousands of visitors” who had the financial means to travel great distances, rent boats, sleep in lakeside cottages, and pump thousands of the recreation-related dollars into the Savannah River valley.<sup>50</sup>

South Carolina’s Governor J. Strom Thurmond worked the other side of the river and did not limit Clarks Hill recreation-use and nature appreciation to non-local visitors with potentially deep pockets. Thurmond, of course, recognized first and foremost that Clarks Hill would benefit one particular class: industrialists. Clarks Hill would lure industry south, according to Thurmond, because of cheap energy and the region’s “freedom from [labor] strikes.” But Thurmond also supported the Clarks Hill project because it would provide public recreation space for “the working people, the farmers, textile workers, barbers, [and] mechanics,” the very “people on the street who” did not have the money to join golf or hunt clubs, or buy “fine horses.” Speaking before an Augusta audience familiar with South Carolina’s horse country in Aiken County, Thurmond explained that Clarks Hill would include a “16,000 acre park...for the recreation and enjoyment of the working man.” At Clarks Hill, Thurmond’s archetypal “common man” could enjoy free access to public space to “hunt and fish,” and thus presumably avoid a legacy of conflict over trespassing on private land.<sup>51</sup> Moody, Thurmond, and others recognized class divisions among recreation enthusiasts and leisure seekers. Public recreation facilities would ultimately provide outlets for visitors who could afford to travel long distances

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<sup>50</sup> “L.S. Moody Traces History of Clarks Hill Development,” Augusta (Ga.) *Herald*, September 15, 1946, p. 12, Folder 3 “Clark’s Hill News Clippings,” Box 3, LMC; Lester Moody, “An Address Before the Georgia Recreation Workers Association,” Augusta, Georgia, March 7, 1946, Folder 4 “Local News,” Box 2, LMC.

<sup>51</sup> *The Truth About the Clark’s Hill Project*, 17-18. See also: Joe Mulieri, “Funds Will Be Granted for Clark Hill Thurmond Tells Audience at Orangeburg,” news clipping, and “S.C. Governor Warns That Power Interests Still Seek to Gain Control of Clark Hill,” Augusta (Ga.) *Herald*, February, 7, 1947, both located in Folder 3 “Clark’s Hill News Clippings,” Box 3, LMC.

for overnight stays in lake side cottages and use boat ramps to launch private watercraft. But class alone was not the only topic in the discussions about recreational facilities in the Savannah River valley.

Though Moody and Thurmond tipped their hats to the local and non-local users, they did not limit recreational development benefits to white nature seekers. Both public leaders relied upon state and federal recreation recommendations that detailed the sites and types of recreation best suited for the Savannah River valley. In the late 1940s, as Clarks Hill moved from drawing board to reality, the Corps enlisted the Department of the Interior's National Park Service (NPS) as a consultant. Given the social fabric of the region, the NPS consultant recommended segregated facilities for white and African American visitors at Corps recreational areas while the NPS itself was desegregating national parks in the southeast.<sup>52</sup> Since twenty-three counties close to the Clarks Hill reservoir included a large African American population (about 43%), the NPS thought provisions "should be made for" African Americans "in locations suitable for the purpose, and with due consideration of variations in recreational preference and economic levels."<sup>53</sup> One year later, while campaigning for Governor in October 1946 and defending the Clarks Hill project, Thurmond declared the dam and reservoir's recreational aspects as "one of the most important benefits of the project." He added, "If the Federal Government develops the project," as opposed to the Georgia Power Company, "the plans call for beautiful parks, for whites and blacks, separate parks."<sup>54</sup> Thurmond should not be mistaken as a defender of democratic outdoor recreation. In wooing his white constituents, what he ultimately promised to

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<sup>52</sup> Young, "A Contradiction in Democratic Government," 672.

<sup>53</sup> Allyn P. Bursley and the National Park Service, *Appendix II, Recreation, Exhibit A: Memorandum Report: Recreational Resources of the Clark Hill Reservoir, Savannah River, Georgia and South Carolina, Prepared August 22, 1945*, in *Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*, compiled by the Department of the Interior, National Park Service for the War Department, Corps of Engineers, South Atlantic Division (February 20, 1946), p. XI-A9, Box 141, Entry #53a114, Records of the Corps of Engineers (RG 77), National Archives II, College Park, Md., hereafter NAII.

<sup>54</sup> Thurmond's speech can be found in, *The Truth About the Clark's Hill Project*, 17.

white leisure seekers was that they would never have to share recreation space with African Americans. Two years later, the Corps followed NPS advice and publicly announced plans for at least two separate swimming, picnicking, and camping facilities on Clarks Hill's shoreline. In Georgia, the Corps recommended the "Keg Creek Negro Area," located about thirty miles north of Augusta and about two miles east of Leah, Georgia (now a day use area). And in South Carolina, the Corps recommended the "Hickory Knob Negro Area," located about two miles south of Bordeaux, S.C., and currently the site of the South Carolina's Hickory Knob State Park.<sup>55</sup>

Race, not unlike class, continued to enter the discussion about recreational planning in the American South before the 1950s. As noted earlier in this chapter, the North Carolina State Park system operated at least one segregated park before opening the state's first African American state park at Jones Lake in 1939. Georgia was a relative late comer to operating state parks for African Americans. The state opened its first African American park, George Washington Carver State Park, in 1950 on land the state leased from the Corps of Engineers at Lake Allatoona, and the state maintained at least three other parks around Georgia in 1955. The idea for Carver State Park was hatched by former Tuskegee Airman and Atlanta resident John Loyd Atkinson, Sr. He originally wanted to replicate the American Beach (Fla.) African American resort community by building a lake resort on private land. But the private resort

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<sup>55</sup> United States Army Corps of Engineers, *Clark Hill Reservoir, Savannah River Basin, Georgia and South Carolina: General Information Proposed Recreational Development*, Savannah District (October 1948), p. 4-5, Box 3, LMC; "Clark Hill Dam Area Recreational Plans Announced by Army Corps of Engineers," *Augusta (Ga.) Chronicle*, October 31, 1948, p. 4-B. In 1945, a NPS study recommended the Corps considered placing one African American state park at Hicks Creek between today's Mistletoe State Park and Leah, Ga., before suggesting the Keg Creek location in 1948; and the NPS originally suggested the Hawe Creek (S.C.) site for an African American park (today this is a Corps campground) before recommending the Hickory Knob location. See: Bursley, *Appendix II, Recreation, Exhibit A, in Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*, page XI-16.

plans fell through, and with Governor Herman Talmadge's assistance, the state leased land from the Corps and Atkinson served as the park's first superintendent until 1958.<sup>56</sup>

South Carolina's system, on the other hand, followed closely behind North Carolina's, and when Governor Thurmond spoke in support of more segregated parks at Clarks Hill, he spoke from a position of experience. South Carolina state parks had excluded African American visitors until 1940 when Lake Greenwood State Park opened and offered segregated recreational facilities within a park designed primarily for white visitors. The Civilian Conservation Corps built the park facilities around a Public Works Administration funded Greenwood County Electric Power Commission hydroelectric dam and lake in the 1930s. By 1947, two more parks opened with facilities and accommodations for African Americans in South Carolina. While these parks provided separate facilities, they were hardly equal. Greenwood, for example, included a 12,000 acre lake that only white visitors could use.<sup>57</sup> Segregated state parks and facilities throughout the American South soon became flashpoints for civil rights protesters beginning in the late 1940s and continuing into the 1960s.

Legal cases emerged in Maryland and Virginia to challenge segregated municipal and state park facilities before and after the famous *Brown v. Board of Education* decision (1954). Together, the segregated recreation cases demonstrated how state parks served as loci for civil rights protest and massive resistance. In 1948, Maceo Martin, an African American man from

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<sup>56</sup> Charles Atkinson (John Atkinson's son) and Greg Germani, "State Parks (Segregated)," *The Atlanta Time Machine*, includes images of four "Georgia State Parks for Negroes," [http://www.atlantatimemachine.com/misc/state\\_parks.htm](http://www.atlantatimemachine.com/misc/state_parks.htm), last accessed March 4, 2010; Southern Regional Council, "State Parks for Negroes - New Tests of Equality," *New South* 9, nos. 4 & 5 (April-May 1954): 1-7. George Washington Carver State Park was eventually consolidated with other state park property and renamed Red Top Mountain State Park, only to be divided again in 1975 when the old Carver portion of the park was transferred to the Bartow County park system to create Bartow Carver Park.

<sup>57</sup> Robert R. Weyeneth, "The Architecture of Racial Segregation: The Challenges of Preserving the Problematic Past," *The Public Historian* 27, 4 (Autumn 2005): 11-44, see 16-17; Robert A. Waller, "The Civilian Conservation Corps and the Emergence of South Carolina's State Park System," *South Carolina Historical Magazine* 10, 2 (April 2003): 101-125, see 112-113.

Danville, Va., filed a legal suit that challenged the Virginia Conservation Commission's policy that barred African Americans from staying overnight in state park cabins. In response to the suit, the park system opened the African American-only Prince Edward Park in 1950 in a system that included eight other white-only parks. It is worth noting that the second of the combined *Brown* cases came from the very same county and stemmed from a 1951 student strike led by Barbara Johns (*Dorothy E. Davis, et al. versus County School Board of Prince Edward County, Virginia*). In 1951, a second Virginia case challenged a Virginia beach recreation area's denial of access to African Americans.<sup>58</sup> The crux of these and following cases demonstrated how difficult it would be for state park systems to provide truly separate and equal facilities. For example, how might a state reproduce unique natural features or a historical site in a completely separate park if the system operated separate facilities? Furthermore, could large states provide enough sites specifically for African Americans? Since the second Virginia case emerged just before during the *Brown* decision, the plaintiffs petitioned for and received a continuance. About the same time, a Maryland legal case combined three suits involving exclusion from public pools, bathing areas, and a public beach. Upon hearing the Maryland case after the *Brown* decision, the United States Fourth Circuit Court of Appeals (Richmond, Va.) ruled state park segregation unconstitutional in March 14, 1955.<sup>59</sup> In the following Virginia cases, the court also ordered that state's system desegregated. But rather than consider an integrated system, Virginia leaders closed all parks as a part the "massive resistance" response to the *Brown* case, and they considered leasing or selling parts of the system.<sup>60</sup> African Americas challenged segregated

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<sup>58</sup> Southern Regional Council, "State Parks for Negroes - New Tests of Equality," *New South* 9, nos. 4 & 5 (April-May 1954): 1-7, see pp. 3-4, 6-7.

<sup>59</sup> Southern Regional Council, "Court Rules That Parks Are For All," and "Text of The Park Decision," *New South* 10, 4 (April 1955), 1 and 3-4.

<sup>60</sup> Southern Regional Council, "Court Rules That Parks Are For All," *New South* 10, 4 (April 1955), 1. See also: "History of Virginia State Parks," Virginia Department of Conservation and Recreation, [http://www.dcr.virginia.gov/state\\_parks/his\\_parx.shtml](http://www.dcr.virginia.gov/state_parks/his_parx.shtml), last accessed March 4, 2010.

policy in schools and on buses, as well as at the entrances to state parks throughout the 1950s, and there would be no shortages of such clashes in the 1960s.

In the years leading up to the *Brown v. Board of Education* decision, the Corps had still planned to segregate black and white nature seekers at Clarks Hill in the Savannah River valley.<sup>61</sup> Two events cooled those plans. First, South Carolina state forester Charles H. Flory wanted new state parks around Clarks Hill reservoir such as the segregated Hickory Knob facility. But on account general park system management and maintenance needs, he thought “the establishment and development of the two state parks proposed on Clark [sic] Hill must of necessity take a lower priority.” His system already had twenty-one existing parks, served 3,000,000 visitors, and could not balance maintenance with new construction.<sup>62</sup> The second, more significant reason for the cooled discussion pertaining to segregated parks emerged when the Supreme Court declared “separate but equal” public schools unconstitutional in 1954, and lower courts applied the decision to public recreation facilities. When Virginia officials closed state parks in 1956 to avoid court ordered park desegregation, South Carolina state park administrator C. West Jacocks defended his state’s segregated system. He justified the segregated system based on what he thought was an equitable geographic distribution of parks that provided facilities for white and African American visitors. Clearly not interested in park integration, Jacocks threatened that “Should any ‘power’ eventually bring into being the enforced non-segregated use of the state parks, there is every indication that there will be no use.” In that event, he intoned, “The parks will be closed.”<sup>63</sup> Despite his best face, Jacocks knew that his facilities could never be truly separate and equal even though South Carolina

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<sup>61</sup> U. S. Army Corps of Engineers, *The Master Plan for Development and Management, Clark Hill Reservoir, Savannah River, Georgia and South Carolina* (Savannah District, December 1950), 62-66.

<sup>62</sup> Charles H. Flory, South Carolina State Forester, to Col. W. E. Wilhoyt, Jr., Savannah District, April 23, 1953, Folder Legislation, 1953 Clarks Hill Project, Box 35, OJP.

<sup>63</sup> C. West Jacocks, “State Parks and Segregation,” *South Carolina Magazine* 20, 1 (January 1956): 3.

operated or was building five African American parks in 1952 when nine other southern states only managed one or two parks each.<sup>64</sup> Separate and equal recreation facilities – as recommended for the Hickory Knob (S.C.) and Keg Creek (Ga.) sites – could never have been possible at Clarks Hill given the project’s federal authority, and any such arrangement would have only delayed an inevitable confrontation over racial inequality evident in other institutions – swimming pools, schools, and public transportation – throughout the United States and at other southern state parks. Such events forced the hands of administrators like Jacocks who eventually followed through on threats. South Carolina parks closed in 1956 to avoid desegregation.

Planning and negotiating the Clarks Hill project’s recreational future required significant socio-economic considerations, corrective action, and time. The Corps and other agencies all came to realize that creating an artificial lake to benefit industry and leisure in a peopled and agricultural environment was not easy. The Clarks Hill water conservation project clearly roiled environmental questions as much as it confronted social and economic realities in Georgia and South Carolina. Plus, the Georgia Power Company executives were not the only voices to protest against federal plans for Clarks Hill. Everyone was actually not “for it,” and even those who did support the federal Clarks Hill project were not always happy with the Sunbelt environments they got.

### **Moving People, Saving Bridges, and Protecting Public Health in New Environments**

The real estate planning and land acquisition process produced marginal conflict when the Corps physically removed people from the Clarks Hill dam and reservoir project area. As Andrew Sparks reported for the *Atlanta Journal Magazine* in 1947, “Although some farm land will be inundated, there are remarkably few home sites in the vast area” since most valley

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<sup>64</sup> Southern Regional Council, “State Parks for Negroes - New Tests of Equality,” *New South* 9, nos. 4 & 5 (April-May 1954): 1-7, see 4.

residents “built on high ground” above the valley floor.<sup>65</sup> Corps real estate reports identified more than 500 property owners in the project area: “It is estimated that approximately 45 percent of the reservoir area is owned by individuals, 45 percent by the Savannah River Electric Company, 4 percent by the Twin City River Company, 3 percent by the United States (National Forest) with the remainder in the stream beds.” A total of 450 individuals – white and African American – comprised the approximately 128 resident and tenant families requiring physical relocation from a project area that grew to encompass over 150,000 acres today.<sup>66</sup>

Other, non-Corps generated surveys and documents confirm that the Savannah River valley was a sparsely populated but working landscape. Based on the initial purchases of 96,000 acres, there was approximately one person for every two-hundred-thirteen acres. In the mid-1940s, the Smithsonian Institution’s Bureau of Ethnology initiated a national archeological salvage project known as the River Basin Surveys. The basin survey program evolved from TVA-sponsored archeological activity at New Deal dam and reservoir sites before becoming a more formal program applied nationwide to dam and reservoir sites after World War II.<sup>67</sup> In 1947, the River Basin Survey sent two archeologists – Carl F. Miller and University of Georgia archeologist Joseph Caldwell – into the Savannah River valley to investigate the Clarks Hill dam and reservoir area as one of the southeast’s first major interagency archeological salvage project. The two men traversed a generally un-peopled landscape in transition, and their narrative and

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<sup>65</sup> Andrew Sparks, “Mile-Wide Dam for the Savannah,” *Atlanta Journal Magazine* (January 12, 1947): 8-9, Box 3, Folder 3, LMC.

<sup>66</sup> “Government Increases Estimated Cost of Clark Hill to Nearly \$50,000,000,” *Augusta (Ga.) Chronicle*, January 29, 1947, p. 1; J. S. Durant and B. H. Grant, *Real Estate Planning Report for Clark Hill Reservoir, Savannah River Basin, Georgia and South Carolina* (Atlanta, Ga.: War Department, U.S. Division Engineer, Real Estate Branch, October 1942), Box 66, Accession Number 76E342, RG 77, National Archives Southeast, Morrow, Georgia, hereafter NAS; *Appendix IX, Real Estate*, in *Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*, Corps of Engineers, South Atlantic Division (Revised, May 1, 1946), pp. IX-2 and IX-3, Folder 821.2 “Clark Hill Dam,” Box 141, Entry number 53a114, RG 77, NAIL.

<sup>67</sup> Jesse D. Jennings, “River Basin Survey: Origins, Operations, and Results, 1945-1969,” *American Antiquity* 50, 2 (April 1985): 281-296.

photographic data clearly indicated the used, abused, and abandoned states of the Savannah River valley's landscape.

The area's old domesticated fields and orchards had changed into a feral landscape. The land was not wilderness nor was it completely domesticated, and the landscape obscured past uses as much as the land was obviously scarred by those uses. As Miller walked across private property and drove state highways in Georgia and South Carolina, Miller's eyes looked for Indian mounds and potential settlement sites on knolls, in fields, and at the junction of watercourses on sand bars, in bottomlands, or adjacent to shoals. He then read back through layers of modern landscapes to find pot shards, human remains, bone tools, and Indian mounds in wooded areas, orchards, cotton fields, and pastures. Miller's notes included brief narrative descriptions of sites, indicated inconsistent land ownership records or occupation status, and noted previous land uses and current property conditions. At the time of Miller's surveys – dated January through April 1949 – the survey sites were typically located in cleared and fallow fields. But land owners and tenants or renters clearly continued to use many fields – for cotton, orchards, and cattle – set to be covered by the water stored behind Clarks Hill dam to control down stream flooding, produce power for distant urban and industrial consumption, and improve navigation in the lower valley.<sup>68</sup>

Miller and his archeological contemporaries also noted land in various stages of use and ecological evolution a few years before University of Georgia biologist Eugene P. Odum began evaluating old field succession downriver at the Barnwell (S.C.) Savannah River Site nuclear bomb factory in 1951. Miller categorized erosion generally and specifically in the Clarks Hill

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<sup>68</sup> Clark Hill Field Notebooks, Book 1, pp. 96, 99, 127 and 139, Box 595, Carl F. Miller, River Basin Survey Collection, National Anthropological Archives, Suitland, Maryland, hereafter CFM.

reservoir area. One “badly eroded knoll...was covered with broom straw and small pines.”<sup>69</sup> Another knoll, near South Carolina bottom land on the Little River, was “marked by sheet erosion” and ubiquitous loblolly and slash pine trees.<sup>70</sup> Some of the “old plowed” fields “had been allowed to grow to pine and shrub” in McCormick County, South Carolina. Other fields identifiably “old” and “terraced” were “partly overgrown in pines and broom straw.”<sup>71</sup> Very often Miller found evidence of Indian habitation in plowed fields, pastures, and canebrakes, and at other times he did not.<sup>72</sup> Despite occasionally striking out, Miller consistently observed an agricultural landscape that – in the absence of human activity – had been “allowed to go back to nature.”<sup>73</sup>

At about the same time that Miller and Caldwell conducted their Clarks Hill investigations a National Park Service (NPS) historian investigated potential historic sites during the months of March and April, 1949. Operating independently of the River Basin Survey and the interagency archeological salvage project, Edward Riley investigated and reported on nearly twenty locations in the proposed Clarks Hill reservoir area, including an eighteenth century military fort, “dead towns,” ferry crossings, and cemeteries. Riley’s recommendations to the NPS varied from doing nothing with some areas to improving road access for others. For Fort Charlotte, an eighteenth century South Carolina garrison, Riley suggested a thorough investigation or removal since it would be covered with water. But for most spots, Riley was a harsh historian: “Archeological investigation of the sites is not feasible. It would probably contribute little to the known history of the towns.” To be fair, Riley evaluated these areas for

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<sup>69</sup> Clark Hill Field Notebooks, Book 1, page 139, Box 595, CFM.

<sup>70</sup> Site No. 65, 38MC17, River Basin Survey Site Files, Box 598, “38 MC McCormick County, SC 1948,” CFM.

<sup>71</sup> Clark Hill Field Notebooks, Book 1, pp. 137 and 150, Box 595, CFM.

<sup>72</sup> *Ibid.*, pp. 55 and 61.

<sup>73</sup> Site No. 56, 9LC67, River Basin Survey Site Files, Box 598, Folder: “9 LC 1-98 (Lincoln County, GA) s.d.,” CFM.

their national significance and not just their local interest, and as such he believed that “none of the sites to be covered by the reservoir has sufficient significance to require preservation.” But at a basic level, NPS historian Riley diverged from River Basin Survey archeologists Miller and Caldwell. Riley only recommended “erection of historical narrative markers at the various” historic sites not older than the eighteenth century since little could “be done to interpret the history of the reservoir area.” In contrast, archeologists Miller and Caldwell identified hundreds of pre-eighteenth century locations illustrating the complex and long environmental history of an area shaped by shifting environmental and cultural conditions.<sup>74</sup>

Journalist Andrew Sparks later reported from one of the sites Riley considered insignificant and highlighted valley residents’ ambivalence about selling their property and relocating. According to Riley, “the only town which will disappear under the dammed-up water” behind Clarks Hill, was Lisbon, Georgia, an “out-of-the-way, one-store hamlet” sixty-five miles upriver from Augusta as described by Sparks.<sup>75</sup> Located at the junction of the Broad and Savannah Rivers, Lisbon had been an important tobacco and cotton trading center in the late 1800s, but declined as railroads stifled river transportation. In the 1940s, Lisbon still included a working river ferry, a post office, and a handful of other buildings.<sup>76</sup> As Irene DuBose, a resident from the small hamlet, explained to Sparks: “They’ll have a hard time pushing us out but I reckon I’ll go.” Another, Lisbon ferryman Jim Evans commented: “I ain’t going to wait for them to start” building the dam or flooding the reservoir, “I’ll take my five children and get out. I’ll farm somewhere I reckon.” Like DuBose and Evans, individuals and family estate representatives, plus other Clarks Hill corporate land owners such as the Savannah River Electric

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<sup>74</sup> Edward M. Riley, *The Survey of the Historic Sites of the Clark Hill Reservoir Area, South Carolina and Georgia* (Richmond, Va.: National Park Service, June 1949), pp. 9, 17, and 27-28, United States Army Corps of Engineers, Savannah District Library, Savannah, Georgia.

<sup>75</sup> Sparks, “Mile-Wide Dam for the Savannah,” Box 3, Folder 3, LMC.

<sup>76</sup> Riley, *The Survey of the Historic Sites of the Clark Hill Reservoir Area*, 15.

Company, the Georgia Power Company, the Twin Cities Power Company, and banks eventually sold their property to the federal government. Many individual and corporate sellers willingly worked with the Corps, eagerly sold property, and moved out of the valley. In a procedure familiar in the past and encountered in future, not all transactions were so smooth. Some land owners reluctantly sold property only under condemnation proceedings where legal fights revolved not over the right of the federal government to condemn land, but over properties' economic value and emotional significance.<sup>77</sup>

There were other situations, however, where individual and community support for a federally financed Clarks Hill traveled a well known and bumpy road. When residents in Lincoln, Columbia, and Richmond counties learned that rising water behind Clarks Hill dam would flood important Georgia highways, they organized to save their communities from perceived economic dislocation. Boosters for Clarks Hill had convinced most Lincoln County and other Georgia residents why the region needed the massive federal multiple purpose project. These Georgia residents all cited the official benefits behind Clarks Hill: cheap electrical power for towns and farms, flood control, future industrial jobs, and recreational opportunities.<sup>78</sup> But when people like Homer Legg discovered that Clarks Hill dam would ultimately cause the Little River to rise and flood roads used for at least a century to connect Lincolnton and Augusta, he

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<sup>77</sup> "Injunction Sought by Power Company," Greenville (S.C.) *News*, April 19, 1947, p. 1, and "Power Company Seeks to Halt Clark Hill Work," Augusta (Ga.) *Chronicle*, April, 19, 1947, both located in Folder 3 "Clarks Hill News Clippings," Box 3, LMC; Henry E. Barber and Allen R. Gann, *A History of the Savannah District U.S. Army Corps of Engineers* (Savannah, Ga.: United States Army Corps of Engineers, 1989), 427. Historians have evaluated similar situations in the Tennessee Valley and reached similar conclusions, see: Michael J. McDonald and John Muldowny, *TVA and the Dispossessed: The Resettlement of Population in the Norris Dam Area* (Knoxville: University of Tennessee Press, 1982), 154; and Darren Anthony Shuler, "On Our Land: Progress, Destruction and the Tennessee Valley Authority's Tellico Dam Project" (M.A. thesis, University of Georgia, 2000). Most recently, Robert P. Shapard also reached this conclusion based on analysis of oral histories, real estate files, and condemnation cases associated with the Clarks Hill project, see: "Building an Inland Sea: Clarks Hill Lake on the Upper Savannah and the Twentieth-Century Lives, Land, and River Hidden by its Waters" (M.A. thesis, North Carolina State University, 2009).

<sup>78</sup> Ester Young, "Clark Hill Dam Viewed As 'Biggest Thing in Our Lives' By People Who Reside in Region of Great Development," Augusta (Ga.) *Chronicle*, July 8, 1947, p. 1.

mobilized his neighbors to save the communities' established lines of communication and transportation. As early as 1946, Judge Homer Legg communicated with the Corps through Rep. Paul Brown about the outlook for the community's highways and bridges over the Little River.<sup>79</sup> By 1948, Legg became the leading spokesman in a multi-community campaign to save two bridges from the projected rising waters of artificial Clarks Hill lake.<sup>80</sup> Legg was joined by business, church, and school leaders, as well as the editors of the Augusta *Herald*. The newspaper defended the Georgia communities and targeted detractors who balked at the potential \$1,500,000 cost to retain or re-build the important infrastructure in counties that had no rail road service. For the *Herald* editorial staff, "the building of a great sixty-million-dollar" Clarks Hill multipurpose project and the implications for building new roads and bridges did "not pose an economic question altogether." Rather, the editors highlighted "human rights and needs," since "homes, schools, churches, stores and even cemeteries have to be abandoned in order that a great deal of water may be impounded to generate electricity and provide adequate waterway transportation down below the project." The editors recognized that water conservation in the Savannah River valley had social costs and required sacrifice at the local level. While the editors may have exaggerated claims that nearly 1,500 "Georgia citizens" would have been cut off from the world – they would need to make at least a twenty-mile detour around a raised Little River and flooded roads – the editors were shrewd international observers. In reference to the Marshall Plan, implemented in early 1948 to resuscitate the post-World War II economies of Europe, the

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<sup>79</sup> Homer Legg, Court of Ordinary, Lincoln County Georgia, to Rep. Paul Brown, Washington, D.C., February 28, 1946, Folder 821.1 Clarks Hill Dam, Misc., Box 140, Entry #53a114, RG 77, NAI; Lt. General R. A. Wheeler, Chief of Engineers, Washington, D.C., to Rep. Paul Brown, Washington, D.C., February 21, 1946 and March 8, 1946, Folder 821.1 Clarks Hill Dam, Misc., Box 140, Entry #53a114, RG 77, NAI.

<sup>80</sup> "Lincoln, Columbia Counties Opposed Rerouting of Road," Augusta (Ga.) *Chronicle*, June 27, 1948, p. 1.

editors noted “we spend hundreds of millions abroad to help distressed peoples and then create distress at home which we ignore.”<sup>81</sup>

After enlisting Georgia’s Representative Paul Brown and Senator Richard B. Russell, Jr., the Corps eventually released a new road and bridge plan. The Corps, of course, had known since 1942 that these particular roads and bridges, as well as cemeteries and other infrastructure like railroads and power lines, required relocation or elevating.<sup>82</sup> What and when folks like Lester Moody and the states’ congressional delegations discovered these potential flashpoints remains unknown, and highlights the Corps’ lack of experience and tact in managing this process. But by 1949, the Corps agreed to retain the Price’s Bridge (Georgia Highway 47) and Raysville Bridge (Georgia Highway 43) “at or near their present locations in conjunction with the Clark Hill development” after pressure from community leaders like Legg, and with assurance from elected leaders that the money would come from Congress. The Corps had originally recommended consolidating the two crossings into one. But according to press reports, “when the proposal for the relocation of the bridges became known, residents of Lincoln, McDuffie, Columbia and Richmond Counties filed protests against” the proposal because the change would “cause a great deal of inconvenience to a large number of persons in these counties and would work hardships upon the people.”<sup>83</sup> With the bridge and road debate, adept politicians like Senator Russell quickly learned that winning a project like Clarks Hill only created numerous smaller headaches that had never been discussed publically such as the road and bridge relocations.

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<sup>81</sup> “A Case of Human Rights Versus Dollars and Cents,” Augusta (Ga.) *Herald*, November 22, 1948.

<sup>82</sup> Durant and Grant, *Real Estate Planning Report for Clark Hill Reservoir*, p. 1-2; *Appendix VII, Relocations*, in *Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*, p. VII-20.

<sup>83</sup> “Two Little River Bridges to Remain Near Present Sites,” Lincolnton (Ga.) *Journal*, October 6, 1949, p. 1.

A feared public health crisis only complicated matters more. The Corps was in over their head by the time they started clearing the reservoir site in the Savannah River. Up to this point, the Corps had navigated recreation and racial issues, manage archeological studies for which the Corps had never considered, and spent more money on unplanned infrastructure relocations. Then the Corps confronted a public health issue during the reservoir clearing phase. The Corps had enlisted the United States Public Health Service (PHS) to survey the reservoir area's demographic and "malariometric" conditions in 1945. The PHS concluded that the Georgia and South Carolina portions of the reservoir and project area were largely free of malaria hosts (people) and vectors (mosquitoes). However, while the pre-reservoir environment was not conducive to mosquitoes, the reservoir area would "be changed to one with a high malaria potential." Ralph S. Howard, Jr., the PHS report's author, explained that "the presence of malaria and the malaria vector in this region, even though of low incidence, emphasizes the likelihood of production of a malaria problem of major proportions." With Howard's recommendations, the Corps planned to fully clear the reservoir area of vegetation to eliminate mosquito habitat, apply larvicides to control mosquito larvae, and monitor mosquito breeding. As noted by the Corps, the Clarks Hill reservoir area was "in the malaria belt where new impoundments may be expected to increase the breeding of *Anopheles quadrimaculatus*," and because of this, "the need for control is evident."<sup>84</sup> The Corps soon became embroiled in a public health and reservoir debate that was not new to the American South's artificial water.

Artificial lake builders typically cleared reservoir areas prior to closing a new dam's floodgates to create a new body of water, and the clearing process often raised the ire of local residents much as the road and bridge relocations did. The Georgia Power Company, the

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<sup>84</sup> Appendix X, *Malaria Control*, in *Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*, Corps of Engineers, South Atlantic Division (Revised, May 1, 1946), pp. X-1 through X-2, and X-A2 through X-A4, Box 141, Folder 821.2 "Clark Hill Dam," Entry #53a114, RG 77, NAIL.

Alabama Power Company, and the Tennessee Valley Authority each cleared their reservoirs in the first half of the twentieth century. The private and public reservoir managers had a steep learning curve, but they quickly improved upon the clearing process and managing malarial conditions between 1915 and 1935.<sup>85</sup>

As such, Georgians' concerns about malaria and reservoir clearing were not without historical context. Before 1930, mosquito and malaria outbreaks were directly related to reservoir clearing, filling, and operation in Georgia (1911) and Alabama (1913 and 1915) [See Chap 2]. Georgia Power Company and Alabama Power Company executives breathed a general sigh of relief when legal cases did not convince juries of any company wrong doing or were settled out of court.<sup>86</sup> While the companies never admitted fault, the mosquitoes and environmental conditions posed enough of a legal question mark that southern utility companies (and TVA) monitored human health before and during reservoir construction, and then used oil and pesticides, released minnows, and manipulated water levels to control mosquito breeding conditions once the reservoirs filled. Given this history and the Corps' own institutional knowledge, how could the Corps not anticipate public health concerns related to reservoir clearing and filling?

At Clarks Hill, the Corps signed the first round of timber clearing contracts for 10,000 acres in the project area in early 1950. By the time the Corps awarded the second set of contracts to clear an additional 13,500 acres, the Chief of Engineers in Washington, D.C. had changed the Corps' national clearing policy from one of complete cutting and removal, to a selective cutting

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<sup>85</sup> Margaret Humphreys, *Malaria: Poverty, Race, and Public Health in the United States* (Baltimore: Johns Hopkins University Press, 2001), "Hydroelectric Malaria," p. 87-93, and "The Tennessee Valley Authority," p. 103-106.

<sup>86</sup> On Georgia Power, see: "Lloyds Shoals and the Ocmulgee Dam," in Lois McMichael, *History of Butts County, Georgia, 1825-1976* (Atlanta, Ga.: Cherokee Publishing Company, 1978), 55-57; and "Jackson Lake and Lloyd Shoals," *History of Jasper County* (Monticello, Ga.: Jasper County Historical Foundation, Inc., 1984), 42. On Alabama Power, see: Harvey H. Jackson, III, *Putting "Loafing Streams" To Work: The Building of Lay, Mitchell, Martin and Jordan Dams, 1910-1929* (Tuscaloosa: University of Alabama Press, 1997), chapter 2, "Almost Done in by a Mosquito;" Atkins, "Developed for the Service of Alabama," 48-52.

and removal process to save money. When residents of the greater Clarks Hill project area caught wind of the new partial clearing program, they once again mobilized to vent their frustration over the project's execution. At the time, the Corps still needed to clear an additional 36,000 acres, and many residents were concerned that "a failure to clear the reservoir basin completely would tend to produce malaria-breeding spots, hazards in the recreational area, and a blight upon the scenic beauty of the reservoir."<sup>87</sup>

Local knowledge challenged the Corps where the Corps appeared incapable of learning about local environmental conditions. John Pierce Blanchard, the Columbia County (Ga.) school superintendent whose father had apparently treated malaria patients from the area in the past, was primarily concerned about the public health consequences of not completely clearing the Clarks Hill reservoir area. The PHS warned against leaving vegetation or downed trees along the shallow waterline in a region where people were known to be infected with malaria. These conditions would present mosquitoes with ripe breeding habitat in motionless and stagnant pools of water where floating and decaying vegetative debris leftover from clearing operations would provide an ample food stock and protective cover from predators for mosquito larvae. Eliminating these conditions and maintaining a clear shoreline would disrupt the mosquito lifecycle.<sup>88</sup> Judge Homer Legg, who had previously saved two bridges from the Clarks Hill reservoir's rising waters, believed that failing to clear the reservoir completely would also lead to future recreation problems. Others shared his opinion and explained that those who originally supported Clarks Hill were increasingly dissatisfied with the thought that lake's new shoreline would "be mostly dead trees standing around the lake." These citizens, not unlike their elected

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<sup>87</sup> "Contracts Awarded For Clearing in the Clark Hill Reservoir," [unknown clipping], April 13, 1950, Folder 3, Hartwell Reservoir, Box 4, LMC; Mary Carter Winter, "Strong Call is Made for Total Clearing of Clark Hill Basin," *Augusta (Ga.) Chronicle*, April 26, 1950, p. 1, Box 3, LMC.

<sup>88</sup> *Appendix X, Malaria Control*, in *Definite Project Report on Savannah River Basin, Georgia and South Carolina, Clark Hill Project*.

representatives, were learning that while they were all “for it” during the conceptual and planning stages, the Corps’ execution of Clarks Hill was far from simple, straightforward, or clearly explained.

When the Corps attempted to solve the region’s water problems, they encountered running racial and health problems. The Savannah District’s Col. Robert Erenkotter could not have agreed more with this sentiment. Erenkotter recognized that the people who had supported the Clarks Hill project were now frustrated that the Corps was cutting corners. He explained that the timber clearing operations and problems at Clarks Hill were not isolated. At Clarks Hill, the Corps had to go through three rounds of contract bids for total clearing because the anticipated costs were “astronomical,” and in the range of \$10,000,000. Since “clearing costs, country-wide, were also running very high,” the unprepared Chief of Engineers in Washington, D.C. had decided to reevaluate clearing programs in all reservoir projects authorized by the 1944 Flood Control Act and subsequent rivers and harbors legislation. Erenkotter claimed the Corps abandoned total clearing at Clarks Hill for the “selective clearing program” in order “to cut costs and to maintain work schedules that would speed up the completion of the dam and enable the government to secure a speedier return in money from the sale of power generated at Clark Hill.” He also reminded his audience, particularly folks like Homer Legg, that “relocation costs” such as those associated with rebuilding the Price’s and Raysville’s bridges, had exceed estimates and also threatened the Clarks Hill project’s finances and ultimate completion.<sup>89</sup> The Corps eventually resolved to completely clear the “zone of fluctuation,” or any shoreline segments that could be exposed during normal reservoir operations and water releases.<sup>90</sup>

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<sup>89</sup> Mary Carter Winter, “Strong Call is Made for Total Clearing of Clark Hill Basin,” *Augusta (Ga.) Chronicle*, April 26, 1950, p. 1, Box 3, LMC.

<sup>90</sup> *Study of Death and Decay of Trees From Flooding*, Civil Works Investigations Program of Research on Clearing, Mosquito Control, and Flotage Removal, Clark Hill Reservoir, Georgia and South Carolina (Savannah: U.S. Army

## Conclusion

So was everyone “for it?” In 1943, when Col. P. A. Feringa made this remark about the federally financed Clarks Hill project, he was technically more correct than wrong. Flooding that nearly caused a catastrophic levee failure in Augusta in 1929 and a 1941 urban drought that resulted in a major energy crisis made the multiple purpose navigation, flood control, and hydroelectric dam project at Clarks Hill more appealing to the Savannah River valley’s residents in 1945 than the Georgia Power Company’s power project. Within a few years, this assumption was challenged and circumscribed by various parties, but the project moved forward and workers poured the first batches of Clarks Hill concrete in 1948. The topography of the Savannah River Valley did not call for a tall western dam best exemplified by the iconic Hoover Dam (officially dedicated in 1935). That Colorado River dam, which stood taller than five hundred feet and measured just over a thousand feet in width, was far different from the Clarks Hill Dam. After increasing from an estimated 1944 cost of \$35.3 million to a 1954 cost of \$78.5 million, the concrete dam and earthen embankment stood just shy of two hundred feet tall and nearly one mile wide across the Savannah River when completed.<sup>91</sup>

When Clarks Hill dam’s floodgates closed and the reservoir began to fill in 1951, the project remained far from finished. In late 1952, Atlanta journalist Andrew Sparks declared that the Savannah River was “imprisoned” behind the dam, and turned into an “ocean” covering 71,000 acres with more than twice as much shoreline (1,200 miles) than Georgia’s Atlantic coast. At the time, Clarks Hill Lake was the “biggest man-made lake southeast of TVA.” Many held out hope that the dam would “tame the river in floodtime, preventing more than a million dollar’s worth of damage every decade” and store water for “periods of drought” last

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Engineer District, January 1961), 2-3, obtained from the Research Library, U.S. Army Corps of Engineers, Engineer Research and Development Center, Vicksburg, Mississippi.

<sup>91</sup> Barber and Gann, *A History of the Savannah District*, 422-426.

experienced in 1941. Others hoped that Clarks Hill would become “the biggest vacationland between the Blue Ridge mountains and the sea.”<sup>92</sup> Clarks Hill began producing power in 1953 and all waited to see what the dam could do, but the project – including park planning, concession contracts, real estate claims and leases, and domestic water supply allocation – remained incomplete and contested well into the 1960s. Many of these questions were new and unanticipated by those who conceived of and who supported the Clarks Hill project, and illustrate the continuing and unintended management issues the Corps, elected officials, engineers, and residents had to negotiate. And even before Clarks Hill went on line, the Corps’ next massive artificial Savannah River valley waterscape moved from idea to reality. The Hartwell dam and lake, as recommended in the 1944 Flood Control Act, would also face many of the same trials, endorsements, and conflict as the Clarks Hill project had experienced.

Just as there was no “Solid South,” there were Sunbelt boosters who were equally divided over resolutions for the region’s water problems. The Savannah River Electric Company and the Georgia Power Company waged an unsuccessful political battle for a privately financed Clarks Hill power project to avoid what they feared would be a road to socialism. The energy companies and their supporters consistently trumpeted the importance of private enterprise and raised the specter of socialism, though this message was often interpreted as flagrant hyperbole. For example, the *Atlanta Journal* editors surmised in 1947 that the Georgia Power Company was “not only fighting for something” it wanted, but was primarily “spearheading a campaign in [sic] behalf of the National Association of Electric Companies” lobby, and “to stop further development by government of the nation’s river systems on the pattern of the Tennessee Valley Authority.” In the editor’s opinion, the battle was not about Clarks Hill, but over a nearly thirty-

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<sup>92</sup> Andrew Sparks, “Georgia’s New Ocean: Builds Up Behind Clark Hill Dam,” *Atlanta Journal and Constitution Magazine* (September 7, 1952): 28-30, Folder 3, Box 3, LMC.

year old war: “Shall there be any further governmental developments like TVA, or shall TVA remain a sort of yardstick or object lesson, and our river systems be developed for power production by private initiative in the manner it deems best for production of profits?”<sup>93</sup> In the matter of Clarks Hill, many more sided with public power than with private power. In perhaps the most forceful and clear language, then Governor J. Strom Thurmond declared, “We know the government always completes its projects.” In directly calling out Georgia Power Company executives who were then restarting the almost twenty-year old Furman Shoals (Lake Sinclair) project on the Oconee River, Thurmond reminded South Carolina citizens that they could not always be sure about a private energy company’s interest in finishing projects.<sup>94</sup> Furthermore, Thurmond noted that “opposition to the nation’s water development system stemmed from ‘bulwarks of wealth and private interest,’” not from those who purportedly held public and community values.<sup>95</sup> Thurmond – better known in the future for his leadership in Dixiecrat revolt, his racial politics, and eventual jump to the Republican Party – was a complex character, and his advocacy for Clarks Hill undoubtedly played into Congress’ decision to change Clarks Hill Dam and Lake’s name to the J. Strom Thurmond Dam and Lake at Clarks Hill in 1988.

To say that dry and high river years, or drought and flood history in the Savannah River valley, did not equally shape the Savannah River valley’s history would be an understatement. Water and its shifting behavior contributed to the reasons why people moved into and throughout the valley for centuries. More recently, New South boosters consistently trumpeted the region’s stock in plentiful, high quality water from the 1890s to the 1950s. As such, devastating flooding in river communities and droughts that compromised electrical production and industrial

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<sup>93</sup> Editors, “Clark’s Hill,” *Atlanta (Ga.) Journal*, May 29, 1947.

<sup>94</sup> “S.C. Governor Warns That Power Interests Still Seek to Gain Control of Clark Hill,” *Augusta (Ga.) Herald*, February, 7, 1947, p. 1.

<sup>95</sup> “Thurmond Sees Development of Water Resources as key to Continued US Progress,” *Columbia (S.C.) State*, May 4, 1947, p. 10-B.

development did not always strike innocent Georgians and South Carolinians. Water was the element that made the region's economic growth possible, and water in the wrong quantities at the wrong times also compromised that growth. Natural disasters – the droughts and the floods in the Savannah River valley – were thus nature's and people's making. Many other factors – the national conversation about racial equality in public places, agricultural land use, bridge relocations, and public health concerns – also influenced the valley's shape, where people lived, and if communities thrived.

After completing the Clarks Hill dam and reservoir project, the Corps went on to build hundreds of large and small reservoirs throughout the American South for a variety of purposes in places southerners had lived, farmed, hunted, and appreciated for centuries. In the post-1945 period, the Corps' work in southern valleys hitched the region's water problems to recreational planning. And outdoor recreation in the southeast also forced some southerners to negotiate the color line and confront socioeconomic realities. Recreation planners ultimately defined recreation possibilities and leisure space boundaries in the American South based on their perceptions of what white and black men and women wanted to do with free time. In a region with a variety of used, abused and abandoned landscapes, the Corps and other agencies faced major challenges in creating democratic and accessible leisure landscapes.

In the last half-century, longtime valley residents had to share a transformed landscape perhaps best described by William Faulkner in his collection of short stories, *Big Woods*. In Faulkner's Mississippi, an old hunter could lament that the new fishermen in boats had no memory of the old agricultural landscapes below the surface of a "government-built" reservoir. Furthermore, the unappreciative fishermen simply left bass plugs and bottles on the "Big

Bottom” itself where the hunter had once tracked deer and game.<sup>96</sup> That old landscape was consumed by human fears of future floods and droughts; it was consumed by insatiable boosters and clever Congressional leaders who made the federal government responsible for managing and altering southern rivers’ environmental conditions. Flush with public funds and hungry for institutional validation after World War II, the Corps contributed to manufacturing and managing new environmental conditions in the Savannah River valley and beyond. But the South’s water problems persisted. Before the Clarks Hill reservoir had even completely filled up, drought once again struck the American South in the 1950s and cast doubt on the role new reservoirs could play in maintaining adequate water supplies for a region that suddenly did not have enough water again.

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<sup>96</sup> William Faulkner, *Big Woods* (New York, N.Y.: Random House, 1955), 170.

## CHAPTER 5

### “SAVE STATES RIGHTS:” HARTWELL DAM, A DIVIDED SOUTH, AND THE WATER PROBLEM, 1954-1961

When Governor Sonny Perdue prayed for rain on the statehouse steps during Georgia’s drought of record in 2007, it was not the first time politics, religion, and water problems merged in the Peach State. In 1954, drought gripped Georgia for a third time in less than thirty years, and Georgians decided to “Pray for Rain” during the driest year in Georgia history since 1925.<sup>1</sup> As the multi-year national drought climaxed in 1954, the drought hit Georgia’s farmers and small towns hardest. In a display of sympathy and well choreographed publicity, Governor Herman Talmadge personally led a Sunday service in Macon designated as a “day of prayer for rain” according to one newspaper. Atlanta officials restricted city departments’ water use, and then planned for, but did not, ration municipal water supplies.<sup>2</sup> Fayetteville, a small town about twenty-five miles south of downtown Atlanta, was not so lucky. The Fayette County seat of 1,200 had to cancel school for the county’s 700 students because the town had no water. Georgia Civil Defense officials set up two-miles of fire department hose collected from neighboring jurisdictions to import water across county lines since the Civil Defense staff had already deployed their stock of metal pipe in six other Georgia communities that had previously

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<sup>1</sup> “Georgians Pray for Rain,” *Augusta (Ga.) Chronicle*, October 11, 1954, p. 2; “Georgia Drought Rated With Worst,” *Augusta (Ga.) Chronicle*, December 28, 1954, p. 1.

<sup>2</sup> “Atlanta May Ration Water,” *Augusta (Ga.) Chronicle*, October 14, 1954, p. 1.

depleted their own municipal water supplies.<sup>3</sup> Urban residents and municipal water supplies were not the only drought victims. The state's increasingly diversified truck farmers also suffered as their fruit and vegetable crops withered on the vine. While poultry farmers lost chickens to the heat, cattle farmers apparently did not lose stock for lack of water. Overall, the state's agricultural economy took a \$100,000,000 hit from a drought that *Atlanta Journal* editors characterized as not making "as much noise as fires and floods" or moving "as fast." But the drought was, in their opinion, "just as deadly."<sup>4</sup>

Georgia – and the southeast – again encountered a serious water supply crisis, signaling that the South's water problems remained unresolved. The 1954 drought, not unlike droughts in 1925 and 1941, compromised urban water supply and industrial operations, as well as agricultural livelihoods. The 1950s Georgia drought – as a historic agent – occurred at a critical juncture during the cotton belt's transformation into the Sunbelt, yet this event is absent in the historical literature. Agricultural and environmental historians have ably illustrated how important technological, institutional, and labor forces have shaped southern agriculture before, during, and after the New Deal.<sup>5</sup> Scholars' commitment to interpreting civil rights and racial

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<sup>3</sup> "Emergency water shortages hit six Georgia Communities; Bremen situation is critical," *Augusta (Ga.) Chronicle*, October 6, 1954, p. 1.

<sup>4</sup> Editors, "State Nurses \$100,000,000 Bruise from 1954 Drought," *Augusta (Ga.) Chronicle*, November 7, 1954, p. 4A, originally published in the *Atlanta (Ga.) Journal*. Portions of this paragraph were previously published, and have been approved for republication by the *Flagpole* as copyright remains in possession of the author, see: Chris Manganiello, "[Georgia's Urban Drought History. Who Knew?](#)" *Flagpole (Athens, Ga.) Magazine*, May 6, 2007.

<sup>5</sup> Gilbert Fite, *Cotton Fields No More: Southern Agriculture, 1865-1980* (Lexington: University Press of Kentucky, 1984); Pete Daniel, *Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Cultures Since 1880* (Urbana: University of Illinois Press, 1985); Jack Temple Kirby, *Rural Worlds Lost: The American South, 1920-1960* (Baton Rouge: Louisiana State University, 1987); Mart Stewart, 'What Nature Suffers to Groe': *Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens: University of Georgia Press, 1996, reprinted in 2002); Edmund Russell, *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring* (New York: Cambridge University Press, 2001); Joshua Blu Buhls, *The Fire Ant Wars: Nature, Science, and Public Policy in Twentieth-century America* (Chicago: University of Chicago Press, 2004); Pete Daniel, *Toxic Drift: Pesticides and Health in the Post-World War II South* (Baton Rouge: Louisiana State University, 2005). I am only aware of two historical accounts of southern drought. The first addresses Arkansas, Kentucky, Louisiana, Mississippi, Tennessee, and West Virginia in the 1930s, see: Nan Elizabeth Woodruff, *As Rare as Rain: Federal Relief in the Great Southern Drought of 1930-31* (Urbana: University of Illinois Press, 1985). The second addresses drought and irrigation history in Mississippi and Alabama after 1970, see: Valerie Grim, "The High Cost of Water:

politics has also demonstrated how the long civil rights movement's complex geography and history defined the region's past.<sup>6</sup> Race, class, and gender, not the environment, functioned as the primary agents of change and drove these influential narratives. Scholars, however, have not seriously considered how the region's water problems, like drought, have affected the post-war South's political economy and environmental history. Water and power have a long history in the South, and the 1950s southern drought and response sparked an intense debate over how best to approach the region's water problems. In this context, Savannah River valley residents were not alone.

By the time the Army Corps of Engineers began planning the Hartwell Dam project to resolve southern water problems, opposition to national multiple purpose projects began to coalesce. As environmental historian Karl Brooks has argued, controversies over dams in the American West "encouraged more widespread resistance after the 1950s to the postwar consensus for dam building on" the nation's rivers. According to Brooks, the post-war public-private power debate over the Hells Canyon High Dam served as a critical tipping point for New Deal liberalism and environmentalism. The Idaho Power Company successfully mounted a decade-long campaign to win control of the Snake River valley, "unplugging the New Deal" in the process.<sup>7</sup> The corporate energy lobby used economic and ecological arguments to win

Presidential-hopeful Dwight Eisenhower's political support and the Federal Power

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African American Farmers and the Politics of Irrigation in the Rural South, 1980-2000," *Agricultural History* 76, 2 (2002): 338-53. Surprisingly, Megan Kate Nelson does not discuss the 1950s Georgia drought despite the fact that nearly 500,000 acres in and around Okefenokee Swamp burned in 1954 and 1955, *Trembling Earth: A Cultural History of the Okefenokee Swamp* (Athens, Ga.: University of Georgia Press, 2005). For reference to Okefenokee burning, see "Drought Depleting Okefenokee Swamp," *The Ledger*, August 7, 1977, p. 5B, available online through Googlenews. The classic agricultural and environmental history of drought on the Great Plains remains Donald Worster, *The Dust Bowl* (New York, N.Y.: Oxford University Press, 1979).

<sup>6</sup> Numan V. Bartley, *The New South, 1945-1980* (Baton Rouge: Louisiana State University, 1995); Matthew D. Lassiter and Joseph Crespino, eds., *The Myth of Southern Exceptionalism* (New York: Oxford University Press, 2010).

<sup>7</sup> Karl Boyd Brooks, *Public Power, Private Dams: The Hells Canyon High Dam Controversy* (Seattle: University of Washington Press, 2006), for quote, see 222, and chapter 7, "Unplugging the New Deal: Hells Canyon High Dam and the Postwar Public-Power Debate."

Commission's approval for three small private dams in 1957. These victories eliminated the federal government's Hells Canyon High Dam project, and beat back plans put forth by old and New Deal alphabet agencies. Public opposition at Hells Canyon – beginning in 1945 and initially led by a private energy corporation – opened the door for other opponents, such as conservationists and ecologists who defended salmon and wild rivers. Unplugging the New Deal in the Snake River valley empowered old and new constituencies across the country.

A second Western battle further cracked the New Deal's dam building and river development legacy. Beginning in the 1950s, successful opposition to a Bureau of Reclamation project in Echo Park convinced a growing post-war environmental community that federal projects could be defeated. According to environmental historian Mark Harvey, activists defended Dinosaur National Monument and the National Park Service's mission from a federal dam on the Green River. By 1956, park and river defenders successfully defeated the project by raising aesthetic concerns and wilderness arguments while also questioning the Bureau's economic analysis and technological claims. Echo Park launched a national environmental movement and careers for personalities such as David Brower who championed wilderness and wild rivers for the next two decades. After Hells Canyon and Echo Park, no western dam moved forward without dedicated, organized, and nationalized opposition.<sup>8</sup>

In the South, the old New Deal dam building consensus changed tact but plowed forward at full speed after 1944 to resolve the region's persistent water problems. Southern historians have explained how fast talking local chamber of commerce representatives adept at 'selling the South,' and long-serving political leaders captured federal dollars and programs to build the

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<sup>8</sup> Mark W. T. Harvey, *A Symbol of Wilderness: Echo Park and the American Conservation Movement* (Albuquerque: University of New Mexico Press, 1994).

Sunbelt's urban-industrial infrastructure.<sup>9</sup> Sunbelt boosters continually used water projects to secure federal dollars to sell the region's other known commodities: low-cost, non-unionized labor and natural resources. Energy corporations and their allies did not, however, completely unplug the New Deal in the American South during the same time period as they did in the Snake and Green river valleys. Instead, southern Democrats reloaded the New Deal and turned Savannah River valley's river and environmental manipulation over to the Corps. Throughout this process, energy executives, citizens, and other federal agencies challenged the Corps, but it would take these collective forces nearly two decades to build serious opposition to federal river manipulation. In the 1950s and 1960s, the Corps' Savannah River valley victories in the public-private power debate lacked the celebrated outcomes in the American West's Snake and Green river valleys. While the Corps defended their programs in the South and the private sector criticized public projects, energy companies continued to build their own hydroelectric dams and reservoirs in the Savannah River valley. The private sector's opposition to Hartwell, however, could not eliminate the Corps' project.

Resistance to federal water projects in the Savannah River valley in the 1950s manifested in a complex moment of volatile social, political, and environmental conditions. Southerners articulated the water problem – in the context of flooding, drought, and soil conservation – in newspapers, correspondence, public meetings, and throughout the levels of state and federal bureaucracies. As the water problem affected agricultural, industrial, and municipal constituencies, southerners also articulated a wide range of solutions to protect property rights, the local tax base, private enterprise, and the environment in the context of the region's water

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<sup>9</sup> James Cobb, *The Selling of the South: the Southern Crusade for Industrial Development 1936-1990* (first edition 1982; Urbana: University of Illinois Press, 1993); Bruce J. Schulman, *From Cotton Belt to Sunbelt: Federal Policy, Economic Development & the Transformation of the South, 1938-1980* (first edition 1991; Durham, N.C.: Duke University Press, 1994).

supply. But at this very moment in Sunbelt political and environmental history, citizens, elected representatives, state bureaucrats, and industrial interests wanted to reevaluate water rights in an era where property rights and states rights converged with civil rights to redraw political loyalties after the landmark *Brown v. Board of Education* case (1954). All of these issues touched as local boosters leaned on politicians to make sure full funding was extended for new Army Corps of Engineers' projects like Clarks Hill, Hartwell, and other major dam and reservoir projects across the Sunbelt. The Clarks Hill project – built between 1946 and 1952 – may have strengthened the region's long-reigning but fractured New Deal Democratic Party. But the Hartwell project's post-war debates over public power, fiscal responsibility, private enterprise, and rights all contributed to dividing political parties and the states of Georgia and South Carolina over how to develop the Savannah River valley and manage the region's water problems. Technological and non-technical solutions to the water problem shaped the landscape, and a rational conservative discourse shaped river manipulation and water supply decisions as well as future political affinities across the American South.<sup>10</sup>

### **Circling the Wagons Around Hartwell**

The United States Army Corps of Engineers had previously evaluated the Hartwell Dam and Reservoir as one of eleven projects approved in concept by Congress in the Flood Control Act (1944). The Hartwell dam site was located about ninety miles upstream from Augusta and seven miles downstream from the confluence of the Tugaloo and Seneca rivers. At this location, the Corps' planned dam was to stand 200 feet tall and stretch over 11,000 feet across the main stem of the Savannah River. The new dam, about seven miles east from Hartwell, Ga., and ten

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<sup>10</sup> James M. Turner argues that environmental opposition after the 1970s emerged in the context of New Right conservatism, wilderness environmentalism, and public land management in the American West, see: "'The Specter of Environmentalism: Wilderness, Environmental Politics, and the Evolution of the New Right,'" *Journal of American History* (June 2009): 123-148.

miles west of Anderson, S.C., was the second major Corps project in the Savannah River Valley. Like Clarks Hill and other multiple purpose Corps projects, Hartwell provided the holy trinity of benefits – flood control, navigation improvement, and power production. The new reservoir was also designed to cover 46,000 acres during normal operations (not including flood-water storage), and provide nearly endless opportunities for recreation on land and water.<sup>11</sup> Elected officials remained generally mum about Hartwell and other possible federal dams in the river valley during Clarks Hill’s planning and construction period. Col. Paschal N. Strong, on the other hand, did not remain so tightlipped. Strong believed the Savannah River valley was “a gold mine for electric power.” And in 1949 while discussing Clarks Hill, the self-confident Strong declared, “You may be sure that the Savannah River will be developed and the Hartwell dam will be built.”<sup>12</sup> Strong was not wrong, and the Hartwell project’s first dedicated financial appropriation of \$50,000,000 came through one year later.<sup>13</sup> With money in the pipeline that might solve the South’s water problems in the Savannah River, Corps engineers promptly began finalizing land surveys and construction designs for the valley’s second major post-war public works project.

When construction on Clarks Hill Dam began, support for the Hartwell project came from three predictable directions. First, old and new civic bodies mobilized to promote the project, starting with the Clarks Hill Authority of South Carolina who announced their approval of the \$60,000,000 Hartwell Dam concept. These boosters and the Corps sold Hartwell as a self-liquidating and ‘cash-register’ dam that would pay for itself by selling electricity generated in the dam’s powerhouse, and they envisioned a federal multipurpose project that would eliminate

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<sup>11</sup> *Definite Project Report: Hartwell Reservoir, Savannah River, Georgia and South Carolina*, Corps of Engineers, Savannah District (December 15, 1952), VII-VIII, Department of Interior Library, Washington, D.C.

<sup>12</sup> “Clarks Hill Power May Be Increased,” *Augusta (Ga.) Chronicle*, February 25, 1949, p. 1.

<sup>13</sup> *Flood Control Act of 1950*, Public Law No. 516, 81<sup>st</sup> Congress, 2<sup>nd</sup> sess. (May 17, 1950).

flooding and facilitate navigation below Augusta. Taking advantage of the forward momentum provided by Clarks Hill at the time, Georgia State Senator C. Mason identified the parallel construction efforts in Tennessee and remarked that “TVA didn’t just happen.” The time to act “on the Hartwell Dam Project” was upon Georgians because, in his estimation, TVA contributed to the “flowering” of that section as Hartwell and Clarks Hill might for Georgia. Like their downstream Clarks Hill allies, the Hartwell Steering Committee emerged to promote another big Savannah River dam and lake.<sup>14</sup>

The Hartwell boosters traveled the same path as the Clarks Hill boosters had in order to garner broad support for their new pet project. The Hartwell Steering Committee wanted public infrastructure projects to simulate local economic development with cheap power, flood control, and navigational improvements for the river below Augusta. The committee was comprised of prominent Savannah River Valley movers and shakers, including Augusta’s tireless Secretary of Commerce Lester S. Moody; Hartwell (Ga.) newspaper publisher Louie B. Morris; Anderson (S.C.) newspaper, radio station, and television station owner Wilton E. Hall; former South Carolina Congressman Butler B. Hare; and longtime South Carolina politician Edgar A. Brown. The Committee published and distributed promotional materials, including an initial publication supposedly representing many voices. *The Hartwell Project...Now: Presented to the Congress of the United States by the People of South Carolina and Georgia*, defined the social merits and economic benefits of the proposed Hartwell Dam for Congressional Representatives and Senators. In addition to the holy trinity of benefits, the Hartwell Committee added other reasons

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<sup>14</sup> “\$60,000,000 Hartwell Dam Project Launched by Clarks Hill Authority,” *Anderson Independent*, November 23, 1948, Correspondence and Materials, 1949, Rivers and Harbors Series, Richard B. Russell, Jr. Collection, Richard B. Russell Library for Political Research and Studies, The University of Georgia Libraries, Athens, Georgia, hereafter RRC.

to the standard list including soil conservation and recreation. National defense, however, became the newest benefit to promote the Hartwell project.

Given the increasing reality of a Cold War, national defense likely represented a sincere attempt to secure federal dollars. The pamphleteers repeated the fears expressed by New South boosters that Georgia and South Carolina lacked coal and petroleum reserves, and thus, the region could not support itself in an emergency or if the nation needed to assume a war footing. The crippling 1941 drought and pre-war power shortages in the southeast served as a good reminder but that drought was never historicized or cited as a direct example in promotional literature. These basic fossil fuels, the committee claimed, “upon which rests a large part of the economy of this area, must be imported.” Long on historic amnesia, the boosters neglected to reconsider that rivers could, in fact, go dry. Furthermore, they claimed the hydroelectric dams would not disrupt energy generation as the coal supply chain might. From this example, the boosters reminded their audience of “how a large portion of our industrial plant can be paralyzed because of operation difficulties in the coalfields” caused by striking miners or rail workers.<sup>15</sup> Dams, on the other hand, were good for national defense because river water was assumed to be always available. To round out the national defense justification, Congress expected the Hartwell project to supply steady water flows to Clarks Hill, which in turn could produce reliable power and send water further downstream.

These promoters may not have known at the time that the Atomic Energy Commission (AEC) planned to locate a nuclear weapons-material manufacturing plant downstream of Clarks Hill and Augusta. To the boosters’ advantage, the Savannah River Valley had a strategic

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<sup>15</sup> Wilton E. Hall, Butler B. Hare, Louie B. Morris, and L. S. Moody, *The Hartwell Project...Now: Presented to the Congress of the United States by the People of South Carolina and Georgia* (Hartwell Steering Committee, Anderson, S.C., January 15, 1949), p. 23, Correspondence and Materials, 1949, Rivers and Harbors Series, RRC.

advantage and became a part of America's modified Cold War "garrison state."<sup>16</sup> After the Soviet Union tested their first fission atomic bomb in 1949, National Security Council Resolution-68 outlined the United States' military mobilization plan and included a call for a new generation of nuclear weapons. Two years later the federal government announced the selection of the Savannah River Project (SRP) site in Aiken and Barnwell Counties (S.C.), which was only twenty miles from Augusta.<sup>17</sup> The AEC invited Delaware based E. I. Du Pont De Nemours & Company to build and operate this new nuclear facility since Du Pont had previous war-time experience maintaining atomic-related facilities such Hanford, Washington, and Oak Ridge, Tennessee.<sup>18</sup> Unlike production at those two sites, the federal government intended to employ undeveloped and untested technology to produce tritium in a heavy-water process for the next wave of nuclear weapons – hydrogen bombs. The Corps and Du Pont began SRP site construction in February 1951. The Corps analyzed climate, geologic, and meteorological data, in addition to water supply, which became a key justification for the Hartwell project. By September 1952, the Corps managed removal of over 1,500 families from the two South Carolina counties, and replaced them with more than 38,000 employees. Beginning in 1951, Dr. Ruth Patrick (Academy of Natural Sciences) and Dr. Eugene P. Odum (University of Georgia) conducted intensive ecological surveys of aquatic and terrestrial organisms found within SRP's three hundred square mile area. Patrick conducted aquatic studies along the site's Savannah River boundary, and analyzed all major plant and animal species in a wetland environment larger than any other area previously studied by ecologists. Odum, Frank Golley, and other researchers

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<sup>16</sup> Harold D. Lasswell, "The Garrison State," *American Journal of Sociology* 46, 4 (January 1941): 455-469; Kari Frederickson, "Confronting the Garrison State: South Carolina in the Early Cold War Era," *Journal of Southern History* 72, 3 (May 2006): 349-378.

<sup>17</sup> For information on NSC-68, see: Schulman, *Cotton Belt to Sunbelt*, 109; Walter LaFeber, *America, Russia, and the Cold War, 1945-2000*, 9<sup>th</sup> ed. (Boston, Mass.: McGraw-Hill, 2002), 101-103.

<sup>18</sup> Granville M. Read, Savannah River Plant (E. I. Du Pont de Nemours & Company), Rotary Club (Wilmington, Del.), "The Savannah River Project": A Speech by Granville M. Read, Chief Engineer, E.I Du Pont de Nemours & Company, before the Rotary Club, Wilmington, Delaware. November 18, 1954.

applied the professionally evolving concept of ecological succession to eight different vegetative communities. They experimented with radioactive tracers to study the flow of energy by isolating individual food chains and quantifying the duration of movement through the chain.<sup>19</sup> This collective and foundational research provided a baseline for future studies, and a foundation for today's Savannah River Ecology Laboratory (SREL).<sup>20</sup> The potential and future ecological contributions produced at the SRP, however, did not likely appear on the Hartwell Dam boosters' radar. They had more basic interests.

The South Carolina facility did fit seamlessly into the Hartwell boosters' plans and strengthened Hartwell Dam promoters' cause in the halls of Congress. South Carolina Senator Olin Johnston, a self-defined "legislator interested in the welfare of our national defense and economy," believed the Hartwell project was instrumental for the SRP operations.<sup>21</sup> Hartwell, he was also quick to argue, was "the only power project in the Deep South which has been designated by the Director of the Bureau of the Budget as a defense project."<sup>22</sup> When Georgia Senator Richard B. Russell, Jr., defended federal expenditures for the proposed Hartwell project in constituent correspondence, he claimed the dam was "badly needed in connection with the Atomic Energy Plant" in Aiken, S.C.<sup>23</sup> Russell specified that a federal dam project would better serve the federal energy plant than any private energy source could. The Hartwell Steering committee "assumed that the Savannah River Plant will follow the pattern of other A.E.C.

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<sup>19</sup> Joel B. Hagen, *An Entangled Bank: The Origins of Ecosystem Ecology* (New Brunswick, N.J.: Rutgers University Press, 1992), 101-110.

<sup>20</sup> Reed, *Savannah River Site at Fifty*, 57 and chapter 17 "Early Stewardship," particularly 458-466.

<sup>21</sup> Senator Olin D. Johnston, Before House Appropriations Committee on Hartwell Dam Funding, Legislation, 1952, Public Works, Dams, Hartwell, Box 32, Olin DeWitt Talmadge Johnston Papers, South Carolina Political Collections, The University of South Carolina, hereafter OJP.

<sup>22</sup> Rep. W. J. Bryan Dorn, Washington, D.C., to Rep. Gerald Ford, Jr., Washington, D.C., May 28, 1951, Topical Files, 1951-1952, Public Works, Dams, Hartwell, Box 39, The William Jennings Bryan Dorn Papers, South Carolina Political Collections, The University of South Carolina, hereafter WDP.

<sup>23</sup> Senator Richard B. Russell, Jr., Washington, D.C., to E. B. Woodward, April 9, 1952, Correspondence, 1949-1958, Rivers and Harbors Series, RRC.

installations and that the Savannah River Plant will be faced with continued expansions and increasing power demands.” By this argument, Hartwell Dam’s electricity would directly benefit the atomic facility.<sup>24</sup> Steadfast Hartwell defenders, the boosters and politicians worked hand in hand to brand Hartwell as a national defense project.

A second group of emerging movers and shakers lined up in support of Hartwell, and they fell into categories that were not associated with the traditional dam benefits or with the new national defense mission. More self-serving and personal reasons inspired Hartwell champions to support the project. Real estate speculators – like C. “Tommy” Wyche and his business associates – were eager to carve new lakeside communities from old farmland for themselves and friends. In 1958, as the Corps began acquiring land from property owners living within the Hartwell dam and reservoir project area, Wyche and his real estate partners began corresponding with South Carolina Senator J. Strom Thurmond about the Hartwell reservoir’s real estate possibilities. Wyche – a Greenville, S.C. lawyer whose firm and associates advocate for environmental conservation today – observed that “In spite of the many protests it appears that the Hartwell Project is going through...and that we, as taxpayers, will be saddled with additional obligations for years to come on account of this unwarranted expenditure.” While apparently concerned with Hartwell’s financial legacy, Wyche decided that “since it is going to be with us,” he wanted to make “arrangements to purchase some property along the lake for a cottage site and perhaps a place to keep a boat.”<sup>25</sup> Wyche, Charlie Ballenger (Ballenger Paving Company), Buck Mickel (Daniel Construction Company), Francis Hipp (The Liberty Corporation) and their

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<sup>24</sup> *The Harwell Project: A Request for an Appropriation*, February 15, 1954, pamphlet published by the Hartwell Steering Committee, Correspondence – Hartwell Dam Material, 1949-1957, Rivers and Harbors Series, RRC.

<sup>25</sup> C. T. Wyche, Greenville, S.C., to Senator J. Strom Thurmond, Washington, D.C., April 9, 1958, Folder Public Works 1 (Dams and Reservoirs) February 25 - September 4, 1958, Box 23, Subject Correspondence Series, 1958, J. Strom Thurmond, Mss 100, Special Collections Unit, Clemson University Libraries, Clemson, South Carolina, hereafter STP.

Greenville area partners were interested in purchasing about 270 acres on the proposed Hartwell reservoir shoreline.<sup>26</sup> They contacted Senator Thurmond to make sure they would have lake access and could build cottages near the waterline before finalizing any land purchases. They inquired about specific polices, such as private property owners' rights to access the reservoir from private property.

It is important to point out at this juncture that the Corps purchased a "collar" of land between the reservoir's high water line and adjacent private property boundaries for all reservoir projects. The amount of land contained within the collar could be a few hundred feet or more depending on topography, a surveyor's skill, and the final agreement between sellers and Corps real estate agents. Finally, the collar lands were considered public land, and therefore open to general access. This final point made Wyche, his associates, and other investors apprehensive about purchasing shoreline lands. Wyche specifically asked if homeowners could purchase or use the federal property in the collar area above the high water line to build a dock. But Wyche and his partners were most concerned about the "likelihood of the public in general being given access to this property either from the lake or from some road."<sup>27</sup>

Wyche, Robert L. Small, and Francis Hipp wrote three nearly identical letters over the course of a few years, and it is not clear that Senator Thurmond always responded to them. Thurmond did, in the meantime, contact Corps administrators for real estate and property rights information throughout the process. For example, one Corps officer reported that excess collar land might be used for public recreation areas, and was therefore not yet considered "surplus"

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<sup>26</sup> For this crew's basic biographical information, see: Knowitall.org and ETV Creative Services, "Legacy of Leadership" (Columbia, S.C.), <http://www.knowitall.org/legacy/index.html>, last accessed March 5, 2010.

<sup>27</sup> C. T. Wyche, Greenville, S.C., to Senator J. Strom Thurmond, Washington, D.C., October 22, 1959, Folder Rivers and Harbors 3-1 (Hartwell Dam) February 21 - November 25, 1959, Box 22, Subject Correspondence Series, 1959, STP; Robert L. Small, Greenville, S.C., to Senator J. Strom Thurmond, Washington, D.C., September 25, 1961, Folder Rivers and Harbors 3-1 (Hartwell Dam) March 17, 1961 - November 3, 1961, Box 30, Subject Correspondence 1961, STP.

land. Even if the land was designated surplus, the Corps was not legally empowered to sell the land to adjacent landowners, and they would have to dispose of the property in accordance with current protocol in an equitable fashion “to prevent criticism that favoritism has been shown in authorizing the use” or sale “of Government property.” In respect to public access to collar lands, private property owners adjacent “to the project boundary” had “the same rights as the general public in using the Government lands and access to the water.” The general public, in turn, could also access the collar from the lake itself. In two different sets of correspondence, Major General W. K. Wilson, Jr. and Col. W. A. Stevens, explained to Thurmond that property owners could build floating docks, walkways, access roads, and other structures in the collar areas on a permit application basis, and as long the improvements did not imply “exclusive use,” or prevent public use of the reservoir lands.<sup>28</sup> Wyche and his colleagues stood to gain significant financial benefit from the reservoir, but their support for the public project was conditional on the project serving a very private and limited public.

A third and final voice advocated for Hartwell. Like the real estate speculators, J. A. Gallimore did not support Hartwell for the well known menu of benefits. Unlike the self-interested real estate speculators, Gallimore thought Hartwell would best serve the hard working, blue collar public. Gallimore was a radio personality who broadcasted from Seneca, S.C. on WSNW, and he was clearly intent on whipping up a class argument. To him, Hartwell represented a great recreation reservoir that would provide “mostly little people who work on the farm, in the stores and in the mills” with easy access to “a first rate recreational facility.” The recreational benefits alone, “if for no other reason,” made the Hartwell dam and reservoir project

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<sup>28</sup> Major General W. K. Wilson, Jr., Deputy Chief of Engineers for Construction, to Senator J. Strom Thurmond, Washington, D.C., November 25, 1959, Folder Rivers and Harbors 3-1 (Hartwell Dam) February 21 - November 25, 1959, Box 22, Subject Correspondence Series, 1959, STP; Col. W. A. Stevens, Savannah District Engineer, to Senator J. Strom Thurmond, Washington, D.C., October 3, 1961, Folder Rivers and Harbors 3-1 (Hartwell Dam) March 17, 1961 - November 3, 1961, Box 30, Subject Correspondence Series, 1961, STP.

“well worth the money.” In a December 1956 radio editorial, Gallimore called his listeners’ attention to the region’s lack of natural lakes and to Hartwell as a prime “tourist attraction.” Since “This is an age of ‘spare time,’” Gallimore believed that recreation was “not a thing for the idle rich but is a factor in the ‘efficiency quota’ of the average person.”<sup>29</sup> Gallimore’s message mirrored one that Strom Thurmond used when running for governor of South Carolina less than a decade earlier. Thurmond had favored Clarks Hill recreation areas for the same reasons Gallimore supported Hartwell; the projects ultimately provided equal access recreation areas specifically across class lines.

Promises of public recreation, personal playgrounds, and the holy trinity of benefits propelled major projects like Hartwell forward in the 1950s and 1960s. These parties – from chamber of commerce secretaries to media kings, and lawyers to general contractors – functioned as cheerleaders for Hartwell dam in the post-war period. The interest groups each expressed new expectations for Hartwell, and many understood that Hartwell was a relic of the New Deal. As the post-war economy leaped forward, public works projects met with considerable resistance from a wide range of interests who rejected the old justifications every bit as much as the new ones.

### **Fighting Hartwell**

Soon after Hartwell received its first dedicated appropriation, a crop of critics emerged to challenge the project. Many boosters, elected officials, and Corps engineers believed that Hartwell was the second most important federal project for the Savannah River valley. And much like opposition to Clarks Hill, which was led primarily by the Georgia Power Company and the company’s allies, a vocal group of challengers opposed Hartwell when the project’s costs

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<sup>29</sup> J. A. Gallimore, Seneca, S.C., to Senator J. Strom Thurmond, Washington, D.C., December 4, 1956, Folder Hartwell Dam, November 23 - December 29, 1956, Box 3, Subject Correspondence Series, 1956, STP.

exploded and the Corps' engineering plans threatened property rights. The opposition mobilized along multiple fault lines.

In 1951, a group of Clemson College (currently known as Clemson University) alumni completed a private report at the request of the College's Board of Trustees. The authors – Cecil L. Reid, A. G. Stanford and Ed D. Sloan – worked quietly for the Board and interpreted the Corps' plans for the Hartwell project as published in Congressional documents. Based on their analysis, the three alumni reached a conclusion that the Hartwell project threatened the College's future. First, they argued that the Corps' regularly scheduled water releases required for electrical production would surround Clemson College with unsightly and insect-prone mud flats. Second, they were dubious that the reservoir would not fill with sediment, citing two South Carolina projects on the Saluda River – Lake Murray (1930) and Greenwood Lake (Buzzards Roost, 1935) – as examples. Third, as water rose behind the Hartwell dam, the new high water level would likely render the College's raw water intake and sewage disposal plant facilities inoperable. Finally, and an issue that soon threatened to halt the project forever, the authors commented on how much of the College's property would be lost to the rising waters. Reid, Stanford, and Sloan decided they were “not in a position to advise as to the damage to the land itself.” In their final and private assessment for the Clemson Board of Trustees, the three men believed a dike or levee – built and maintained by the Corps – was the best solution to keep the rising waters off of campus property, away from many buildings, and out of the football stadium.<sup>30</sup>

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<sup>30</sup> Clemson Alumni Corporation, *Preliminary Report on the Damage to the Property of Clemson College by the Proposed Hartwell Dam Development*, April, 1951, provided by A. G. Stanford, V.P., Robert and Company Associates, Atlanta, Ga., to Senator J. Strom Thurmond, Washington, D.C., April 12, 1957, Folder Hartwell Dam, November 29, 1956 - October 18, 1957, Box 19, Subject Correspondence Series, 1957, STP.

Reid, Stanford, and Sloan used information from the private Clemson College report to publish their publically released *The Truth About 'Hartwell.'* The tone of the two documents could not have been any more different, since *The Truth About 'Hartwell'* reads like a red-smearing vituperative rant. The 1952 cover page alone made the mission clear: “SAVE CLEMSON from being surrounded by a sea of mud; SAVE SOUTH CAROLINA from Federal Control, from so-called Civil Rights, from Socialism and Communism; SAVE STATES RIGHTS.”<sup>31</sup> Buried in the rhetoric were nuggets of truth. The three authors correctly identified a major problem with multiple purpose dams: “A full reservoir cannot regulate floods and an empty reservoir cannot generate power.” Managing a reservoir to collect flood waters might mean keeping the reservoir low or nearly empty, but in order to produce power on a regular schedule, reservoirs need to be full. Since Hartwell was initially considered a flood control structure with additional benefits for power production and navigational improvements, the concern was real. What, the authors asked, would the reservoir’s fluctuating level mean for Clemson – the mudflats, mosquitoes, the sewage and water lines, and the relocation of buildings and roads? If the reservoir’s actual level was called into question by Reid and his co-authors, so was the nation’s economic future. Hartwell opponents, like those who stood up against Clarks Hill a decade earlier, turned to the Tennessee Valley Authority as an example. The writers explained that TVA did not pay taxes, was a federally subsidized power company, and threatened private enterprise. TVA, Clarks Hill, and now Hartwell apparently represented the slippery-slope: “If the government can go into the power business and charge itself no interest and practically no taxes it should pay, why cannot it also go into the Oil, Bread, Shoe, Transportation or Insurance business. When it does this, is that not state socialism?” In

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<sup>31</sup> Cecil L. Reid, Al G. Stanford, and Ed D. Sloan, *The Truth about 'Hartwell'* (Fredericksburg, Va.: January 7, 1952), pamphlet, Correspondence – Hartwell Dam Material, 1949-1957, Rivers and Harbors Series, RRC.

conclusion, *The Truth About 'Hartwell'* recommended that the Corps abandon their project, or at a minimum reduce the height of the dam to keep the Clemson College campus high and dry.<sup>32</sup>

*The Truth about 'Hartwell'* ultimately shared two opinions. First, flooding valuable private land for a public project put private property everywhere at risk. Second – and the real reason for this rant – public power programs could not match private, capitalist enterprise.

South Carolina Rep. William Jennings Bryan Dorn did not directly respond to the *Truth About 'Hartwell,'* but he did put his own spin on the socialist and communist rhetoric. In a response to one constituent, Dorn claimed he primarily supported the Hartwell project's construction in his district because of the region's low per-capita income. After driving through his poverty stricken district, he decided that the area was “among the most eroded areas in the south with much waste land and old abandoned farm cabins.” He also claimed that after visiting TVA sites and the Columbia River's Bonneville Dam project, he would defend Hartwell Dam because he thought the project would deliver prosperity to “the desperately poor people of the Savannah Valley....It will help small industries and in aiding small industries and the rural people, it most certainly helps those people to be independent and will help them to resist Socialism and Communism.” For Dorn – the old Democratic New Dealer – public projects and programs would ideally put individuals back on their feet, promote local industry, and thus provide jobs for able bodied Americans.<sup>33</sup>

The Charlotte-based Duke Power Company weighed in on the Hartwell case, not because they were directly threatened at the moment, but because they were concerned about their corporation's future in the Savannah River valley. They did, however have prior experience managing the South's water problems. Duke, after all, provided hydro and coal generated

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<sup>32</sup> Reid, et. al., *The Truth about 'Hartwell.'* pp. 5, 24-25.

<sup>33</sup> Rep. William J. Bryan Dorn, to E. M. Lander, Jr., Professor, Clemson, S.C., June 20, 1953, Folder Topical Files, 1953-1954, Public Works, Dams, Hartwell, Box 41, WDP.

electricity to almost half of the Hartwell project area. In an effort to educate South Carolina's Congressional delegation, Duke's executives offered objective and technical reasons to question Hartwell's hydroelectric value in comparison with private steam technologies. Duke executive David Nabow explained the company's history and operations to South Carolina Representative Dorn in 1954. Since the company's founding, Duke Power was "concerned with the conservation of water resources in relation to requirements for its hydro-electric and steam-generating plants." The water was important, according to Nabow, because "of the importance of such resources to the well-being and growth of industry and of population in the area which it serves." The company shifted to coal and steam after 1940, and built or planned five steam plants in 15 years. Based on a long operations history, Duke Power understood the complexities of planning new facilities, managing generation, and attracting future customers. Nabow recognized "that the large increases in the demands for electric power in the Company's service area [had] outgrown the limited hydro-electric potentialities in this area." As such, "the primary dependence must therefore continue to be placed on large and efficient steam-electric generating plants" and "economical hydro-electric sites" if necessary. In short, steam technology was more cost-effective and efficient than hydroelectric systems.<sup>34</sup> To underscore the situation, Duke Power President N. A. Cocke declared that in 1955, Duke ranked "fourth in hydro capacity among the nation's tax paying electric utility companies," and with a single modern steam electric plant, "Duke Power has provided a dependable annual output in excess of the total output of seven hydro-electric sites in Duke's service area recommended for development by the Army

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<sup>34</sup> D. Nabow, "Statement of Duke Power Company," before the Commission on Organization of the Executive Branch of the Government: Task Force of Water Resources and Power, June 2, 1954, pp. 1, 8-9, Folder Topical Files, 1953-1954, Public Works, Dams, Hartwell, Box 41, WDP.

Engineers.”<sup>35</sup> All of this led Duke executives and Hartwell opponents alike to ask, why did the federal government continue to waste taxpayers’ money on large multiple purpose projects? Private enterprise and technology outperformed public power projects, in the company’s opinion, and Duke executives told Rep. Dorn that Hartwell was nothing short of a colossal waste of tax payer money.

Over the next few years, critics of the Hartwell project increasingly argued that the project was a tax-payer funded boondoggle and would actually provide few national defense benefits. Clemson history and political science professor Earnest M. Lander, Jr., was among the vocal critics of the Hartwell project. He often wrote to his South Carolina Congressional delegation to express his contempt for Hartwell in particular and fiscally irresponsible federal projects in general. Based on his reading of the newspapers, Lander concluded that the Atomic Energy Commission (AEC) did not need any electricity produced at the Clarks Hill and Hartwell projects, and that the navigational and flood control benefits were a sham.<sup>36</sup> One of Lander’s neighbors followed a similar line of reasoning and urged Senator J. Strom Thurmond to “lock up the Congressional pork barrel, and to stop Hartwell Dam” because the “solvency of our nation” was at stake.<sup>37</sup>

Nearly two years would pass before anyone demystified Hartwell’s national defense benefits and water needs. Confused by the AEC’s and Savannah River Plant’s (SRP) needs, Georgia’s and South Carolina’s Congressional representatives reached out to the Corps and AEC

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<sup>35</sup> Files contained with letter from N. A. Cocke, President, Duke Power Company, Charlotte, N.C., to Rep. W. J. B. Dorn, Washington, D.C., September 14, 1955, Folder Topical Files, 1955-1956, Public Works, Dams, Hartwell, Box 43, WDP.

<sup>36</sup> E. M. Lander, Jr., Professor, Clemson, S.C., to Rep. William J. Bryan Dorn, Washington, D.C., June 14, 1953, Folder Topical Files, 1953-1954, Public Works, Dams, Hartwell, Box 41, WDP; E. M. Lander, Jr., Professor, Clemson, S.C., to Senator Olin D. Johnston, Washington, D.C., August 20, 1953, Folder Legislation, 1953, Public Works Hartwell, Box 36, WDP.

<sup>37</sup> James A. Stevenson, Clemson, S.C., to Senator J. Strom Thurmond, Washington, D.C., January 10, 1955, Folder Hartwell Dam, Box 10, Subject Correspondence Series, 1955, STP.

for clarity. In addition to regulating the flow of the Savannah River, the Corps informed Georgia Rep. Paul Brown in 1955 that the Hartwell Project would “reduce the temperature of river flows,” which would benefit the SRP’s general operations.<sup>38</sup> South Carolina’s Rep. Dorn eventually contacted the AEC directly to find out if the Hartwell and Clarks Hill projects were assets for the SRP’s operations. An unnamed staffer responded that the AEC understood that the Corps would use Clarks Hill to regulate the Savannah River’s flow at 5300 cubic feet per second (cfs), and acknowledged this as “one of the important factors in the site selection.”

Environmental conditions, however, complicated the SRP’s early operations. “Due to the prolonged two-year drought period in 1954-55,” the AEC staffer explained to Dorn, “the 5300 c.f.s. expected flow from Clark Hill” was not delivered. “As an emergency measure, certain alterations were made at the Savannah River Plant pumping station to permit operation” during the drought. While the AEC never declared that the Clarks Hill or Hartwell projects were absolutely necessary for SRP operations and national defense, they did declare that if river flows remained below 5300 c.f.s, “penalty to one” unspecified operation at the SRP would be severely compromised.<sup>39</sup> Clarks Hill and Hartwell provided at least some measure of national defense benefits in the 1950s. Furthermore, drought continued to influence water management and industrial development in the Savannah River valley despite two massive artificial reservoirs – one functioning and another slated for completion in the 1960s. Lander’s attempt to clarify the national defense benefits dovetailed with other conservative opinions.

Lander and other voices represented a new conservative vanguard when they articulated their opposition to the Hartwell development, and the remaining vestiges of New Deal public

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<sup>38</sup> Col. Wm. Whipple, U.S. Army Corps of Engineers, to Representative Paul Brown, Washington, D.C., 6 July 1955, letter, Correspondence – Hartwell Dam Material, 1949-1957, Rivers and Harbors Series, RRC.

<sup>39</sup> Savannah River Operations Office, Atomic Energy Commission, “Comments on Hartwell Dam,” 1956, Folder Topical Files, 1955-1956, Public Works, Dams, Hartwell, Box 43, WDP.

works projects. Even when Georgia and South Carolina delegates advocated for federal projects in the river valley to solve the water problem, citizen support for public power projects did not come very easily. Not all boosters shared the same vision of shaping the region's economic future through public projects like Hartwell. The former Clarks Hill Authority and the more recent Hartwell Steering Committee had enjoyed cross-border alliances in the past. However, and over the course of the next thirty years, South Carolinians increasingly became spoilers, and they defended private enterprise and property rights while rejecting Georgians' visions of public power and federal public works projects in the Savannah River Basin.

Frank Harrison joined Lander in a conservative critique of the Hartwell and other Corps projects. Harrison, a McCormick, S.C. attorney, connected the issues of states rights, civil rights, and property rights in a single sentence: "The taking of huge areas of private property by the Federal Government is becoming increasingly dangerous especially in view of the recent Supreme Court decision and other actions of the administration in attempting to continue the centralizing of power in the Federal Government."<sup>40</sup> Harrison linked the Corps' land acquisition program for the Hartwell project and the Supreme Court's May 1954 desegregation order with a federal water conservation program. If, Harrison wondered, the courts could condemn land and outlaw segregation, and Congress could authorize public power programs that put private industry out of business, what else might government do? The water problem and the race problem began to converge at Hartwell, but would more fully blossom during their final project, the Trotters Shoals development.

Other tax payers, like S. Maner Martin, not only feared government expansion, they bristled at spending public funds on a massive "fish pond" like Hartwell to solve the water

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<sup>40</sup> Frank Harrison, Attorney, McCormick, S.C., to Senator Olin D. Johnston, Washington, D.C., May 26, 1954, Folder Legislation, 1954, Public Works, Dams, Hartwell, Box 43, OJP.

problem.<sup>41</sup> Lucile Buriss Watson claimed that “reputable engineers and thinking voters” were “opposed to Federal Power control as a major step toward Socialism and an extravagant waste of the taxpayers’ money.” Watson admitted that her opposition to the project was grounded in self-interest because she did not want “the beauty and peace of our landscape spoiled by mosquitoes, mudbanks, motor boats, and hoards of fishermen!” Apparently the more she became educated about the Hartwell project, the more she “realized the whole thing was based on misrepresentation and log-rolling.” Watson reminded Senator J. Strom Thurmond that “Our forefathers went to war because of Taxation without representation. Today we are tongue-tied in the presence of Taxation with Misrepresentation.”<sup>42</sup>

### **The 1954 Drought**

Calling the proposed Hartwell reservoir a “fish pond” may sound like a misrepresentation of a body of water that would eventually inundate nearly 50,000 acres. But Martin’s and Watson’s choice of words tapped into an ongoing national discussion about water management and the southeast’s water problems. As journalist Bill Allen claimed in 1953, if mid-western states could claim the title of the “Land ‘o Lakes then Georgia is the Paradise o’ Ponds.” By one account, Georgia could claim 12,000 farm and fish ponds that inundated 40,000 acres. Not only did the ponds produce nearly 450 pounds of fish per acre for anglers, but famers used the ponds to irrigate crops, water livestock, combat erosion, and control flood waters. Due to the prolonged drought in the early 1950s, “the fastest growing” water feature in the south was the

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<sup>41</sup> S. Maner Martin, Clemson, S.C., to Rep. W. J. B. Dorn, Washington, D.C., December 4, 1956, Folder Topical Files, 1955-1956, Public Works, Dams, Hartwell, Box 43, WDP.

<sup>42</sup> Lucile Burriss Watson, Clemson, S.C., to Senator (elect) J. Strom Thurmond, Washington, D.C., November 30, 1954, emphasis in original, Folder Hartwell, Box 10, Subject Correspondence Series, 1955, STP.

farm and fish pond that should not be confused with the Savannah River valley's massive Hartwell or Clarks Hill reservoirs.<sup>43</sup>

As the drought dried Georgia in 1954, farm ponds helped the region survive the water crunch as much as they complicated agricultural, industrial, and municipal interests increased competition for the state's dwindling water supply. Farmers, factory managers, and city water managers clashed throughout the state. When farmers built ponds to water livestock upstream of factories, the factories reduced operations because the reduced stream inhibited operations. In one county, an upstream farm pond reduced downstream flows, leaving five businesses without water for nearly five months. In Newton County, one upstream farm and irrigation pond consumed so much water that a downstream factory had to shut down because it could not produce enough energy in the on-site steam plant. And finally, some fish pond owners complained about pollution – from military installations, factories, homes, and other farms – that washed into their ponds from upstream and killed fish.<sup>44</sup>

The 1950s drought also affected other urban and agricultural communities in the Savannah River Valley and around the state. Newspapers painted a grim picture of urban drought in summer and fall of 1954. For example, the Washington, Ga., city water supply was so depleted that the city council considered “a complete shutdown of water service during certain hours of the day as a necessary conservation measure.” Before going down that road, the city ordinances banned “unnecessary” water-use activities such as car washing and lawn and garden

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<sup>43</sup> Bill Allen, “State Hooks Title: ‘Paradise o’ Ponds,”” *Atlanta (Ga.) Journal*, September 13, 1953, p. 12. Allen claimed 15,000 irrigated acres, and another claimed 27,700 acres: Georgia Water Use and Conservation Committee, *Water in Georgia, submitted by the Georgia Water Use and Conservation Committee to the Governor, the General Assembly and the People of Georgia*, 1955, p. 55, hereafter *Water in Georgia*. For irrigation loan sources, see: Display Ad, Georgia Railroad Bank, August 8, 1954, p. 6A; James R. Holland, “Southeast’s irrigation need pointed up by long drought, Georgia Agriculturalist says,” *Augusta (Ga.) Chronicle*, September 30, 1954, p. 5C; “Cheaper Loans for Irrigation Announced,” *Augusta (Ga.) Chronicle*, October 24, 1954, p. 13B; “C. and S. Bank Announces Plan for Farm Irrigation,” *Augusta (Ga.) Chronicle*, October 2, 1954, p. 9; and “Tifton Farmer Gets Loan for Irrigation his Land,” *Augusta (Ga.) Chronicle*, December 3, 1954, p. 8C.

<sup>44</sup> *Water in Georgia*, 20-23.

watering, and threatened \$100 fines.<sup>45</sup> By the fall, one metro Atlanta county turned to a full-on water transfer. East Point, an Atlanta suburb, purchased eighty-five million gallons of water from Douglas County. The plan was to pump water from a Douglas County lake near Lithia Springs, and then transfer the water into Sweetwater Creek for delivery to East Point's raw water treatment facility.<sup>46</sup>

The South's water problem in the 1950s reflected the region's historical shift from cotton belt to diversified Sunbelt. Southern farmers, of course had always produced tobacco, raised vegetables, and cultivated orchards. And boosters had been balancing industry with agriculture for decades. But the Sunbelt economy accelerated and exacerbated a shift away from old monocultures like cotton and the textile industry. Livestock was one example of new growth in the agricultural sector. South Carolina agricultural officials thought the state's 437,000 head of cattle consumed 8,500,000 million gallons per day, in addition to other animals such as hogs and poultry. Water, as journalist W. D. Workman, Jr., declared, was an irreplaceable "commodity" necessary for industrial, agricultural, and municipal development. But, water's "vital importance" had been neglected by "layman and law-maker alike." In South Carolina, not unlike Georgia, the water problem was "not so much one of supply as of distribution and regulation." In a refrain often repeated at the time and again in the future, Workman claimed that "the quantity of water which falls annually as rain" was enough to supply the South Carolina's "industrial, agricultural, commercial and residential potential." However, increased demands for irrigation, energy production, and manufacturing, combined with new residential air-conditioning systems, dish and clothes washing machines, and "modern plumbing facilities"

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<sup>45</sup> Frank K. Meyers, "Washington Residents Facing Possible 14-day water supply," *Augusta (Ga.) Chronicle*, Augusta 12, 1954, p. 1D.

<sup>46</sup> "East Point Buys Water From Lake," *Rome (Ga.) News-Tribune*, October 3, 1954, p. 2.

boosted water consumption “terrifically.”<sup>47</sup> The Sunbelt South’s water problem had clearly reached another tipping point.

Georgians’ directly confronted the water problem. The 1954 drought – when the annual rainfall of thirty inches was twenty inches less than average – had resulted in \$100,000,000 in agricultural damages. Eighteen cities lacked adequate water supply and industry was “handicapped.” Following a 1953 Georgia Association of Soil Conservation District Supervisors meeting that included a discussion of the state’s water problem and water law, participants hatched an idea to create a water conservation committee. Within months, the Georgia Water Use and Conservation Committee formed in early 1954 to promote water “conservation” and “wise use” to protect the state’s future water supply. The committee was honest about the water problem: they did not blame the drought on “nature,” and instead acknowledged the region’s historically “erratic” water supply and conflicting water usage as the cause.

The Georgia Water Use and Conservation Committee included representatives from more than forty private, state, and federal institutions including the academic, forestry, agriculture, public health, engineering, and industrial communities. The members – professors, lawyers, judges, business owners, extension agents, and federal employees – wanted to see Georgia grow and wanted to avoid future problems through a coordinated soil and water conservation program. Most of the committee’s members had embraced soil conservation in the past as a tool to improve the region’s agricultural economy. After the crippling drought, more of the committee members realized that water conservation remained important for agricultural development, but was increasingly more important for municipal and industrial economies.

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<sup>47</sup> W. D. Workman, Jr., “South Carolina Legislators are facing problem of protecting state’s water,” *Augusta (Ga.) Chronicle*, January 3, 1954, p. 1.

To solve the state's water woes, Water Use and Conservation Committee members recommended additional storage capacity, waste water treatment, conservation measures, and possible changes to state water law. They also suggested that the Governor or legislature create a state water administration office that could conduct a statewide study to ascertain how much water the state had and used. The committee was cognizant of the state's diverse geography and varying local conditions, and that no single plan could solve all of the state's water problems. But they all agreed a plan was necessary for the state's future growth. "We feel that growing conflicts over water," the committee stated, resulted from drought and increased consumption across all sectors of the economy. These two factors made it "imperative that water problems" receive the attention of the Georgia General Assembly as soon as possible.<sup>48</sup>

While the Georgia Water Use and Conservation Committee recommended state action to protect Georgia's future water supply, some committee members recommended and accepted any and all federal assistance. Jim Woodruff, Sr., chairman of Georgia Waterways Commission and a strong believer in comprehensive river development, wanted the state to "build multi-purpose dams on tributaries" of the major rivers where the federal government was already completing major dam projects such as Clarks Hill and Hartwell.<sup>49</sup> Others were not so sure about more massive dams and reservoirs as solutions to drought-proof the South and solve the water problem.

Two alternatives to massive dams and reservoirs emerged as methods to solve the South's water problem. First, Dr. George King, a University of Georgia irrigation engineer, corrected a misinformed historical comparison about the southeast and the American West. "Until recently," he explained to a Rome reporter, Georgians thought "irrigation was

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<sup>48</sup> *Water in Georgia*, pp. 7, 46.

<sup>49</sup> Elmo Hester, "Half of Georgia's Lost Crops Within 500 Feet of Water," *Atlanta (Ga.) Journal*, October 20, 1954, p. 4.

...something pertaining to the arid western states.” But after Georgia moved through “three drought years in succession” with a final year “of extreme severity,” state agriculturalists reconsidered the value of irrigation in the humid American South. King identified a problem that had always plagued Georgia and would continue to do so into the future. Like South Carolinians, King believed that Georgia’s water supply was “reasonably fair to copiously ample” south of a line drawn from the fall line cities of Columbus through Macon to Augusta, and in parts of the Georgia mountains. The Piedmont area in between the Coastal Plain and the Blue Ridge, however, had “Serious problems....obtaining enough water for general irrigation.” The state generally had plenty of water, but the water was not always in the right place at the right time. When considering Georgia’s water problem, United States Geological Survey technician M. T. Thomson claimed that the state’s future irrigation supply would have to come from Blue Ridge mountain streams, Piedmont ponds, and Coastal Plain wells.<sup>50</sup> But where would the new irrigation infrastructure come from?

Thomson had one answer: Georgia’s Citizens & Southern bank system began “financing irrigation installations,” and urged “farmers to avail themselves of” of the new revenue source and technological solution “where conditions justify.”<sup>51</sup> Georgia’s farmers and anglers received loans from local banks for equipment, but federal tax-dollars funneled through the Soil Conservation Service bankrolled the farm and fish ponds. SCS engineers built 1,289 Georgia farm ponds in 1953, and for many years had already been providing technical consultation. To build a pond, the farmers contacted the SCS for advice, and for a few hundred dollars, paid for an earthmoving equipment-operator, the pipe, and the necessary material to build a small dam. If the farmer claimed the pond was also intended to support livestock or to irrigate fields, the

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<sup>50</sup> “Drought Spotlights Need for Irrigation Planning,” Rome (Ga.) *News-Tribune*, October 7, 1954, p. 14.

<sup>51</sup> “Farm Irrigation is Useless Without Ample Water Supply, Georgia Authority Points Out,” Augusta (Ga.) *Chronicle*, October 16, 1954, p. 3.

USDA's Production Marketing Administration paid up to \$300 of the farm pond's construction cost. Additionally, farmers had access to free fish – including bass and sunfish – to stock the ponds from the United States Fish and Wildlife Service and Georgia State Game and Fish Commission. Farmers could also obtain loans – facilitated through the USDA's Farmer's Home Administration – for diesel pumps, aboveground sectional irrigation piping, and wheeled pump-gun sprinklers to irrigate fields or more easily move water to farm animals. By 1954, farmers irrigated between 15,000 and 25,000 acres of land in Georgia.<sup>52</sup>

Letters opposing the Corps' Hartwell dam and reservoir increasingly included a second alternative to solving the South's water problem. Leila B. Watson, of Clemson, S.C. was not afraid to call the Hartwell project an example of "creeping socialism" or to offer alternatives to the Corps' plans. Like other South Carolinians, Watson wondered why Congress continued to support the Corps' colossal flood control projects over the Department of Agriculture's (USDA) emerging "Small Watershed" projects.<sup>53</sup> Increased interest in the USDA's program, administered by the Soil Conservation Service (SCS), came after two important events: the crippling drought of the 1950s and in the immediate aftermath of *Brown v. Board of Education*. Thomas Parker and others wrote to recommend small watershed projects that would trap "water running-off at the source" more efficiently to prevent flooding and erosion in addition to storing water for irrigation purposes. Parker and others considered the small scale multiple purpose watershed projects a better use of taxpayer dollars, private land, and technology to control floods

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<sup>52</sup> Bill Allen, "State Hooks Title: 'Paradise o' Ponds,'" *Atlanta (Ga.) Journal*, September 13, 1953, p. 12. Allen claimed 15,000 irrigated acres, and another source claimed 27,700 acres: *Water in Georgia*, 55. For irrigation loan sources, see: Display Ad, Georgia Railroad Bank, August 8, 1954, p. 6A; James R. Holland, "Southeast's irrigation need pointed up by long drought, Georgia Agriculturalist says," *Augusta (Ga.) Chronicle*, September 30, 1954, p. 5C; "Cheaper Loans for Irrigation Announced," *Augusta (Ga.) Chronicle*, October 24, 1954, p. 13B; "C. and S. Bank Announces Plan for Farm Irrigation," *Augusta (Ga.) Chronicle*, October 2, 1954, p. 9; and "Tifton Farmer Gets Loan for Irrigation his Land," *Augusta (Ga.) Chronicle*, December 3, 1954, p. 8C.

<sup>53</sup> Leila B. Watson, Clemson, S.C., to Senator Olin D. Johnston, Washington, D.C., April 1, 1954, Folder Legislation, 1954, Public Works, Dams, Hartwell, Box 43, OJP.

as opposed to the large Corps projects such as Hartwell.<sup>54</sup> Southerners had learned more about such small watershed projects as drought in the 1950s shifted from the middle of the country to the entire nation. In response to the drought conditions, President Dwight Eisenhower had expanded the scale and scope of the United States Department of Agriculture to provide financial drought relief funding to seventeen specific western states in 1937.<sup>55</sup> When the 1950s drought moved from regional to national proportions, USDA expanded the “water facilities loan program of the Farmers Home Administration to the entire Nation.”<sup>56</sup> The Farm Home Administration (FmHA) Water Facilities Act was likewise expanded in 1954 “to apply nationwide...and to let farm area water systems take on nonfarm customers in rural communities.”<sup>57</sup> Eisenhower also made permanent a USDA program to provide technical and financial assistance to local watershed groups that took “responsibility for initiating, carrying out, and sharing the costs of upstream watershed conservation and flood control.”<sup>58</sup> Known alternately as “The Small Watershed Program” or PL-566, benefits included technical and financial support for flood control and soil conservation for agricultural purposes. The USDA technically administered this federal ‘assistance’ program, but local community committees and districts initiated the projects, were responsible for sharing some costs and managing the projects. Unlike the Corps’ reservoir projects that required top-down acquisition of private land that typically involved at least some unwilling sellers and condemnation proceedings, the USDA’s bottom-up farm pond incentives

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<sup>54</sup> Thomas Parker, M.D., Greenville, S.C. to Senator J. Strom Thurmond, Washington, D.C., May 16, 1955, Folder Hartwell Dam, May 19, 1954 - December 22, 1955, Box 6, Subject Correspondence Series, 1955, STP; S. Maner Martin, Clemson, S.C., to Rep. W. J. B. Dorn, Washington, D.C., December 4, 1956, Folder Topical Files, 1955-1956, Public Works, Dams, Hartwell, Box 43, WDP

<sup>55</sup> Water Facilities Act (1937), see: *A Brief History of the Farmers Home Administration* (Washington, D.C.: United States Department of Agriculture, Farmers Home Administration, 1989), 4, available online, <http://www.rurdev.usda.gov/rd/70th/History%20of%20Farmers%20Home.pdf>, last accessed March 5, 2010.

<sup>56</sup> Eugene C. Buie, *A History of United States Department of Agriculture Water Resource Activities*, (Washington, D.C.: United States Department of Agriculture, Soil Conservation Service, September 1979), 25, available online, <http://www.nrcs.usda.gov/about/history/articles/>, last accessed March 5, 2010.

<sup>57</sup> *A Brief History of the Farmers Home Administration*, 6.

<sup>58</sup> Buie, *A History of United States Department of Agriculture Water Resource Activities*, 25.

and Small Watershed Program catered to willing landowners and local community organizations interested in local control and economic stimulus.

The small watershed program was cheaper on paper and helped control flooding within local watersheds. But local debate over who would build small or large dams was hardly isolated to the southeast. Luna Leopold and Thomas Maddock plunged into the national discussion in the early 1950s. Leopold, the son of conservationist and wildlife biologist Aldo Leopold, was a well-known geologist and engineer. He and Maddock co-authored a book, *The Flood Control Controversy* (1954), to clarify what caused floods and how best to manage them. The two authors suggested that small watershed projects and land treatment methods would indeed provide flood control in the headwaters, but they would do little to prevent flooding downstream where large dams would indeed provide the best measure of flood control. In their opinion, flood control did “not mean the elimination of floods.” Big dam critics compared small watershed projects with the Corps’ big dams as though they were the same fruit, but Leopold and Maddox thought the options were more like apples and oranges. The Corps’ main-stem big dams and the SCS small watershed projects were ultimately compatible, in Leopold’s and Maddox’s analysis, but they were not interchangeable.<sup>59</sup> Not all southerners were convinced, and many believed small watersheds were economically and politically more valuable than Corps dams. South Carolinians considered the Corps’ projects nothing but “big dam foolishness,” a characterization they picked up from a Midwestern journalist who popularized opposition to the Corps’ general program of water management. Elmer Peterson published his book, *Big Dam Foolishness*, in the same year as Leopold’s and Maddock’s book, and one

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<sup>59</sup> Luna B. Leopold and Thomas Maddock, Jr., *The Flood Control Controversy: Big Dams, Little Dams, and Land Management* (New York: The Ronald Press Company, 1954).

particular USDA Small Watershed project in the Savannah River valley illustrates how the process worked and was imbued with Peterson's rhetoric.<sup>60</sup>

The Twelve Mile Creek watershed project in Pickens County, South Carolina, located high up in the Savannah River's watershed, contained 790 farms spread over 67,000 acres. According to one cheery Greenville journalist, farmers and soil conservationists worked "to see how efficient a job man can do with Nature's help in storing as much water as possible in the land where it falls and thereby reducing the flood flow with accompanying damage to land." Journalist David Tillinghast toured the watershed with soil conservationists. Tillinghast bristled at the cost of the Corps' Hartwell dam and reservoir, and enthusiastically trumpeted the benefits of the small watershed project. The Twelve Mile Creek project – which included small flood control dams on headwater farms and land treatments (terracing, kudzu planting, etc.) in erosion-prone areas – was technically a much cheaper flood control option when compared with Hartwell.<sup>61</sup> Other editors followed Tillinghast's lead in an apparent state-wide campaign. The Charleston *News and Courier* editor, T. R. Waring, was more inclined to see federal money spent on multiple smaller watershed projects throughout the state. Smaller farm ponds in particular would provide a better "method of conserving water, and controlling floods at the source." This type of watershed planning "could be adapted to the entire state with excellent results at half the cost of Hartwell Dam," because the USDA's small watershed project cost's were "shared by local and federal sources."<sup>62</sup> W. D. Workman, one of Waring's columnists, concluded that the cost sharing alone made the small watershed program more democratic

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<sup>60</sup> Elmer T. Peterson, *Big Dam Foolishness: The Problem of Modern Flood Control and Water Storage* (New York: The Devin-Adair Company, 1954).

<sup>61</sup> David A. Tillinghast, "Twelve Mile Creek Waters Begin to Yield," [Greenville (S.C.) *Piedmont*, May ?, 1955], newspaper clipping included with Lucile Watson, Clemson, S.C., to Senator (elect) J. Strom Thurmond, Washington, D.C., May 19, 1955, Folder Hartwell, Box 10, Subject Correspondence Series, 1955, STP.

<sup>62</sup> T. R. Waring, Editor, Charleston (S.C.) *News and Courier*, to Senator J. Strom Thurmond, Washington, D.C., June 4, 1955, Folder Hartwell, Box 10, Subject Correspondence Series, 1955, STP.

because farmers and local conservation district members worked with federal engineers to complete local projects and manage the water supply locally.<sup>63</sup> Local control – or a hyper-focused states’ rights attitude – soon infused the debate of water management in the Savannah River valley.

The Georgia and South Carolina drought not only highlighted competition among water users and potential alternatives to massive reservoirs, the drought also uncovered anxiety about water rights at a moment when rhetoric about states rights and civil rights converged. The Georgia Water Use and Conservation Committee recommended that the state legislature consider amending Georgia’s riparian legal tradition – a legal construction that entitled a property owner along a watercourse to use water so long as they did not diminish the overall flow, and did not transfer the water to another user or over great distances. This tradition is more common in the eastern United States as compared to the western water allocation process of prior appropriation, whereby an individual holds access rights to water, can move the water over great distances, and does not have to return the water for downstream use.<sup>64</sup> The Georgia Water Use and Conservation Committee ultimately recommended that laws not change until they uncovered specific problems. However, the committee did argue that Georgia’s industrial development was handicapped by the “uncertainty as to the rights and duties of the users of Georgia’s water resources.” As such, “this uncertainty discourages investment in beneficial water use, and constitutes perhaps the greatest weakness in our law as it exists.”<sup>65</sup> The Georgia Water Use and Conservation Committee was not alone in articulating this aspect of the water problem. The USDA funded farm ponds and small watershed projects provided concrete alternatives to

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<sup>63</sup> W. D. Workman, Jr., “‘Stop, Look and Listen’ Notes On Hartwell Dam Construction,” *Charleston (S.C.) News and Courier*, June 12, 1955, p. 16B, found in Folder Hartwell, Box 10, Subject Correspondence Series, 1955, STP.

<sup>64</sup> Donald Pisani, *To Reclaim a Divided West: Water, Law, and Public Policy, 1848-1902* (Albuquerque: University of New Mexico Press, 1992), 31.

<sup>65</sup> *Water in Georgia*, 62.

massive Corps reservoir projects, and possible solutions for some of the South's water problems, and they vested water supply management responsibilities of adjacent landowners and local soil conservation district operatives. The Corps projects, however, redrew property lines and thus transferred water supply management responsibilities to the federal government on behalf of the nation's citizens.

As the Clarks Hill project moved into the operational phase, the Corps and South Carolinians began negotiating how the reservoir's water might be allocated. Clarks Hill was not originally authorized to provide municipal water supply for any community in South Carolina or Georgia, and was authorized to provide the standard flood control, hydroelectric power, and navigational benefits. However, in 1955, the Corps met with McCormick representatives to discuss the city's proposal "to acquire water" from Clarks Hill after the reservoir was completed and operating. The Corps explained to the McCormick delegation that specific legislation would be required from Congress so that the Corps could divert water from the reservoir to the city and county. At the time, Corps and McCormick officials must have been optimistic that Congressional authorization was likely since they agreed upon the water's value: a rock-bottom rate of \$8.50 per million cubic feet of water. But the legislation never made it out of the Senate, and McCormick had to wait for three more years before they received legal authority to tap into the Clarks Hill reservoir.<sup>66</sup>

When Congress enacted the Water Supply Act (1958), McCormick County executives and lawyers took advantage of the new legislation to add to the town's municipal water supply and to assure future economic development. To be fair, McCormick County had sacrificed more than a fifth of the county's taxable land for the Clarks Hill project, including 100,000 acres

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<sup>66</sup> "Summary Notes of Conference Held in Office of District Engineer," Col. T. Def. Rogers, District Engineer, Savannah, Ga., February, 21, 1955, Subject Correspondence Series, 1955, Folder Clarks Hill, Box 5, STP.

managed by the Corps and United States Forest Service.<sup>67</sup> The Water Supply Act intimated that federal reservoirs – such as Clarks Hill Reservoir – could be used for domestic and industrial water supply. As Brigadier General William F. Cassidy explained the process to Senator Thurmond after McCormick submitted an application, Corps engineers would determine if water allocation would “‘seriously’ affect the purposes for which the project was authorized or would involve major structural or operational changes.” If McCormick’s request would alter operations at Clarks Hill, Congressional approval was “required before a water supply agreement could be finalized.” Cassidy explained that the final decision would hinge on the quantity of water removed and the quality of the water returned, as well as if the water would be returned to a different watershed. The Corps did eventually determine that McCormick’s water allocation request required more water than the Clarks Hill project could technically spare, so Congressional authorization was required. Public Law 23, 84th Congress, 1st Session granted the City of McCormick the right to withdraw 600 acre-feet of water per year (approximately 195,000,000 gallons) from Clarks Hill, for a paltry \$500 per year.<sup>68</sup>

McCormick officials were happy to get water but not excited about future prospects. First, they were concerned that the costs might go up. Second and not unlike members of Georgia’s Water Conservation Committee, they were concerned that new industries might not locate in the area if they could not access Clarks Hill’s water supply directly without Congressional approval. According to the McCormick Chamber of Commerce, the federal government had to resolve the federal reservoir water problem and resolve local water rights

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<sup>67</sup> Sara V. Liverance, “McCormick County Citizens Disappointed With Dam,” *Greenville (S.C.) News*, [January 6, 1955?], Folder Hartwell, Box 10, Subject Correspondence Series, 1955, STP

<sup>68</sup> Brigadier General William F. Cassidy, Assistant Chief of Engineers for Civil Works, Washington, D.C., to Senator J. Strom Thurmond, November 2, 1959, Folder Rivers and Harbors 3-1 (Hartwell Dam) February 21 - November 25, 1959, Box 22, Subject Correspondence Series, 1959, STP.

because McCormick County needed to convey to industrial reps that water was available and how much the water would cost.<sup>69</sup>

As the Hartwell dam and reservoir project moved through the planning phases, South Carolina Representative William Jennings Bryan Dorn communicated with the Corps about the new reservoir's water allocation process in light of the Clarks Hill and McCormick situation. Congress did not initially authorize Hartwell, like Clarks Hill, to provide municipal water supply for any community in South Carolina or Georgia and they did approve the project for flood control and navigation. Maj. General William F. Cassidy explained to Dorn the water allocation process much as Brigadier General Cassidy had for Senator Thurmond months earlier. McCormick ultimately paid \$0.05 per 20,000 gallons, and Cassidy stated that the Corps had not yet determined "the cost of water from the Hartwell project" but would utilize a similar formula for Hartwell.<sup>70</sup>

In light of these water allocation negotiations, some South Carolinians reduced the issue to a question of states rights. For example, Ernest B. Rogers informed the Chamber of Commerce that federal control of water supply in federal reservoirs was symptomatic of "the gradual attrition of the individual states' historical rights to control water resources."<sup>71</sup> Frank E. Harrison, McCormick County's attorney, offered the same water and states rights opinion in no uncertain terms before the Corps' Savannah District Board of Engineers where he continued to register his opposition to new federal reservoirs in the Savannah River valley. Harrison was most frustrated by how Clarks Hill, the planned Hartwell, and future reservoirs fundamentally

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<sup>69</sup> "McCormick Wants Gov't. Restrictions Removed," Anderson (S.C.) *Free Press*, November 19, 1959, p.1.

<sup>70</sup> Maj. General William F. Cassidy, Assistant Chief of Engineers for Civil Works, Washington, D.C., to Senator Olin D. Johnston, Washington, D.C., February 25, 1960, Folder Legislation, 1960, Persons, Hall, Wilton E., Box 78, OJP.

<sup>71</sup> Ernest B. Rogers, Jr., "An Evaluation of carters Island and Goat Island Reservoirs Proposed to be Built by the U.S. Army Corps of Engineers on the Savannah River," for the McCormick (S.C.) Chamber of Commerce and the Abbeville County (S.C.) Planning and Development Board (February 17, 1960), Folder Rivers and Harbors 4 (Rivers) January 8 - May 24, 1960, Box 31, Subject Correspondence Series, 1960, STP.

altered water management and legal access to water. Harrison wanted water management turned over to a “local water authority so that the common law rights as to water use can be restored to the people.” Harrison articulated how federal reservoirs – ringed by a strip of public land – fundamentally changed riparian law in the South. Communities and property owners lost rights to water contained within federal reservoirs when they sold their property to the federal government. As such, Harrison claimed that federal management of Clarks Hill’s water supply discouraged industry from locating in McCormick County because they would have no direct access to the water supply without Congressional approval. Harrison labeled the Corps, “a military branch” that threatened to inflict “great damage to our country” by assuming “political power and economic control over large areas of our economy.”<sup>72</sup>

Damage, of course, is relative. The Corps damaged the Savannah River itself when they built the Hartwell Dam, a 2,451 foot concrete and 10,000 foot earthen embankment structure. Behind the dam, a reservoir covered 56,000 acres, and necessitated the removal of 560 urban and rural families, “or a total population of 2,800” in a project area with a population of seventeen people per square mile. Not all land owners were excited to make way for the dam and reservoir that required them to sell their property.<sup>73</sup> For example, one Seneca (S.C.) landowner was frustrated that he could not recoup the market value for the property he needed to sell. He pleaded with Sen. J. Strom Thurmond, “I am told the dam is to benefit this area, but why should I be pushed out of my home without being given full value, or enough to replace my home in the same general locality?” Harold Timms clearly understood the real estate dynamics at work, or at a minimum how they worked against him. Property values were destined to increase as more

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<sup>72</sup> Frank E. Harrison, Attorney, McCormick, S.C., to Rep. W. J. B. Dorn, Washington, D.C., November 20, 1956, Folder Topical Files, 1955-1956, Public Works, Dams, Hartwell, Box 43, WDP; Frank E. Harrison, before the Board of Engineers, Savannah (Ga.) District, February 17, 1960, Folder Rivers and Harbors 4 (Rivers) January 8 - May 24, 1960, Box 31, Subject Correspondence Series, 1960, STP.

<sup>73</sup> *Definite Project Report: Hartwell Reservoir*, 41-42.

folks like himself competed for remaining property or “due to higher value placed on resort type property.” Thurmond worked his magic by contacting the Corps’ real estate managers in an effort to ameliorate the situation. Eventually, the Corps offered to acquire Timm’s property earlier so he might better plan his relocation while also allowing him to remain on the property during the project’s construction phase.<sup>74</sup> Not all situations had such happy endings.

Land condemnation cases blossomed during the Hartwell project as land owners fought to establish fair prices for their land. According to United States District Court case file transcripts, many property owners primarily struggled to establish fair per-acre values for land under condemnation – not unlike those who challenged federal real estate agents at Clarks Hill and other locations.<sup>75</sup> Based on transcripts, some of these farms were profitable for pulpwood, cattle, corn, and hay, and these property owners wanted to make sure they got fair value for what they considered good land in the river bottoms. Condemnation proceeding favored white landowners who had the resources to fight in court, and people with good land had little incentive to sell. But property owners with poor land – or minority land owners with no resources to fight – took the money when offered.<sup>76</sup> As Clarks Hill and Hartwell land condemnation issues worked their way to resolution, constituent uproar did encourage Senator Olin Johnston to repeatedly attempt to introduce legislation to reconvey surplus lands the Corps no longer needed for project operation to former owners.<sup>77</sup> But real estate issues alone could not

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<sup>74</sup> Harold Timms, Seneca, S.C., to Senator J. Strom Thurmond, Washington, D.C., November 21, 1955, Folder: Clarks Hill, February 15 - April 4, 1956, Box 2, Subject Correspondence Series, 1956, STP.

<sup>75</sup> Darren Anthony Shuler, “On Our Land: Progress, Destruction and the Tennessee Valley Authority’s Tellico Dam Project” (M.A. thesis, University of Georgia, 2000); Robert P. Shapard, “Building an Inland Sea: Clarks Hill Lake on the Upper Savannah and the Twentieth-Century Lives, Land, and River Hidden by its Waters” (M.A. thesis, North Carolina State University, 2009).

<sup>76</sup> National Archives Southeast (Morrow, Ga.) Record Group 21 contains the U.S. District Court’s Western District of South Carolina civil case files pertaining to the Hartwell condemnation proceedings, for example, see boxes 254, 257-260.

<sup>77</sup> Senate Bill 3172, 87<sup>th</sup> Congress, 2<sup>nd</sup> sess., April 16, 1962, Folder Legislation 1962, Public Works, Dams, Hartwell, Box 167, OJP.

hold up the dam's construction, which the Corps began in 1955 and completed by 1962 after the 56,000 acre reservoir filled. The initial estimated cost of \$68,400,000 (1948) jumped to a final \$89,240,000, but the Corps recently claimed they had earned over \$118,485,133 from power sales to electrical co-operatives and other customers through the Southeastern Power Administration (SEPA, Department of Energy). The project may not have been popular with some area residents, but in 1962, the Corps reported that nearly 750,000 people visited Hartwell. And in 1988, Hartwell Lake was the second (of the ten) most popular Corps project in the nation after 13,000,000 visited the project.<sup>78</sup> The boosters' dreams of creating a recreational and leisure paradise while solving the South's water problem in the Savannah River valley appeared to have come true.

### **Conclusion**

The 1950s southern drought replayed the region's old water problems. For decades, southern boosters sold the South by offering up cheap and tractable labor, downplaying racial strife, and showcasing bottomless stores of natural resources like water. Despite their best face, the boosters and politicians discovered that the South's water problem – like the race and labor problems – persisted. After 1945, New Deal inspired solutions for public water management encountered stiff resistance from champions of private enterprise. As civil rights and states rights politics merged, they influenced how a divergent southern population thought about, discussed, and offered solutions for the South's water problems in Georgia and South Carolina. No amount of political or economic power could master the region's water. Politics and power, however, were not the only issues at stake.

Droughts, not unlike floods, influenced the region's economic development and environmental future. Massive Corps reservoirs, medium size Soil Conservation Service

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<sup>78</sup> Barber and Gann, *A History of the Savannah District*, 434-442.

watershed projects, and thousands of small farm ponds served municipal, industrial, and agricultural constituencies. The projects produced electricity, delivered water to industry, reduced flooding down-valley, irrigated fields, became recreation destinations, and supported domestic animals, game, and fish. Collectively, all of these projects also fundamentally altered the region's hydraulic cycle. To be fair, the Savannah River's watershed was never pristine or un-altered by those who depended on the basin for survival. However, the scale to which the watershed was altered after 1945, and particularly after the 1950s southern drought, had been unmatched and would require an equally unprecedented level of ecosystem maintenance. The South's elaborate hydraulic system of ponds, reservoirs, dams, canals, locks, levees, and channelized streams that supported the region's wide ranging demographic and economic constituencies would always be beholden to the hydraulic cycle. Too much or not enough rain had clearly visited the region in the past, and would continue to do so in the near future.



## CHAPTER 6

### THE LONG ROAD TO TROTTERS SHOALS: JOBS, WATER POLLUTION, AND RECREATION, 1960-1976

The Savannah River valley's water problems remained unsolved after more than sixty years of tinkering by private and public actors. Corporate water conservation projects designed to store water for hydroelectric generation throughout the South had shifted back to coal generated electricity after major droughts in the 1920s. The New Dealers' multiple purpose public works projects, on the other hand, continued to promise the holy trinity of benefits and influenced the Savannah River valley's post-1945 waterscape. The U. S. Army Corps of Engineers' projects at Clarks Hill and Hartwell only tentatively solved the region's water problems, as drought struck while Clarks Hill's reservoir filled. These massive federal reservoirs captured flood waters and could not always outlast droughts, and they created new environmental conditions requiring new management responsibilities. If these projects helped alleviate valley residents' fears about uncontrolled flooding and drought, they also invited conflict. A new water problem emerged in southern rivers and reservoirs: water quality.

When the Corps moved forward on the Trotters Shoals project water quality became an important part of the region's post-1945 water problem.<sup>1</sup> Trotters Shoals, located between the

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<sup>1</sup> In 1973, Congress renamed Trotters Shoals the Richard B. Russell Dam and Lake, but I will continue to refer to the project as Trotters Shoals throughout this chapter.

Clarks Hill (operational in 1952) and Hartwell (1963) projects, was the Corps' third and final Savannah River valley multiple purpose dam and reservoir development. Private and public water conservation projects before 1945 primarily approached water quantity as environmental challenge: how much could be stored and used to generate electricity, facilitate navigation, or mitigate flooding. In other words, the traditional benefits – power production, navigation, and flood control – promoted water conservation and water supply with little concern for water quality. The Corps had worked with state and federal agencies in the Savannah River valley to maintain fisheries and control malarial conditions at reservoir sites, but promoting recreation and public health was not the same as protecting clean water. Trotters Shoals was different on two accounts. First, Congress dismantled the New Deal's holy trinity at Trotters Shoals, and officially authorized the project for power production and recreation, and only incidentally for flood control or navigation. Second, the project was situated in the middle of the Savannah River valley's Piedmont province, and the shoals were among the last undammed twenty-eight miles of the Savannah River between the upper reaches of the Clarks Hill reservoir and Hartwell dam. The function of free flowing water – as a source of dilution for pollution or as a potential National Recreation Area – influenced the Corps' execution of Trotters Shoals and this unique stretch of Piedmont-river.

Debate over the fate of this final upper section of the Savannah River began as early as 1959, lasted until authorization in 1966, continued before construction began in 1974, and was far from finished when the dam began generating electricity in 1985. This lengthy twenty-five year process involved old and new actors who used old and new arguments to lay claims on the Savannah River's water resources. A prodigious environmental historiography has identified the post-1945 period as a turning point, whereby conservationists who promoted wise use of natural

resources gave way to an environmental movement that promoted beauty, health, and permanence. This chapter will discuss how Southern “countryside conservationists” and environmentalists negotiated post-1945 economic development and water problems in the shadows of dams inspired by New South and New Deal aspirations.

Environmental historians have interrogated who and what constituted environmentalism since Samuel Hays began sketching the contours of American conservation and environmental politics. Scholars eager to interpret the impact of the Progressive Era’s “gospel of efficiency” and wise use conservation, or post-1945 environmentalism, start with Hays. For example, Hayes identified domestic and urban expatriates who lived part-time in post-1945 countryside as important contributors to the nascent environmental movement. Following this line of urban-to-rural migration, Adam Rome identified middle class suburban homeowners as the progenitors of modern environmentalism. In both Hayes’ and Rome’s analysis, new arrivals in the countryside were motivated to protect their bucolic rural or new suburban landscapes from reckless and environmentally damaging development. As these part-time and suburban pioneers watched the destruction outside their plate-glass windows, they turned to local, state, and federal authorities to help mitigate the destructive cycles for which they were partly responsible. In Rome’s interpretation, citizen activists in the Mid-Atlantic and Northeast leaned on science and political networks to solve environmental problems, and these localized interest groups sparked the national environmental movement. Hayes acknowledged that regional heterogeneity influenced post-1945 environmental behavior, and he concluded that a general “weakness in environmental interest” existed in the American South based on his analysis of Congressional voting records since 1970. He attributed this sentiment “to the region’s agricultural roots, the persistence of rural attitudes and institutions, and the slower growth of urban populations with newer interests

and values.” Only by the 1980s, according to Hays, did the South’s environmental engagement look “more like other regions” such as New England, the Mid-Atlantic, and the Pacific Coast, and then only in the urban South.<sup>2</sup> The events and actors involved in the Trotters Shoals dam and reservoir battle suggests that Savannah River valley countryside conservationists and environmentalists valued appropriate economic development, water quality, and environmental protection.

Countryside conservation and environmentalism in the post-1945 South involved a wide range of participants concerned about the valley’s aesthetic beauty, human health, and future. The actors involved in the Trotters Shoals debate between 1960 and 1970 lived in small southern towns and emerging urban centers, and they linked the South’s water problems, economic development, and environmental quality. Countryside conservationists wanted community economic development, but not at the expense of southern waterways and certainly not at the expense of water quality in the massive federal reservoirs that were supposed to drive a recreational, leisure, and post-industrial economy. Historian of environmental politics Paul Milazzo has analyzed the “unlikely environmentalists” in Congress who crafted federal water pollution control legislation in the 1950s while they laid the foundation for the landmark Clean Water Act (1972). Milazzo’s Congressional committee members and professional staff argued that water pollution ultimately limited commercial and industrial expansion, and thus justified a federal response to protect jobs and human health in American communities. In his successful endeavor to “bring Congress back” into the historical narrative, Milazzo did not consider how the countryside influenced those elected representatives in Congress who shaped clean water

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<sup>2</sup> Samuel Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (New York, N.Y.: Cambridge University Press, 1987), chap 5 “The Countryside: A Land Rediscovered, yet Threatened,” and p. 43 for quote; Hays makes the same argument in *A History of Environmental Politics Since 1945* (Pittsburgh: University of Pittsburgh Press, 2000), 185-188; Adam Rome, *Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York, N.Y.: Cambridge University Press, 2001).

legislation. County lawyers, corporate executives, university employees, and journalists in the Savannah River valley weighed in on the value of dams, water pollution, and the Sunbelt's future while Congressional committees and staff built their cases. Milazzo cited a Gallup poll from the mid-1960s suggesting that fewer than one-fifth of Americans were concerned with water pollution.<sup>3</sup> The numbers are circumspect in the context of countryside conservation, environmentalism, and the Trotters Shoals dam where project opponents and supporters repeatedly used water pollution to justify their positions. In the pro-industry camp, people opposed to the Trotters Shoals dam argued that polluting industries needed a free flowing and undammed river to dilute industrial pollution. In another camp, countryside conservationists who supported the Trotter Shoals dam argued that a free flowing river that accommodated polluting industries would damage the river and the downstream Clarks Hill reservoir. As such, they promoted a dam that would 'save' a river from the ill effects of pollution by creating a new reservoir. And after 1970 another Trotters Shoals opposition group emerged: environmentalists opposed the project for environmental and fiscal reasons.

The environmental movement in the American South was diverse, and not solely focused on how best to manage the Savannah River valley's water resources. As Hays observed, "internal Democratic party variations were especially noteworthy in the South, where rapid social change was creating new urban views within a more traditional rural climate." While he associated this friction with the 1970s and afterward, the Trotters Shoals event illustrates how the region's environmentalists reflected internal debates within the Democratic party, as well as what constituted appropriate federal spending, the public good, and adequate regulation of

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<sup>3</sup> Paul Charles Milazzo, *Unlikely Environmentalists: Congress and Clean Water, 1945-1972* (Lawrence: University of Kansas Press, 2006), pp. ix, 74.

private enterprise before 1970.<sup>4</sup> Boosters, elected state and national representatives, state and federal bureaucrats, corporate executives, and citizens all spoke for the river because the water continued to represent potential energy for industrial production, could stimulate consumer behavior, and offered new leisure environments. Clarks Hill's reservoir and Hartwell Dam also created a new river environment in between – at Trotters Shoals – where water quality became a central part of the South's ongoing and evolving desire to solve the region's persistent water and other problems. At this geographic location, along this last un-dammed stretch of the Savannah River's Piedmont section, countryside conservationists and environmentalists challenged the Sunbelt economic juggernaut.

### **South Carolina, Duke Power, and Middleton Shoals**

As an old New South actor, the Duke Power Company maintained a vested interest in development of the Savannah River watershed. As a landlord, the Charlotte, North Carolina based company that developed the Catawba River basin beginning in 1904, owned thousands of acres upstream and downstream from the Hartwell project. Company real estate agents had begun purchasing property along the Keowee River upstream from the Hartwell reservoir before 1920 and by the 1940s had amassed at least 14,000 acres.<sup>5</sup> Below the Hartwell dam, the company bought thousands of acres of Savannah River bottomland in Georgia and South Carolina between Middleton Shoals and Calhoun Falls, S.C. in the 1930s. Most of this property – at least 7,000 acres – came from James Edward Calhoun's Millwood Plantation estate [see

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<sup>4</sup> Hays, *Beauty, Health, and Permanence*, 41-50.

<sup>5</sup> The company purchased another 68,000 acres from a single seller in 1964, see: Duke Power, "Keowee-Toxaway Timeline," Folder Topical Files, 1965, Keowee-Toxaway, Box 72, The William Jennings Bryan Dorn Papers, South Carolina Political Collections, The University of South Carolina, hereafter WDP. Robert F. Durden noted that Duke began acquiring this property after the Catawba River's 1916 flood, see: *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001), 141.

Chapter 1] and was planted in pine.<sup>6</sup> As an energy company, the utility provided the South Carolina upstate with electricity, and linked Greenville's and Spartanburg's economic growth more with Charlotte, North Carolina, than with South Carolina's capital in Columbia. Duke also maintained a transmission system interconnection – established by 1914 – with the Georgia Power Company's Tallulah-Tugaloo project [Chapter 2]. Duke's post-1945 industrial and residential customer base continued to grow in South Carolina, but the company had no major electrical generation facilities in the valley or this portion of the company's service area.

Whereas the Georgia Power Company challenged public power at Clarks Hill immediately after World War II and lost [Chapter 4], Duke Power had plans for this property and challenged public power directly at Trotters Shoals after 1960. The Duke Power Company – a New South company – ultimately succeeded in capitalizing upon their Keowee and Savannah river properties but not without a fight or compromise.

The Duke Power Company, like Georgia Power and Alabama Power, continued to feel threatened by the public power models exemplified by the Tennessee Valley Authority and the U. S. Army Corps of Engineers' two new Savannah River valley projects. According to Duke Power historian Robert Durden, TVA resembled “a multi-purpose public corporation,” doing “on a massive interstate scale” what the Duke Power Company had done in the Catawba River valley since 1904.<sup>7</sup> Duke had successfully engineered the Catawba River's multiple dams to generate

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<sup>6</sup> “Tax Facts About Hart Dam,” *The South Carolina Farmer*, March 1957. Old Calhoun Estate: James P. Nickles, Attorney, Abbeville, S.C., to Rep. W. J. B. Dorn, Washington, D.C., September 21, 1959, Folder Topical Files, 1962, Trotters Shoals, Box 63, WDP; James P. Nickles, to Senator Richard Russell, October 9, 1962, Folder Legislation 1962, Public Works, Dams, Trotters Shoals, Box 167, Olin DeWitt Talmadge Johnston Papers, South Carolina Political Collections, The University of South Carolina, hereafter OJP; The History Group, Inc., *Historical Investigations of the Richard B. Russell Multiple Resource Area* (Atlanta, Ga.: Prepared for the Archeological Services Division, National Park Service, and funded by the Savannah District, U.S. Army Corps of Engineers, 1981), 177 and 189; and Sharyn Kane and Richard Keeton, *Beneath These Waters: Archeological and Historical Studies of 11,500 Years Along the Savannah River* (Savannah, Ga.: U.S. Army Corps of Engineers and the Interagency Archeological Services Division, National Park Service, 1993), 268.

<sup>7</sup> Durden, *Electrifying the Piedmont Carolinas*, 104.

electricity, provide limited flood control relief, and supply water to municipalities and industries for free. Since 1922, the company managed reservoirs to eliminate malarial conditions. After 1939, Duke established a forestry division to manage the company's non-flooded lands for timber harvesting, which by 1960 included over 200,000 acres of working forest. The company also provided free public access to ten company lakes in 1960.<sup>8</sup> At the time, the Duke Power Company's service area stretched across 20,000 square miles in the Carolinas and reached 2.75 million people.<sup>9</sup> As Duke public relations executives liked to boast, the company built this elaborate waterscape "without government subsidy" and the public enjoyed many of its benefits "free of charge."<sup>10</sup> Today, Duke maintains eleven major dams and reservoirs along the 200-mile Catawba River (a tributary of the Santee River basin), and the Corps maintains no facilities on this river.

Duke was not able to maintain this monopoly in North Carolina or South Carolina without facing challenges. For example, to protect their investments from the encroaching New Deal state in the 1930s, the company secured an injunction to stop Public Works Administration (PWA) grants and loans from reaching a new electrical cooperative in Greenwood County, South Carolina in 1934. Company executives protested that Duke could not compete with tax-exempt co-ops that received below-market interest rate loans. The Supreme Court eventually overruled the injunction in 1937, and the decision released \$110M in federal funds for sixty-one projects of a similar nature in twenty-three states, much to the distaste of private utility companies. The PWA money ultimately subsidized electrical generation projects like the Buzzard Roost

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<sup>8</sup> Duke Power Company, "Presentation for 1959 Edison Award," 1960, Folder Topical Files, 1962, Duke Power Co., Box 61, WDP.

<sup>9</sup> W. B. McGuire, President, Duke Power Company, before the Board of Engineers for Rivers and Harbors, Savannah, Ga., February 17, 1960, Folder Rivers and Harbors 4 (Rivers) January 8 - May 24, 1960, Box 31, Subject Correspondence Series, 1960, J. Strom Thurmond, Mss 100, Special Collections Unit, Clemson University Libraries, Clemson, South Carolina, hereafter STP.

<sup>10</sup> Duke Power Company, "The Catawba River Story," [n.d., probably 1961], Folder Legislation 1961, Duke Power, Box 81, OJP.

hydroelectric dam and Greenwood Lake project – which was located in the Duke service area – during the New Deal’s middle years.<sup>11</sup> This would not be the last time Duke faced challenges from the region’s electrical co-operatives. As we will see, the Duke Power Company was compelled to compromise with the Corps at place called Middleton Shoals, a long series of shallow rocks below Hartwell dam, to get what they wanted upstream of Hartwell in the Keowee River valley.

Middleton Shoals became a flash point between private and public power advocates in the 1960s. The Duke Power Company owned thousands of acres of land on both sides of the Savannah River at Middleton Shoals, located eight miles downstream from Hartwell Dam and twenty miles upstream from Trotters Shoals, and between Anderson County (S.C.) and Elbert County (Ga.). As construction continued at Hartwell Dam, rumors of additional Savannah River valley dams generated both support and opposition to projects in the vicinity of Middleton Shoals.<sup>12</sup> Given its track record, the Duke Power Company continued to oppose any federal dam that impinged upon private manipulation of the Savannah and Keowee rivers.

The power company had discussed building a steam plant to generate electricity on the South Carolina side of the Savannah River for many years, and Middleton Shoals was the most promising site in the 1960s. Duke’s plans for the site included a \$289,000,000 coal-fired thermo-electric steam plant that would initially generate 700,000 kW by 1965 and expand to generate over 2,000,000 kW at full capacity while consuming 10,000 tons of Appalachian coal. For reference, when the Duke Power Company introduced the Middleton Shoals project, the

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<sup>11</sup> Durden, *Electrifying the Piedmont*, 107-109. After fighting this project in the 1930s, Duke Power eventually acquired the Greenwood Electrical Power Commission’s properties in 1966, and consumer electrical rates remain frozen at 1966 levels, see: Duke Energy Carolinas, LLC, “South Carolina Only, Index of Rate Schedules,” October 5, 2009, p. 2, <http://www.duke-energy.com/pdfs/SCMasterIndex.pdf>, last accessed March 6, 2010.

<sup>12</sup> “Greenwood, Calhoun Falls Opposed to New Dams,” *Anderson (S.C.) Independent*, November 18, 1959; “Elberton and Augusta Favor New Dams On Savannah,” *Anderson (S.C.) Independent*, November 18, 1959; “Savannah Development Debated at Hearing,” *Anderson (S.C.) Independent*, November 20, 1959.

company's total hydroelectric and steam-electric generation capacity at the time was 3,000,000 kW, and thus Middleton Shoals would have nearly doubled the company's generation capacity.<sup>13</sup> However, the company could not develop the river on their own. Because Middleton Shoals required a diversion dam that would stretch part-way across the 'navigable' Savannah River and redirect some of the river's water into the steam plant's boilers and condensers, Duke Power needed Congressional authorization to dam the river. The company failed to obtain this right in 1962 despite support from South Carolina's Congressional delegation because Georgia's Senator Richard B. Russell (D) blocked the authorization in the Senate. Russell argued that Duke's Middleton Shoals project conflicted with multiple federal dam sites recommended for that stretch of the Savannah River by the Corps in the 1944 Flood Control Act. Given this resistance, Duke continued to lean hard on South Carolina's Congressman William Jennings Bryan Dorn (D), and Senators J. Strom Thurmond (D) and Olin D. Johnston (D) for full support.

South Carolinians generally favored the Duke facility at Middleton Shoals and were opposed to the new federal dams. There were reasons not to build Trotters Shoals, including the two preexisting Corps projects in the Savannah River valley. River basin residents asked, why build another public project? The often-repeated reasons to support a private project, to the contrary, included increased tax revenue, in this case to the tune of \$2,000,000 per annum for Anderson County, South Carolina. Based on the proposed tax revenue, the Anderson Chamber of Commerce went on record in 1959 as preferring "the Duke project" over "additional government-built dams."<sup>14</sup> The company also claimed the fully completed plant would generate over \$15,000,000 annually in local, state, and federal taxes. But what no elected official wanted

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<sup>13</sup> "Duke Power President Promises Huge Plant," Anderson (S.C.) *Independent*, November 20, 1959, p. 16, newsclipping, Folder Rivers and Harbors 4 (Rivers) January 21 - December 29, 1959, Box 23, Subject Correspondence Series, 1959, STP.

<sup>14</sup> "Why Leave the Job Half Done?" editorial originally published in the Athens (Ga.) *Banner-Herald* and reprinted in the Anderson (S.C.) *Independent*, November 26, 1959.

to admit, and Duke president W. B. McGuire only admitted in a private meeting, was that Middleton Shoals would operate “tax free for the first three years” per “state regulations.” Furthermore, McGuire acknowledged “it would be a long time before they would actually put the ultimate capacity of this plant into operation,” and thus tax payments would remain low until Duke completed the plant.<sup>15</sup> Given a lack of transparency, most South Carolinians – influenced by heavy lobbying from Duke Power and other industrial advocates – supported private industry’s agenda. Georgians, along with their cross river neighbors, also supported Duke’s Middleton Shoals project because they assumed that free market principles and free enterprise would enlarge the local tax rolls and spur job creation. Many of these same people were not aware that their states were subsidizing industrial development by offering liberal tax incentives to companies like Duke Power to create a friendly business environment. Duke executives, however, never publically revealed the full costs and benefits of the Middleton Shoals project.

Beyond Andersonians, Duke enjoyed great support throughout South Carolina. Congressional Representative William Jennings Bryan Dorn welcomed the Army Corps’ decision, and repeated a common phrase: “Public dams should be built only when private enterprise will not or cannot build them. Private enterprise pays taxes and should have a right to developments wherever possible.”<sup>16</sup> Even the editors of the *Augusta (Ga.) Chronicle*, an institution that had supported public projects like Clarks Hill and Hartwell in the past, switched sides and favored Duke’s private investment goals.<sup>17</sup> According to opponents of federal development on the Savannah River, the new dams proposed by the 1944 Flood Control Act wasted taxpayer dollars, eliminated potential industrial sites, and introduced un-equal

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<sup>15</sup> Minutes from a meeting held in Senator Richard B. Russell’s office, April 13, 1961, Folder Legislation 1961, Duke Power, Box 81, OJP.

<sup>16</sup> “Green Light Given Duke Plant – Dorn,” *Anderson (S.C.) Independent*, May 14, 1960.

<sup>17</sup> “We oppose Trotters Shoals,” *Augusta (Ga.) Chronicle Herald*, April 28, 1963.

competition between private and public power. Governor Ernest F. Hollings was one of successive South Carolina governors who opposed additional federal dams between Clarks Hill and Hartwell, and his “strenuous opposition” in 1960 led the Army Corps to scrap their initial plans to build two-dams on this stretch of the Savannah River.<sup>18</sup> And the Corps, in an unwritten policy, did not push an interstate project if one governor expressed no desire to proceed. Given these cheerleaders, statements, and positions, Duke’s Middleton Shoals project appeared well supported, feasible, and pragmatic. The Corps, however, was also notorious for working in gray areas when allies were present.

### **Georgia Water and Power at Trotters Shoals**

Not to be outdone by the South Carolina political establishment or the Duke Power Company, Lester Moody and former Georgia state Senator Peyton Hawes capitalized upon Senator Richard B. Russell’s leadership to obtain a restudy of the Savannah River between the Clarks Hill and Hartwell dams. Moody personally wrote the resolution that Russell submitted to the Congressional Public Works Committee who then authorized a restudy with particular attention to “the advisability of constructing a reservoir” at a site known as Trotters Shoals “for flood control and allied purposes.” After the restudy and in early 1962, the Corps recommended “that the United States construct the Trotters Shoals Dam and Reservoir with a hydroelectric power installation” as the third component for the much sought after “comprehensive plan for developing the Savannah River basin.”<sup>19</sup> Trotters Shoals was about thirty miles downstream from Hartwell Dam and about thirty miles upstream from Clarks Hill dam. The height of

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<sup>18</sup> “Hollings Blocks 2 New Dams,” Anderson (S.C.) *Independent*, May 14, 1960.

<sup>19</sup> L. S. Moody, Augusta (Ga.) Chamber of Commerce to Peyton S. Hawes, Elberton, Ga., August 24, 1961, Trotters Shoals Dam – Material, 1961-1965, Rivers and Harbors Series, Richard B. Russell, Jr. Collection, Richard B. Russell Library for Political Research and Studies, University of Georgia Libraries, Athens, Georgia, hereafter RRC; *Notice of Report on Savannah River, Georgia and South Carolina Trotters Shoals Reservoir*, February 19, 1962, Trotters Shoals Dam – Material, 1961-1965, Rivers and Harbors Series, RRC.

Trotters Shoals' dam, however, threatened to flood Duke Power Company's Middleton Shoals steam plant site and other industrial sites on the Savannah River's remaining undammed twenty miles.

Trotters Shoals and Middleton Shoals were not exclusive projects, and this fact made eliminating Trotters Shoals difficult. For the next three years, the Duke Power Company and development interests in South Carolina and Georgia debated the merits and benefits of federal power at Trotters Shoals and corporate power at Middleton Shoals. Over the course of this debate, engineering reports illustrated that the two projects were compatible, but this did not neutralize old arguments that corporate power advocates articulated in the Clarks Hill and Hartwell dam debates such as tax status, limited access to water for domestic and industrial consumers, and the legitimate question of how many additional recreation areas the region really needed. Trotters Shoals' opponents also dug deep to brand the dam as a socialist experiment, a threat to private enterprise that would eliminate seven future industrial sites, and fiscally irresponsible in the face of a growing national debt.

When the Corps released their first official report for Trotters Shoals in 1962, Corps engineers dismantled the holy trinity of benefits connected to every preceding multiple purpose project.<sup>20</sup> The Corps did not recommend Trotter Shoals as a flood control or navigation project – Hartwell upstream and Clarks Hill downstream provided those benefits. The Corps increasingly sold the Trotters Shoals project as a public power and recreation project that only incidentally provided flood control or navigation benefits. Trotters Shoals, however, remained a limited multiple purpose project. For example, supporters in some nearby communities, such as Calhoun Falls, S.C., anticipated that the Trotters Shoals reservoir would help with an old water

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<sup>20</sup> Major General Keith R. Barney, Chairman, Board of Engineers for Rivers and Harbors, to Chief of Engineers, Department of the Army, March 22, 1962, Folder Rivers and Harbors 3 (Dams and Reservoirs) March 2 - December 18, 1962, Box 28, Subject Correspondence Series, 1962, STP.

problem. James Nickles hoped water from Trotters Shoals might supplement the town's deep well that ran "low in dry weather."<sup>21</sup> But a new water problem emerged at Trotters Shoals: water pollution.

In the late 1950s, South Carolina Congressman W. J. B. Dorn initiated a project to sell the Savannah River valley to the pulp and paper industry. His and other South Carolinians' efforts to bring industry to this stretch of the Savannah River complicated the river's future. Dorn never tired in his quest to bring jobs to his northwest corner of South Carolina, and to increase tax revenues to benefit community businesses, schools, and roads. And he never stopped reminding constituents, committees, and commissions that the pulp and paper industry had a future in the region since former cotton farmers had "gone to pine trees and cattle."<sup>22</sup> As early as 1956, Dorn arranged a Savannah River valley tour for executives from the Dayton, Ohio-based Mead Corporation, the Seaboard Railroad, and Duke Power. From South Carolina, Dorn invited former and sitting elected officials, development board members, and industrial-site selection specialists, all in an effort to hook Mead and land a new industrial facility.<sup>23</sup> The company's executives liked the soft and hardwood timber they found in the valley, and were likely promised tax breaks and other financial incentives in a bid to draw the company to South Carolina. Mead had already purchased property in the valley in 1955, and after the Dorn-tour in 1956, the company announced plans to build a pulp and paper mill at the confluence of the Rocky River and the Savannah River between Hartwell Dam and the upper reaches of Clarks

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<sup>21</sup> James P. Nickles, to Senator Richard Russell, October 9, 1962, Folder Legislation 1962, Public Works, Dams, Trotters Shoals, Box 167, OJP.

<sup>22</sup> Draft statement, Rep. W. J. B. Dorn, to Governor Donald S. Russell, Columbia, S.C., March 18, 1963, Rivers and Harbors 3 (Dams and Reservoirs), Folder 1, February 18 - March 29, 1963, Subject Correspondence Series, 1962, Box 32, STP.

<sup>23</sup> Guest list, Folder Topical Files, 1955-1956, Mead Corporation, Box 43, WDP.

Hill reservoir.<sup>24</sup> Dorn was pleased with the results not only for his constituents, but also because he personally owned forests planted in pine and ready for cutting.<sup>25</sup>

The Mead Corporation's plan to harvest South Carolina timber and manufacture paper products along the Savannah River also complemented the Duke Power Company's plans for a steam plant at nearby Middleton Shoals. Mead purchased Savannah River valley property and timber in South Carolina from Duke, and was positioned to purchase Duke's electricity to power the new mill. Mead was like Duke, however, and the Trotters Shoals reservoir threatened to flood company assets including one of Mead's proposed mill sites. Duke's and Mead's objective – to develop the last undammed section of the Savannah River in the Piedmont – initially appeared to make Dorn's and other boosters' opposition to a federal project at Trotters Shoals easier. Mead, however, expressed no commitment to build a mill so long as Trotters Shoals threatened to flood the company's property, and this frustrated South Carolinians hungry for jobs and economic development.<sup>26</sup> But Duke, and Mead to a lesser degree, was eventually forced to concede at Trotters Shoals to get what they wanted upstream in the Keowee River valley.

Given Georgia politicians' and boosters' track record at winning federal dams for the Savannah River, Congressman Dorn changed his tune. A reluctant public power supporter, Dorn brokered a compromise with Georgia's Congressional delegation – namely Senator Russell and Congressman Phil Landrum (D) – who refused to back down from Trotters Shoals. For Georgians, giving up on Trotters Shoals and supporting Duke's Middleton Shoals was not appealing since the project would only benefit South Carolinians. As one astute South Carolina

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<sup>24</sup> R. M. Cooper, Columbia, S.C., to Rep. W. J. B. Dorn, Washington, D.C., July 31, 1956, Folder Topical Files, 1955-1956, Mead Corporation, Box 43, WDP.

<sup>25</sup> Rep. W. J. Bryan Dorn, Washington, D.C., to H. E. Whitaker, President, Mead Corporation, Dayton, Ohio, March 8, 1956, Folder Topical Files, 1955-1956, Mead Corporation, Box 43, WDP; Rep. W. J. Bryan Dorn, Washington, D.C., to Senator Olin D. Johnston, Washington, D.C., [1960], Folder Legislation, 1960, Public Works, Dams, Hartwell, Box 78, OJP.

<sup>26</sup> Statement, Rep. W. J. B. Dorn, "Trotter Shoals, Middleton Shoals, and Keowee-Toxaway," July 19, 1966, Folder Topical Files, 1965, Trotters Shoals, Box 74, WDP.

attorney observed, “A large number of people have asked me why the people of Georgia are so whole heartedly” in support of Trotters Shoals and opposed to Duke’s Middleton Shoals project. “The obvious answer is that Duke Power Company has no influence in the State of Georgia.”<sup>27</sup> Furthermore, it could also be argued that the Georgia Power Company chose not to weigh in on this issue as the company had no incentive to support a competitor on the edge of Georgia Power’s service area. But it should also be clear that not all Georgians supported Trotters Shoals unconditionally. Newspaper editors, business interests, and state officials supported Trotters Shoals only on the assumption that no viable and committed private industry could be found. Even Georgia’s Governor Carl Saunders explained that he would like to see private development and industry locate in the Savannah River valley. But, if companies like Mead could not make firm commitments, he would reiterate his “previous endorsement” of Trotters Shoals.<sup>28</sup> Mead’s and Duke’s wavering in the Savannah River valley tipped the scales in Trotter Shoals’ and Georgia’s favor.

Breaking the impasse over Middleton Shoals and Trotters Shoals ultimately involved Duke’s other interest in the upper Savannah River valley, on the Keowee River, where the company had been amassing land since 1916. In 1965, Duke Power Company president W. B. McGuire announced plans to build a \$700,000,000 Keowee-Toxaway hydroelectric and thermoelectric steam plant complex. Rep. Dorn called the Oconee and Pickens county project

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<sup>27</sup> James P. Nickles, Attorney, Abbeville, S.C., to Rep. W. J. B. Dorn, Washington, D.C., March 19, 1962, Folder Topical Files, 1962, Trotters Shoals, Box 63, WDP.

<sup>28</sup> Editors, “Free Enterprise and Trotters Shoals,” Crawfordville (Ga.) *Advocate-Democrat*, May 3, 1963, clipping, Folder Topical Files, 1963, Trotters Shoals, Box 65, WDP; Editors, “Does Georgia Want Industry?” Macon (Ga.) *News*, May 6, 1963, clipping, Folder Topical Files, 1963, Trotters Shoals, Box 66, WDP; Editors, “Private Enterprise Best,” Savannah (Ga.) *Morning News*, June 1, 1963, clipping, Folder Topical Files, 1963, Trotters Shoals, Box 65, WDP; Gov. Carl E. Sanders, Atlanta, Ga., to Scott Nixon, Atlanta, Ga., June 14, 1963, Folder Topical Files, 1963, Trotters Shoals, Box 65, WDP; Frank Coggins, Jr., Granite Industries, Elberton, Ga., to W. E. Smith, Jr., Daniel Construction Company, December 28, 1964, Folder Topical Files, 1964, Trotters, Box 68, WDP.

“fantastic and almost incomprehensible.”<sup>29</sup> The company claimed they still intended to build a steam plant at Middleton Shoals while they promised to build two new dams to create Lakes Jocassee and Keowee plus a steam plant on Lake Keowee. This was surely a strange twist for Duke to talk about building hydroelectric dams after spending five years criticizing the Corps’ Trotters Shoals hydroelectric facility on economic grounds or because hydro facilities were inefficient compared to steam facilities. But, according to news reports, “the Duke president said his company needed hydro plants for use in peak hours and could use steam plants” throughout the rest of the day.<sup>30</sup> In fact, by the 1960s, hydro projects increasingly served as critical peak power generation facilities for all federal and corporate energy producers. As Duke began to move the Keowee-Toxaway project through the Federal Power Commission’s licensing process, electrical co-operatives in North Carolina, South Carolina, and Georgia requested further investigation into how Duke’s projects might interfere with federal plans for comprehensive development of the Savannah River basin.

To break this impasse, South Carolina’s Congressman Dorn engineered a compromise with Duke Power representatives, the electrical co-operatives, and Trotters Shoals proponents. Regional electrical cooperatives had opposed Middleton Shoals and Keowee-Toxaway because the two projects further privatized the river and threatened subsidized electrical generation. Municipal and rural cooperatives represented New Deal legacies and continued to support expanded service and low rates wherever possible. In this case, the Tri-State Power Committee – composed of North Carolina, South Carolina, and Georgia co-ops – opposed any additional private development of energy resources, particularly at the expense of public power options.

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<sup>29</sup> Durden, *Electrifying the Piedmont*, 131-134, 134 for Dorn quote; “Duke Plans \$700 Million Oconee, Pickens Projects,” Anderson (S.C.) *Mail*, January 2, 1965, Folder Legislation Clippings, Industry, Box 158, OJP.

<sup>30</sup> “Duke Tells Long Range Power Plans,” [unknown newspaper clipping], January 2, 1965, News clippings 1965, Pre-Authorization Series, Robert L. Williford Richard B. Russell Dam and Lake Project Files, Richard B. Russell Library for Political Research and Studies, The University of Georgia Libraries, Athens, Georgia, hereafter RWC.

But, according to Duke Power Company historian Robert Durden, “so widespread and loud was the support in South Carolina for Duke Power and its proposed project that the South Carolina cooperatives were forced to withdrawal from the Tri-State Committee, leaving their Georgia and North Carolina associates in a bi-state coalition.” The Bi-State Power Committee, however, continued to oppose the Keowee-Toxaway plan on the grounds that the project complicated the federal government’s plans for comprehensive development of the Savannah River. The electrical co-ops, however, ultimately agreed to withdraw their opposition to the Keowee-Toxaway and the Middleton Shoals projects as long as the South Carolinas Congressional delegation and Duke did not oppose federal construction of the Trotters Shoals dam.<sup>31</sup>

Under Dorn’s stewardship, the electrical co-ops relented because the Duke Power Company agreed not to oppose Trotters Shoals. When Dorn announced the “Trotter Shoals, Middleton Shoals, and Keowee-Toxaway” compromise terms in July 1966, he pledged to support authorization for Duke’s Middleton Shoals diversion dam, Duke’s Keowee-Toxaway project in Oconee and Pickens County (S.C.), and Trotters Shoals. Dorn also continued to promote Mead’s pulp and paper mill in Abbeville County once the company purchased additional property for a mill site that would not be flooded by the proposed Trotters Shoals reservoir. When Dorn was done, after fighting for nearly a decade, he could claim “This entire development, both Federal and private, will be second to none in the world.” Furthermore, “These projects will insure job opportunity, tax revenue for our schools, recreation and progress for generations to come,” and represented “the dawn of a new era.”<sup>32</sup> On one level the compromise was novel and created a climate for public and private power to co-develop the

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<sup>31</sup> “Duke Project Hits Opposition,” *Columbia (S.C.) State*, March 24, 1965, Folder Legislation Clippings, Industry, Box 158, OJP; Durden, *Electrifying the Piedmont*, 135-140.

<sup>32</sup> Statement, Rep. W. J. B. Dorn, “Trotter Shoals, Middleton Shoals, and Keowee-Toxaway,” July 19, 1966, Folder Topical Files, 1965, Trotters Shoals, Box 74, WDP.

Savannah River Basin. Private and public power proponents both won, and agreed to share the same river valley in an unprecedented compromise. Both the Georgia and South Carolina Congressional delegations agreed to formulate a single strategy for the Middleton, Trotters Shoals, and Keowee-Toxaway projects. Congress authorized Trotter Shoals as a component of the Rivers and Harbors Act of 1966 and approved Duke's Middleton Shoals diversion dam, and the Federal Power Commission approved Duke's Keowee-Toxaway application.<sup>33</sup> After 1966, the Savannah River valley's comprehensive development plan of mixed corporate and federal institutions looked complete, and the South's water problems partially resolved.

### **Water Quality and a New Problem**

The compromise, however, did not address a nagging water problem that had emerged in the years leading up to the 1966 compromise: water quality. As with previous federal dam and reservoir projects in the Savannah River Valley, boosters formed a committee – the Trotters Shoals Steering Committee – to promote the dam and lake. Picking up where Augusta's Chamber of Commerce executive Lester Moody left off, Elberton, Georgia's Peyton Hawes chaired the new committee and tackled water pollution head-on. The boosters explained that Trotters Shoals, like the other two Savannah River dams, was designed to provide cost-effective off-peak electricity (e.g. during morning/evening or the hottest/coldest part of the day when consumer demand can spike), water for municipal and industrial use, recreational opportunities, and a stimulus for economic redevelopment. Another anticipated benefit included the projected increase in value and use of lake front property for recreation and vacation homes. While it would be a stretch to call these boosters environmentalists, many promoters and federal officials agreed that the industrial sites along the free-flowing Savannah River between Clarks Hill

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<sup>33</sup> "Switches Position on Trotters Shoals: Dorn Says Now Backing Both River Projects," Anderson (S.C.) *Independent*, June 20, 1966; *Rivers and Harbors Act of 1966*, Public Law 89-789, 89<sup>th</sup> Congress, H. R. 18233, November 7, 1966, page 16.

reservoir and Hartwell dam were inappropriate for most industrial companies such as Mead. Hawes claimed that chemical companies and paper-pulp mills required clean water for production and fast moving water for disposal, and Hawes considered “Industries needing free flowing water” to be “polluting industries.” This kind of industrial development, Hawes argued, would turn the slow flowing Savannah River below Hartwell Dam and the Clarks Hill reservoir into cesspools. The Steering Committee boldly concluded, less than ten years after the crippling 1954 drought: “The Southeast is one of the few areas in the nation where clean, fresh water is still available in substantial supply. In our judgment, the only prudent course is to develop and conserve these great resources expeditiously and judiciously. Trotters Shoals can be the largest and best remaining project to be developed in the entire Southeast.”<sup>34</sup> The solution, in Hawes estimation, to saving this section of the Savannah from industrial pollution was not to harden the pollution regulation and enforcement apparatus. Rather, Hawes wanted to eliminate industrial sites by turning the river into a pool between two other reservoirs.

Water pollution in the Savannah River valley was not necessarily a new problem. Water quality had long been on the minds of Savannah River valley residents. Since the nineteenth century, fishermen had lamented a decline in migratory fish and Corps engineers observed sediment deposits throughout the upper and middle sections of the river. Lower Savannah River valley residents had connected Savannah, Georgia’s water pollution with the pulp and paper industry since the 1930s.<sup>35</sup> In the 1940s, U.S. Fish and Wildlife biologists again linked soil filled rivers with lackluster Savannah River fisheries, and the Public Health Service provided the Corps with malarial control suggestions for the Clarks Hill project. Municipal and industrial

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<sup>34</sup> Peyton S. Hawes, Chairman, Trotters Shoals Steering Committee, *Brief...In Support of the Trotters Shoals Project, Savannah River, Georgia and South Carolina*, May 27, 1963, Rivers and Harbors 3 (Dams and Reservoirs), Folder III, May 20 - June 28, 1963, Box 32, Subject Correspondence Series, 1962, STP.

<sup>35</sup> James M. Fallows and Ralph Nader, *The Water Lords: Ralph Nader’s Study Group Report on Industry and Environmental Crisis in Savannah, Georgia* (New York, N.Y.: Grossman Publishers, 1971).

pollution was not yet a serious concern in the upper Savannah River valley for these engineers, biologists, and public health officials. Water quality, as they illustrated at the time, had more to do with sediment and muddy waters than with untreated municipal and industrial wastes. Or put another way, water pollution was the result of a long legacy of soil management choices on the Savannah River valley's farms.

By the 1940s, serious water pollution began migrating upstream in southern watersheds like the Savannah and Tennessee systems, and was no longer simply a land management problem. Beginning in the late 1930s, the Tennessee Valley Authority regularly collected water quality data to identify pollution sources and manage reservoirs for high quality fishing, boating, and swimming. TVA found that the majority of the upper Tennessee River valley's water pollution originated from textile, cellulose, and paper manufacturing operations located upstream of Chattanooga in the Holston, French Broad, and Pigeon Rivers that stretched into southwestern Virginia and western North Carolina. In 1942, a TVA study described the Pigeon River as subject to "gross pollution," and called Carolina Power & Light's Walter's dam and Waterville Lake "an immense septic tank."<sup>36</sup> In another Tennessee River tributary near Brevard, N.C., the French Broad River was "highly colored and frothy" below the Ecusta paper mill.<sup>37</sup> Some of these river stretches were, according to historian Daniel Schaffer, "so polluted that they were unsuitable for industries requiring clean water, could not be used for swimming," and had reduced former trout streams to carp streams. By 1945, industrial wastes and untreated municipal waste flowed downstream, entered TVA's reservoirs, and forced the TVA to act.

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<sup>36</sup> For quotes, see: Richard A. Bartlett, *Troubled Waters: Champion International and the Pigeon River Controversy* (Knoxville: University of Tennessee Press, 1995), 65-66. Carolina Power & Light built the Walters/Waterville project in 1929, and the project is now owned by Progress Energy, see: Jack Riley, *Carolina Power & Light Company, 1908-1958* (Raleigh, N.C.: Edwards & Broughton Company, 1958), 209, and <http://www.progress-energy.com/aboutenergy/powerplants/hydro/index.asp>, last accessed March 6, 2010.

<sup>37</sup> Daniel Schaffer, "Managing Water in the Tennessee Valley in the Post-War Period," *Environmental Review* 13, 2 (Summer 1989): 1-16, see 7 for quotes.

However, the TVA Board of Directors was hamstrung by a hostile anti-TVA political climate that scrutinized any attempts by TVA to enlarge its 1933 legislative mandate. TVA was powerless to combat pollution since the Authority's regulations could not supersede state water quality regulations, if any existed at all. TVA engineers and consultants did provide data and technical details for state authorities, and they left enforcement to state agents with authority to negotiate with individual municipalities and industrial polluters.<sup>38</sup> The Savannah River was an interstate river like the Tennessee, but valley residents did not have a TVA-like actor who could work with Georgia and South Carolina to assess and manage water pollution. And the Corps was an unlikely enforcer.

By the 1950s, the Corps was aware that communities and industries in the Trotters Shoals reservoir area dumped untreated and partially treated waste into the Savannah River. The Corps was not responsible for enforcing the Federal Pollution Control Act (1956), but Corps engineers were not oblivious to water pollution. In a *Savannah River, Georgia Review Report*, the Corps noted that "While this situation is currently permitted or tolerated, experience with other reservoirs has been that under reservoir conditions dumping of raw wastes leads to claims on the Federal Government for treatment plants and other corrective measures." To avoid this, the Corps recommended that state and local agencies take the lead responsibility on water clean up or face federal enforcement. Under the terms of the Federal Water Pollution Control Act (1956), the first step in enforcement involved a "conference phase" where state and local authorities attempted to resolve water pollution problems. If state and local authorities could not resolve the

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<sup>38</sup> H. Clarence Nixon, "The Tennessee Valley: A Recreation Domain," *Papers of the Institute of Research and Training in the Social Sciences*, no. 9 (Nashville, Tenn.: Vanderbilt University Press, June, 1945), 12.

problem, the U.S. surgeon general could take the alleged polluter to court. This, according to political historian Paul Milazzo, happened only once before 1966.<sup>39</sup>

When South Carolina countryside conservationists rallied behind Trotters Shoals, they cited the potential for industrial pollution as a single most important reason to support the federal dam and reservoir project. As early as 1962, one group of Abbeville County citizens rejected Mead's plans for a pulp and paper mill on the Savannah River. One South Carolina resident, attorney James Nickles wrote to Georgia's Senator Russell, and stated "The people of Abbeville County are not the least interested in" Mead's mill because the company planned to "pour their poison chemicals" and industrial wastes directly into the Savannah River.<sup>40</sup> The "Abbeville Citizens for Trotters Shoals" ran a full page newspaper advertisement claiming that "Mead CANNOT locate at Calhoun Falls because raw or substantially untreated pulp and paper mill waste dumped into the river would pollute the downstream Clark Hill Reservoir and intermediate river area." And since the Savannah River between Hartwell Dam and Clarks Hill reservoir was not truly free-flowing because flows were regulated by Hartwell Dam, "Mead CANNOT locate at Calhoun Falls because there is no CONTINUOUS flow of water in the Savannah River at this point."<sup>41</sup> Like Peyton Hawes, these Abbeville citizens cited potential water pollution in a flowing Savannah River as a justification to dam that same river and build a new reservoir.

A separate group from the same community, however, rejected Trotters Shoals outright. The combined Anderson and Abbeville state legislative delegations authored a South Carolina

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<sup>39</sup> The Corps' *Savannah River, Georgia Review Report* (July 1, 1959) was quoted extensively in: Ernest B. Rogers, Jr., *An Evaluation of carters Island and Goat Island Reservoirs Proposed to be Built by the U.S. Army Corps of Engineers on the Savannah River*, for the McCormick (S.C.) Chamber of Commerce and the Abbeville County (S.C.) Planning and Development Board (February 17, 1960), p. 1-2, Folder Rivers and Harbors 4 (Rivers) January 8 - May 24, 1960, Box 31, Subject Correspondence Series, 1960, STP. See also: Milazzo, *Unlikely Environmentalists*, 33-34.

<sup>40</sup> James P. Nickles, to Senator Richard Russell, October 9, 1962, Folder Legislation 1962, Public Works, Dams, Trotters Shoals, Box 167, OJP.

<sup>41</sup> Abbeville County Citizens for Trotters Shoals advert, "Why Mead Will Not Locate at Calhoun Falls," Anderson (S.C.) *Independent*, February 16, 1963, p. 5, Folder Legislation Clippings, Industry, Box 158, OJP.

General Assembly Resolution asking the Corps to “prohibit construction” of the Trotters Shoals dam. They opposed Trotters Shoals because the dam would “completely stop the free flow of water from the headwaters of Hartwell Lake to Augusta, Georgia.” Furthermore, they noted without a hint of concern for environmental or human health, if a new lake rose from the Savannah River’s bed and captured industrial and municipal wastes, the South Carolina Water Pollution Control Act water quality standards would be forced to act and require remediation. Local industries and municipalities were faced with the prospect of investing in costly sewage and waste treatment technology before “discharging [waste] into lakes of the State.”<sup>42</sup> Local business boosters wanted industry to locate in their communities to make money, but they did not want to spend money cleaning up after anybody, or lose a working river to a recreational lake.

Some of Peyton Hawes’ and Trotter Shoals’ opponents on the Columbia, S.C. editorial board of *The State*, “boiled” Trotters Shoals down to a “jobs v. recreation” argument in 1963. Rather than consider the implications of industrial pollution on the river between the Hartwell dam and Clarks Hill reservoir, the editors argued that the existing lakes were good enough for recreation, and the river in-between could be developed in an effort to create jobs.<sup>43</sup> In 1963, Hawes initially thought that the Mead pulp and paper mill, the Trotters Shoals dam, and Duke’s Middleton Shoals steam plant project could all come to fruition, particularly if “the problem of pollution of the river can be solved, which is likely a probability.” Hawes cited examples from other southern river valleys where TVA and Duke Power built steam plants alongside existing reservoirs. But Hawes cautioned against Mead’s promise to generate new industrial jobs. Mead

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<sup>42</sup> *A Concurrent Resolution of the General Assembly of Carolina*, Introduced by the Anderson and Abbeville, South Carolina Delegations, March 9, 1962, Trotters Shoals Dam – Material, 1961-1965, Rivers and Harbors Series, RRC.

<sup>43</sup> Type-script, “A Fight for the Right,” from the *State* (Columbia, S.C.), April 25, 1963, Trotters Shoals Dam – Material, 1961-1965, Rivers and Harbors Series, RRC.

operated a mill in Rome, Georgia, and had apparently “spent millions in trying to treat its water discharge sufficiently to keep from polluting” the Corps’ Lake Allatoona twenty-three miles downstream. In the Savannah River valley, Hawes explained, Mead’s mill would only be four miles above Clarks Hill reservoir.<sup>44</sup> He was not convinced that Mead could keep the Clarks Hill reservoir from turning into a cesspool. And even Georgia’s Governor, Carl E. Saunders, when pressed to decide between Trotters Shoals or Mead, declared, “In my opinion, the belief that water using but polluting industries will and can locate in this stretch of the river is at best a mistaken one.” Clarks Hill was downstream and would fill with pollution in his estimation.<sup>45</sup> The pollution and jobs issues continued to dog the final undammed Piedmont section of the Savannah River after Dorn engineered a compromise with Duke and Mead in 1966. And as water pollution and quality became a national issue, the topic remerged periodically throughout the Trotters Shoals construction process.

Three interconnected lines of reasoning – shaped in part by countryside conservationists – affected the final undammed Piedmont stretch of the Savannah River between the Hartwell dam and the Clarks Hill reservoir. First, the old public vs. private power debate influenced the number, size, and shape of dam and reservoir projects at Middleton Shoals, Trotters Shoals, and in the upper reaches of the Savannah River. Ultimately, Duke focused their financial resources on the Keowee-Toxaway project in the upper Savannah and never even initiated construction at Middleton Shoals.<sup>46</sup> Only the Corps followed through with the Trotters Shoals dam and reservoir project. Second, South Carolinians had used job creation and tax revenue as a

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<sup>44</sup> Peyton Hawes, “Area Can Have Both Duke and Trotters Dam; Also Mead Plant,” *Anderson (S.C.) Independent*, March 27, 1963, Folder Legislation Clippings, Industry, Box 158, OJP.

<sup>45</sup> Gov. Carl E. Sanders, Atlanta, Ga., to Dan L. Grant, Atlanta, Ga., May 30, 1963, Folder Topical Files, 1963, Trotters Shoals, Box 65, WDP.

<sup>46</sup> Federal Power Commission News Release, “FPC Issues License to Duke Power Company for Upper Savannah River Hydroelectric Power Project,” September 26, 1966, Folder Topical Files, 1966, Keowee-Toxaway, Box 76, WDP.

bludgeon against an expensive, taxpayer funded federal project. Supporters placed the Duke Power Company and Mead on pedestals of private free enterprise in comparison to the Trotters Shoals project that they tarred as quasi-socialistic. But Mead, like Duke, backed away from the Savannah River Valley, expanded a production facility in Alabama, and never built their planned pulp and paper mill along the Savannah River.<sup>47</sup> Much to the valley residents' dismay, the region continued to be, in Dorn's words, an "industrial desert."<sup>48</sup> And third, once these debates were put to rest through an engineered compromise to give all three projects a green light, water pollution influenced the thinking about the best use for this stretch of river. Trotters Shoals countryside conservationists successfully linked fears of water pollution to support for the new reservoir. The final stretch of river did not remain undammed and the Corps took responsibility for building the last of three major federal dams in the Savannah River valley.

### **Environmentalists and Trotters Shoals**

The Corps' Trotters Shoals project, however, was still not a done deal after authorization in 1966 and faced one last major challenge. The Rivers and Harbors Act of 1966 authorized the \$84,900,000 Trotters Shoals project, located 30 miles downstream from Hartwell Dam and 37 miles upstream from Clarks Hill. Authorization of spending, however, did not mean appropriation of the money. The money would come in fits and starts, and the Corps awarded the first construction contract in 1974 for the power production and recreation-centric Trotters Shoals dam and reservoir. After the private v. public power, jobs and free enterprise, and pollution debates, the boosters, politicians, and citizens who defended Trotters Shoals for nearly twenty years faced a new challenge. Environmentalists from the countryside rallied in the 1970s,

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<sup>47</sup> George Pringle, President, Mead Corporation, to Z. W. Meeks, Anderson Chamber of Commerce, March 16, 1965, Folder Topical Files, 1965, Duke Power Company, Box 71, WDP.

<sup>48</sup> Rep. W. J. Bryan Dorn, Washington, D.C., to Fred D. West, Jr., Abbeville (S.C.) *Press and Banner*, March 9, 1960, Folder Legislation, 1960, Public Works, Dams, Hartwell, Box 78, OJP.

and the individuals who opposed Trotters Shoals on environmental grounds included local citizens, university professors, state conservation employees, and professional environmental organizations.

A new piece of federal legislation made public participation integral to executing massive federal public works projects. Congress passed, and President Richard Nixon signed into law, the National Environmental Policy Act (1969) within three years of Trotters Shoals' authorization. NEPA, as the act was known, created the Council on Environmental Quality (CEQ) to set the nation's environmental policy before Nixon crafted additional legislation to form the Environmental Protection Agency in late 1970 to manage both CEQ and NEPA's mandates. NEPA threw a wrench into the gears of major federal public works projects across the county because the new policy required the completion of an Environmental Impact Statement (EIS) prior to construction that evaluated potential environmental impacts and considered the benefits of alternatives including a "no action" alternative. The EIS process opened a federal agency's entire construction process to review. The first round was an internal review that was designed to "resolve interagency disputes."<sup>49</sup> For example, federal agencies such as the Fish and Wildlife Service could weigh in on how a Corps project might impact the agency's mandate to protect fish and wildlife. The second round was an external review that provided citizens with access to the same information used by agencies to complete a project's review. The public could also submit formal responses that had to be included in the public record, and if any aspect of the EIS was incomplete, the agency could be sued.<sup>50</sup> NEPA, according to environmental historian Jeffery Stine, "created a system of internal and external review of environmental considerations" that forced the Corps to consider the environmental effects of their projects "in unprecedented

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<sup>49</sup> Hays, *A History of Environmental Politics Since 1945*, 126.

<sup>50</sup> Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington, D.C.: Island Press, 2005), 175-77, 180-81.

detail.” Stine’s observation comes in the context of the Tennessee-Tombigbee Waterway, a massive navigation project that linked the Gulf of Mexico with the Tennessee River via Alabama and eastern Mississippi. The Tenn-Tom, according to Stine, was “one of the first major water projects to be built entirely under the auspices of NEPA.”<sup>51</sup> Trotters Shoals dam and reservoir was also subject to the EIS process not only once, but multiple times.

Because the Corps had not begun construction on Trotters Shoals by 1970, it was the Corps’ first Savannah River valley project subject to compliance with NEPA and the EIS process. The Corps’ preliminary *Draft Environmental Impact Statement* for Trotters Shoals, completed in 1971, revealed what the Corps knew about their reservoirs’ environmental conditions. The EIS focused on the Savannah Rivers’ current and future issues – fish and water quality. Trotters Shoals was defined as primarily a power endeavor with four approved generators and a desire to add at least two additional pumped storage units, but recreation, fish, and wildlife benefits remained widely publicized justifications for the undertaking. As such, the development’s preliminary EIS focused on recreation and water quality. The EIS review determined that the Trotters Shoals reservoir would eliminate “the spawning runs of migratory species of fish” such as the white bass found in Clarks Hill. As such, the *Draft Environmental Impact Statement* authors observed that the “value of the river as a stream trout fishery” would be lost, as would be “the river channel which presently acts as a buffer zone between” the Hartwell and Clarks Hill reservoirs. That final, undammed stretch of Piedmont river had served to at least improve “the low dissolved oxygen discharges released from Hartwell” before the Savannah River entered Clarks Hill reservoir. But the Corps acknowledged that even in this limited fishery, “problems do exist because of inadequate low flows and, at times, low levels of

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<sup>51</sup> Jeffrey K. Stine, *Mixing the Waters: Environment, Politics, and the Building of the Tennessee-Tombigbee Waterway* (Akron, Ohio: University of Akron Press, 1993), 85-86.

dissolved oxygen” compromised the native bass fishery. The Hartwell and Clarks Hill reservoirs, however, contained “excellent lake fishing, with largemouth bass, crappie, and bluegill.” The Corps’ *Draft Environmental Impact Statement* authors envisioned a new Trotters Shoals lake with a two-tiered fishery: cold water discharged from Hartwell Dam into Trotters Shoals would provide limited habitat for a stocked cool-water rainbow and brown trout fishery while the vast majority of Trotters Shoals lake would provide warm-water habitat for stocked bass and other fish. The Corps eagerly anticipated a functional Trotters Shoals reservoir fishery, but the Corps was not oblivious to the other difficult environmental conditions posed by the valley’s reservoirs.<sup>52</sup>

The Corps’ engineers to defended the massive Trotters Shoals dam and reservoir project in the *Draft Environmental Impact Statement* while simultaneously arguing that the project would produce new environmental conditions. The reservoirs after all, were complicated environments. These public reservoirs did indeed create good fisheries habitat and a new environment for anglers, pleasure boaters, campers, swimmers, and second-homeowners to appreciate. But juggling the dams’ and lakes’ services – hydropower production, flood control, and recreation – also complicated the lakes’ ecological functions. The artificial lakes’ new reservoir environment required technological solutions beyond hatchery science to maintain new sport fisheries. These new lakes created new ecological conditions, and one of the most significant problems was insufficient oxygen for aquatic organisms. Large artificial southeastern reservoirs behave differently than natural lakes in colder regions. Whereas some lakes and reservoirs experience a circulating inversion of hot and cold water twice a year (particularly

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<sup>52</sup> U.S. Corps of Engineers, *PRELIMINARY Environmental Impact Statement, Trotters Shoals Dam and Lake, Savannah River, Georgia and South Carolina* (Savannah, Ga.: U.S. Army Engineer, Savannah District, November 1970), pp. 2-4, Correspondence, 1971, Planning and Funding Series, RWC. See also: Charles Salter, “Fishing: Stripers imperil Lake Russell trout Bass entering from Hartwell, Clarks Hill,” Atlanta (Ga.) *Journal & Constitution*, July 1, 1993, E15.

lakes that have freeze-thaw cycles), southeastern reservoirs typically experience a single seasonal inversion. This single inversion, when combined with manipulated water levels and intensive solar heat gain, leave southern reservoirs oxygen poor at their deepest points. For example, the Savannah River's reservoirs "stratify in the summer and early fall months. A temperature gradient is initiated in early March with stratification occurring in August, September, and October," until the inversion, or "over-turn" occurs. "During late summer and early fall, low to zero dissolved oxygen occurs in the lower strata of the lakes," or what is also known as the dead storage pool. Water discharged from the dams in the summer season – typically from the deepest portion of a reservoir near the dam – has a very little dissolved oxygen. The Corps and Trotters EIS authors worried that the dissolved oxygen would be so low that it would "not meet State water quality standards." Additionally, the *Draft Environmental Impact Statement* authors expressed concern that low dissolved oxygen levels and cold water released from Trotters Shoals directly into Clarks Hill would further reduce dissolved oxygen and water temperatures in the latter reservoir.<sup>53</sup>

Fishery health and oxygen levels were also related to an increasingly important southern water problem: water pollution. The Trotters Shoals *Draft Environmental Impact Statement* observed that the region's primary industrial sector – the textile industry – utilized significant "quantities of water for manufacturing and processing." The Corps identified "eleven textile mills, two on the Georgia side and nine on the South Carolina side" of the Savannah River that would affect Trotters Shoals' reservoir water quality. The Bigelow-Sanford Mill – located on an

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<sup>53</sup> U.S. Corps of Engineers, *PRELIMINARY Environmental Impact Statement*, p. 23-28. See also: Thomas L. Crisman, "Natural Lakes of the Southeastern United States: Origin, Structure, and Function," *Biodiversity of the Southeastern United States: Aquatic Communities*, edited by Courtney T. Hackney, S. Marshall Adams, and William H. Martin (New York, N.Y.: John Wiley & Sons, Inc., 1992), 475-538; John J. Hains, et. al., *Water Quality in Richard B. Russell and J. Strom Thurmond Lakes: Interim Report for the Period 1997-1998*, Technical Report EL-99-13 (Calhoun Falls, S.C.: U.S. Army Engineers Research and Development Center, November 1999); and John J. Hains, "Southeastern Lakes: Changing Impacts, Issues, Demands," *LakeLine* (Winter 2001/2002): 23-28.

immediate South Carolina tributary to the reservoir – discharged “approximately 1.5 million gallons of waste water each day into their lagoons” before sending the waste water down the Rocky River and into the Savannah River. The mills in both states were technically in compliance with state water control and quality laws, but the EIS concluded that dyes and other associated textile waste products were “not degradable in normal waste disposal systems” or biodegradable. Industry was not the only culprit: seven municipalities in the reservoir area discharged municipal wastes into the Trotters Shoal’s tributaries. In assessing municipal waters, the *Draft Environmental Impact Statement* concluded that “in general, water quality is fair with high fecal coliform counts occurring in some instances.”<sup>54</sup> The Trotters Shoals dam and reservoir EIS process lingered for years and over a variety of issues: pumped storage, dredging, and earthquake engineering. A *Final Environmental Impact Statement* emerged in 1979 during the construction process and the dam was operational five years later, but the Corps completed a *Final Supplement to the Final Environmental Impact Statement* in 1991 when reversible turbines for pumped storage were added to the project.<sup>55</sup> The Trotters Shoals dam and reservoir *Draft Environmental Impact Statement* processes was not, however, the only major hurdle.

1971 was a major transition year for the Savannah River valley. In the *Draft Environmental Impact Statement* process, the Corps had to evaluate the Trotters Shoals dam and reservoir, and this frustrated the boosters, citizens, politicians, and engineers who had spent decades and careers promoting the project. With the Dorn compromise that equalized the Duke Power Company’s, the Mead Corporation’s, and the Corps’ plans for the Savannah River between Hartwell and Clarks Hill, Trotters Shoals dam and reservoir supporters thought the

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<sup>54</sup> U.S. Corps of Engineers, *PRELIMINARY Environmental Impact Statement*, p. 2-3, Correspondence, 1971.

<sup>55</sup> U.S. Corps of Engineers, *Final Environmental Impact Statement: Richard B. Russell Dam and Lake (Formerly Trotters Shoals Lake), Savannah River, Georgia and South Carolina* (Savannah, Ga.: U.S. Army Engineer, Savannah District, May 1979), p. 46, Environmental Impact 5/74 Report Folder, Construction Series, 1974-1993, RWC.

project was as close as possible to a done deal. Then, Senator Richard Brevard Russell, Jr., the Georgia representative from Winder, died in January. At the time of his death, Russell was the Senate's most senior member. He had attempted to run for President, had mentored Lyndon B. Johnson, and was well versed in parliamentary procedure, perhaps best illustrated by his tactics to delay civil rights legislation. Russell had also mastered the Sunbelt art of capturing federal dollars for his home state as the Trotters Shoals dam and reservoir project demonstrated. Within months of his death, his supporters rallied to rename Trotters Shoals in Russell's honor. Elberton's Peyton Hawes, a former Associate Justice to the Georgia State Supreme Court, booster-extraordinaire, and adroit political operative, pounced. In a letter to Senator Herman Talmadge, Hawes explained that the Russell family supported renaming the Trotters Shoals project for Senator Russell, and agreed that dam was "the granddaddy" of all the Savannah River dams. Another two years passed before a Senate and House introduced bills that authorized the name change to honor "the first Southerner in modern times to be nominated for the Presidency" and a legislator who fought "fiercely for the needs of his own people in Georgia."<sup>56</sup> Without a doubt, renaming the dam made sense. Russell had tirelessly supported and promoted all three of the Savannah River's federal dams: he successfully challenged Georgia Power at Clarks Hill; he refused to back down from Clemson College's demands to scuttle Hartwell; and he once again rebuffed private power and the Duke Power Company at Trotters Shoals. But there was another reason to rename Trotters Shoals after Richard Russell: the dam was still not completed and faced continued scrutiny. As Hawes hoped in 1971, "when the resolution to change its name is introduced and passed, this could be used as a vehicle to unfreeze the \$550,000.00" from the Congressional purse to initiate the project. In a brilliant

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<sup>56</sup> *Designating the Trotters Shoals Dam and Lake, Ga. and S.C., as the Richard B. Russell Dam and Lake*, 93<sup>rd</sup> Congress, 1<sup>st</sup> Session, S. Report 454, October 9, 1973, Readex U.S. Congressional Serial Set online.

political maneuver, Hawes and others made it very difficult for the Congressional Public Works Committee to turn down future appropriations for a project named for one of the Senate's most senior members.<sup>57</sup>

Appropriations for the project were slow in coming on account of Vietnam War expenditures. But the Trotters Shoals dam and reservoir project also hit a speed bump when the Senate requested a National Recreation Area study. In March 1971, the Senate Committee on Public Works requested that the Corps consider establishing a Savannah National Recreation Area that included the Hartwell, Trotters, and Clarks Hill dam and reservoir projects. The National Recreation Area (NRA) was a new, national outdoor recreation designation originally established by agreements between two Department of Interior agencies in the 1930s; the National Park Service assumed recreational facilities management at Bureau of Reclamation dam and reservoir sites on the Colorado and Columbia Rivers.<sup>58</sup> By 1963, the President issued an Executive Order to formalize the NRA selection and designation process, and he placed final authorization in the hands of Congress. The official goal of the NRA was to augment existing federal recreation opportunities with “a system of National Recreation Areas made up of a limited number of areas where the recreation demand is not being met through other programs.”<sup>59</sup> The result was a new system whereby any existing federal department or agency – including the Tennessee Valley Authority and the Corps – could manage recreation facilities that were not to be confused with National Parks that managed nation's cultural and natural ‘crown jewels.’ By 1971, fewer than a dozen NRAs existed, including the Lake Mead NRA (Park

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<sup>57</sup> A copy of a letter from Peyton S. Hawes to Senator Herman E. Talmadge, January 26, 1971, Folder Correspondence, 1971, Planning and Funding Series, RWC.

<sup>58</sup> Larry M. Dilsaver, *America's National Park System: The Critical Documents* (Lanham, Md.: Rowman & Littlefield Publishers, Inc., 1994), chapter 5. See also: Lake Roosevelt – [http://www.nps.gov/history/history/online\\_books/laro/adhi/adhi.htm](http://www.nps.gov/history/history/online_books/laro/adhi/adhi.htm), last accessed March 6, 2010.

<sup>59</sup> *Federal Executive Branch Policy Governing The Selection, Establishment, And Administration Of National Recreation Areas By The Recreation Advisory Council*, Circular No. 1, March 26, 1963, [http://www.nps.gov/history/history/online\\_books/anps/anps\\_5g.htm](http://www.nps.gov/history/history/online_books/anps/anps_5g.htm), last accessed March 6, 2010.

Service), the Golden Gate NRA (Park Service), The Land Between the Lakes (TVA), and Spruce-Knob Seneca Rocks NRA (Forest Service). Today, nearly all NRAs are managed by either the National Park Service or the U.S. Department of Agriculture's Forest Service. The Savannah National Recreation Area would have been the Army Corps of Engineer's and the Department of Defense's first such project, if the project had been completed. Like public works projects that changed environmental conditions, creating a National Recreation Area after NEPA required an Environmental Impact Statement review process.

The Corps announced plans for a Savannah National Recreation Area and held two rounds of public meetings in late 1971 and early 1972. The goal was to discuss the NRA concept as well as "water resources and related problems" in the Savannah River valley. Col. Howard L. Strohecker of the Savannah River District office encouraged everyone and anyone to attend or submit written comments. Strohecker primarily wanted public comments on how the Savannah's planned Trotters Shoals reservoir would fit with the existing Clarks Hill and Hartwell reservoirs in a comprehensive recreation area.<sup>60</sup> One attendee, Dr. Alma Toevs Walker obliged and submitted a lengthy explanation that both supported the NRA concept and rejected the Trotters Shoals dam and reservoir. Walker, a botanist and the Georgia Conservancy's Athens Area Chapter President, praised the Corps for their technical ability to build projects for the holy trinity of benefits, but she also blasted the Corps for their technical ineptitude when it came to managing water quality and pollution. After decades of debate and wrangling over Trotters Shoals, Walker accused the Corps of assuming that the Trotters Shoals reservoir would be completed "when, in fact, the dam creating it has not been built." Walker still thought of

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<sup>60</sup> Savannah District, "Announcement of Public Meetings on Studies for Establishment of the Savannah National Recreation Area in the Clark Hill, Trotters Shoals, and Hartwell Lakes Area of Georgia and South Carolina," October 1, 1971, Georgia Conservancy Binder, Box 3, Alma Toevs Walker, MS 2696, University of Georgia Libraries, Hargrett Rare Book and Manuscript Library, Athens, hereafter AWC.

Trotters Shoals as a question mark and not an exclamation point. When the Corps explained that “everyone will be allowed to express his views,” they may not have expected Walker to recommend that the Bureau of Outdoor Recreation take the lead recreation management role in any new NRA. The Corps, in Walker’s opinion, was not cut out to manage recreation facilities. But in a refrain that would come back in Walker’s and others’ correspondence, Walker wanted to maintain a stretch of river between Hartwell dam and Clarks Hill reservoir. A river for canoes would be better than a lake, because, “the scenic and other aesthetic qualities of a river that is drowned are lost and not always counter-balanced by those of a lake.”<sup>61</sup> Aside from Dr. Walker’s input, the Corps claimed an “Overwhelming Majority Support Three-Lake NRA Concept” after the first round of public hearings. According to the Corps, the Savannah NRA plans were “heartily endorsed” except for two dissenting opinions from representatives of the Sierra Club and the Georgia Conservancy. Bill Baab, an Augusta, Ga. Chronicle reporter had a different take on the Greenville, S.C., meeting where the meeting “ended in mild disorder.” Apparently “the majority [of the participants] took the opportunity to attack the feasibility of the Trotter Shoals project,” and did not actually comment on the NRA.<sup>62</sup> The two dissenting opinions the Corps took seriously supported the Savannah NRA only on the condition that Trotters Shoals dam and reservoir was not a part of the plan. Like Walker, they also desired that another federal agency manage the NRA, and maintain a “‘free-flowing’ stream between Hartwell and Clark Hill lakes for canoeing.”<sup>63</sup> In reality, the stretch of river that Walker and others defended was not free flowing by any means – flows were dictated by Hartwell Dam

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<sup>61</sup> Alma Toevs Walker, Athens, Ga., to Col. Howard L. Strohecker, Savannah District, November 2, 1971, Georgia Conservancy Binder, Box 3, AWC.

<sup>62</sup> Bill Baab, “Shoals Dam Lambasted,” Augusta (Ga.) *Chronicle*, November 2, 1971, p. 7.

<sup>63</sup> “Trotters Shoals Panel Discussion,” News Release from the Savannah District Army Engineers, Georgia Conservancy Binder, Box 3, AWC.

water releases. But Walker and state agency officials used the Savannah National Recreation Area EIS process to defend this lone stretch of Piedmont river in the Savannah valley.

The second round of public meetings on the Savannah National Recreation Area indicated a clear shift within the Corps' approach to the process, but the EIS draft was considered useless by some observers. By the second round of public meetings, held in January 1972, two clear options emerged. Col. Howard L. Strohecker of the Savannah River District office again encouraged everyone to attend. Prior to this meeting, he provided a fact sheet to explain new ideas and plans based on first round of meetings and additional studies. The Corps now offered two "Alternatives." The first provided plans for a NRA that included the two existing lakes and no lake at Trotter Shoals. The goal here was to create a stretch of the Savannah River much as Walker promoted. No dam and reservoir, but plenty of hiking, picnicking, and other recreational amenities set back from the river. The second alternative included the two existing lakes plus the new Trotters Shoals reservoir with undeveloped recreation areas (picnic and day use), intermediate sites (boat ramps, group areas), destinations (cabins, marinas, etc.), and resort villages (operated as private concessions).<sup>64</sup>

After appearing to have completed their homework, the Corps recommended Congress create the Savannah National Recreation Area and released a preliminary Environmental Impact Statement in the spring of 1972. The NRA would basically follow the existing or approved Hartwell, Trotters, and Clarks Hill project boundaries. The plan called for 15 "high-density" recreation areas with beaches, boat ramps, picnic areas, playgrounds, restaurants "and other facilities normally associated with Federal reservoir projects." The Corps recommended that the federal government pay for all recreation areas, except those leased by the states and private

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<sup>64</sup> *Handout for Public Meeting Held 24-25 January 1972: Savannah National Recreation Area Alternative Plans for Development*, Georgia Conservancy Binder, Box 3, AWC.

concessions, and not to require any cost-sharing with state governments. The EIS, however, was fatally flawed. The Only “Environmental Impacts of the Proposed Action” included “minimization of adverse environmental impacts generally associated with the utilization of timber and mineral resources.” Furthermore, the Corps only contemplated a reduced forest cover for wildlife and timber harvest, and made no assessment of fishery resources. Finally, the only alternative the EIS considered was a NRA without the Trotters Shoals reservoir. Without the artificial lake, the NRA would lose 540 miles of shoreline and more than 26,000 acres of surface water, and would only gain “riverway parks, campgrounds, visitor centers, and fishing.” Rather than limit the NRA to a two-lake recreation complex connected by a short section of regulated river, the Corps wanted the NRA to “serve as a vehicle for insuring orderly future growth and development and protection and enhancement of environmental quality.” The Corps recommended a “greenbelt” to connect and encircle the NRA project area, thereby enabling visitors unfettered access to every acre of lakeshore. Without saying so directly, the Corps must have assumed that the “collar lands” encircling each reservoir could also function as this “green belt.”<sup>65</sup> It is worth noting the Corps acknowledged that Trotters Shoals and the NRA were separate issues, and the implementation of one would not necessarily impact the implementation of the other.

Georgia Department of Natural Resources officials commented on the Savannah National Recreation Area preliminary EIS and blasted the Corps for assembling an EIS that was “mediocre at best.”<sup>66</sup> The unsigned and internal *Proposed Savannah National Recreation Area*

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<sup>65</sup> *Savannah National Recreation Area, Georgia and South Carolina, Environmental Impact Statement*, Folder: Savannah National Recreation Area, Box 14, 025-01-004 Department of Game and Fish, Georgia Archives, Morrow, Ga.

<sup>66</sup> *Proposed Savannah National Recreation Area Environmental Impact Statement and Preliminary Feasibility Report*, p. 3-4, Folder: Savannah National Recreation Area, Box 14, Department of Game and Fish (025-01-004), Georgia Archives, Morrow, Georgia.

*Environmental Impact Statement and Preliminary Feasibility Report* outlined many “serious deficiencies and inaccuracies” in the Corps’ EIS. The most egregious error that the Corps committed was a poor assessment of potential environmental impacts, particularly water quality and the valley’s fishery. The EIS failed “to even mention the very real possibility of a substantial degradation of the water quality of the Savannah River resulting from the construction of” Trotters Shoals reservoir. The water released from Hartwell dam and into the Savannah River was already oxygen poor and only minimally supported the remaining cold-water bass fishery. The DNR staff recognized that “while there is little or no data presently in hand to substantiate or refute the possibility of a degradation of the [sic] water quality, particularly in terms of the ability of the system to sustain aquatic life as well as other wildlife which are dependent on this portion of the eco-system for life, this question must be addressed in a responsible manner before the construction of the Trotters Shoals project.” Like Walker and other environmentalists from the Sierra Club and the Georgia Conservancy, Georgia’s DNR identified Piedmont rivers as threatened. The Savannah River, at least the section between Hartwell and Clarks Hill, was one of only four Georgia rivers – in addition to the Oconee, Alcovy and Flint – that flowed through the Piedmont without any significant re-plumbing. Given these realities, the Georgia DNR staff recommended a Savannah NRA include the Hartwell reservoir, regular releases from the Hartwell dam to keep the Savannah River flowing in the Piedmont, and the Clarks Hill project. They suggested a one-mile strip on either side of the Savannah River with hiking paths, camping, and trails at least three hundred feet from the river bank. Likewise, they recommended that any and all recreation areas be set back from the shoreline and thus invisible from the river and the reservoir. In essence, Walker, other environmentalists, and the DNR recommended that the Piedmont section of the Savannah River

be designated a recreational river. This suggestion was not without precedent for Georgians, as the next chapter will demonstrate.

### **Conservatives and Trotters Shoals**

After facing environmentalists and two Environmental Impact Statement processes that threatened to bring the Trotters Shoals dam and reservoir project to a halt, the boosters tried to fight back. The first booster to do so was James R. Young. As the Savannah NRA review process got underway in late 1971, Young, an associate editor of the Elberton (Ga.) *Star*, communicated with an ally about how one public meeting would run. Young did not “want the ecology opposition to arrive with any scheme to make an adverse issue of Trotters Shoals,” and was reassured that “the Chairman of the meeting will hold the subject to recreational benefits.” If other topics arose, such as pollution, commentators would be told to hold those subjects for a “subsequent hearing.”<sup>67</sup> Young was not the only Savannah River valley resident who was put-off by the new Trotters Shoals opposition community. Even old hands, like Rep. W. J. B. Dorn were concerned about the fate of Trotters Shoals, and Dorn encouraged Trotters Shoals boosters to “keep fighting or this ‘far left’ crowd will kill everything.”<sup>68</sup> And fight they did. The third operative to express concern was Augusta Chamber of Commerce executive Lester S. Moody. To understand his competition, Moody employed an accomplice to troll for information. Environmentalists – the white, organized, middle-class Georgians who used political and scientific tools to protect their state’s beauty and health – increasingly pushed back against projects that damaged the environment or were perceived threats. A small group of men and women established the most highly functioning group – the Georgia Conservancy – in 1967. But

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<sup>67</sup> James R. Young, Associate Editor [*Elberton Star?*] to “Brownie,” October 18, 1971, Correspondence, 1971, Planning and Funding Series, RWC.

<sup>68</sup> Rep. William Jennings Bryan Dorn, Washington, D.C., to Wilbur H. Hoover, November 1, 1971, Correspondence, 1971, Planning and Funding Series, RWC.

other organizations also operated in Georgia and South Carolina, such as the Sierra Club and the National Wildlife Federation. But in 1971, the Sierra Club was an enigma to Moody, so he asked H. Zimmerman to assemble a brief dossier about the Sierra Club. Headquarters: San Francisco, California. Membership: 37,000 claimed in 1966. Mission: The Sierra Club championed conservation from its founding in 1892 before David Brower promoted “the wilderness theme.” When Zimmerman constructed this profile he concluded that the Sierra Club had a deep-pocketed, strong lobby with a “powerful interest in the ecology and conservation effort throughout the country,” in addition to solid Congressional connections. When he was done, Zimmerman confided, “I trust that this information will be of some value in your effort to keep the Trotters Shoals project on course.”<sup>69</sup>

Finally, Robert L. Williford, like the other Trotters Shoals supporters, was equally concerned about the emerging and powerful environmentalists’ voices that threatened his pet project. In late 1971, the Elberton (Ga.) *Star* editor expressed frustration over the Georgia Press Institute convention’s organizational decision to allot two hours to environmental issues as requested by the Georgia Conservancy. Williford branded the Georgia Conservancy “a highly controversial group of environmentalists who are fighting the activities of the US Corps of Engineers, the Soil Conservation Service and other agencies engaged in such projects as stream improvement, flood control, harbor improvement, snagging operations, watershed constriction and mosquito control.” As a newspaper man and Trotter Shoals supporter to the core, Williford went “on record as strongly opposing” the proposed conservation agenda item, and he requested that the timeslot be reassigned to “something of more value and interest to newspaper publishers.” Clearly frustrated, Williford called the Georgia Conservancy “a special interest

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<sup>69</sup> H. F. Zimmerman, Augusta, Ga., to Lester S. Moody, Augusta, Ga., October 6, 1971, Folder 1, Trotter’s Shoals 1970, Box 4, Lester Moody Collection, 2002.036, Augusta History Museum, Augusta, Georgia, hereafter LMC.

group which came requesting time to promote their belief's and programs.” In exaggeration mode, he did “not feel we should provide a forum for such groups, and certainly not in response to their request,” because if the Georgia Conservancy got air time, “Why not the Black Panthers, religious groups, or one of the thousands of others who have some ‘special kick’ going.”

Williford was not the first person to link the South’s water and race problems, and his linking of civil rights and environmental activism demonstrated his total investment at Trotters Shoals.

Countryside conservationists who rallied around water quality and environmentalists who supported the National Recreation Area were only the latest manifestation of the project’s opposition.<sup>70</sup>

Frank Harrison was among a small group of regular writers to South Carolina’s Congressional delegation who linked the Savannah River’s water problems to the nation’s race problems in the 1950s. As a concerned constituent, Harrison was not alone in his critique of the Hartwell dam. Unlike some of his fellow writers who were prone to hyperbole, Harrison was rational. His logic pointed to a new conflation of “rights” that eventually converged more concretely downstream at Trotters Shoals. First and foremost, Harrison opposed the Hartwell dam and reservoir because the economics did not make sense. The Corps wanted to build a taxpayer funded and tax-exempt dam that produced electricity less efficiently than thermoelectric coal fired steam plants as advertized by the Duke Power Company. This was an old argument that also branded “government ownership of these projects” a socialistic enterprise that involved “serious federal encroachment upon state and local rights.” His protest bubbled from a collection of sources including his observation of the Corps’ Clarks Hill project land condemnation and acquisition process. When the federal government acquired land, they also

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<sup>70</sup> Robert Williford to Waldo “Bo” McLeod, Editor, Donaldsonville (Ga.) *News*, November 24, 1971, Correspondence, 1971, Planning and Funding Series, RWC.

acquired riparian rights and access to the Savannah River. As the Corps assembled their reservoir lands and established a buffer or “collar” of land – or what today looks like a bath-tub ring – around the reservoir, the Corps also acquired rights to access that water. Once the Corps assumed title to this land, municipalities and industrial interests could not longer simply draw water from the federal reservoir as they might have from a free flowing Savannah River. Harrison was personally involved in McCormick County’s (S.C.) fight for Congressional authority to legally draw water from Clarks Hill, and the process, while ultimately successful, only added to his sense that the federal government was usurping state’s and local municipalities’ rights to access water.

As Harrison succinctly summed up his concerns, “The taking of huge areas of private property by the Federal Government is becoming increasingly dangerous especially in view of the recent Supreme Court decision and other actions of the administration in attempting to continue the centralizing of power in the Federal Government.” Harrison was referring to nothing other than the Supreme Court’s May 17, 1954 *Brown v. Board of Education* ruling that declared “separate but equal” facilities un-Constitutional. Harrison thought he saw the writing on the wall, and connected states rights, water rights, and civil rights: “The widespread increase of federal public use and recreation areas may result in serious political repercussions in this state and other states because these areas may become areas which cannot be used to any extent by members of the white race.”<sup>71</sup> Harrison was not alone. For example, when the Georgia Farm Bureau assembled to set the 1955 state farm lobby’s agenda, they “expected to make a stand on four major issues - water resources, segregation, rural electric and telephone appropriations, and price supports on basic commodities,” according to one journalist. Farmers who had suffered

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<sup>71</sup> Frank Harrison, Attorney, McCormick, S.C., to Senator Olin D. Johnston, Washington, D.C., May 26, 1954, Folder Legislation, 1954, Public Works, Dams, Hartwell, Box 43, OJP.

through the 1954 drought were interested in “legislation for establishment of water rights” because existing law was unclear, out of date, and often pit municipal, industrial, and agricultural users against one another.<sup>72</sup> By the late 1950s Georgians and South Carolinians connected these states, civil, and water “rights” as the South navigated a host of problems.

Water projects are an unlikely place to look for this conflation of rights, and were far removed from the suburbs of Charlotte (N.C.), Atlanta (Ga.), and Orange County (Calif.). But community access to the Savannah River’s water was a critical resource for rural counties and towns seeking to benefit from a continually diversifying and growing post-1945 economy. Water was power, and the Savannah River valley’s water remained highly contested by those who supported federal power projects and those who advocated for corporate power. Public projects, like the Corps’ Clarks Hill, Hartwell, and Trotters Shoals projects, made water access more difficult and directly challenged states rights and limited local economic development. The *Brown* decision only exacerbated this particular aspect of the water problem.

Robert P. Jeanes, of Easley, S.C., opposed the Hartwell project on fiscal grounds, and called the lake an unnecessary “fishing and boating resort.” Jeanes, like Harrison, was well aware of civil rights activity throughout the South. While Jeanes’ primarily addressed the Hartwell project, he also devoted an equal amount of ink to his frustration with the court-ordered desegregation of Clinton, Tennessee’s school system in 1956. Riots and violence brought national attention and National Guard tanks to Clinton to keep the peace. Jeanes implored Sen. J. Strom Thurmond to “do any and every thing in your power, to help correct” a situation that threatened white supremacy.<sup>73</sup> As massive resistance mounted in the late 1950s, a Georgian

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<sup>72</sup> “More than 1,000 to attend annual Farm Bureau meet,” *Augusta (Ga.) Chronicle*, November 1, 1954, p. 11.

<sup>73</sup> Robert P. Jeanes, M.D., Easley, S.C., to Senator J. Strom Thurmond, Washington, D.C., December 24, 1956, Folder Legislation, Hartwell Dam, November 29, 1956 - October 18, 1957, Box 19, Subject Correspondence Series

contacted Thurmond to win his support for a Senate bill that would order the Corps to sell excess land acquired – at times through condemnation – for the Clarks Hill project. While this was his main reason for contacting the South Carolina Senator, he explained that he had not bothered to do so “because of the Civil Rights legislation.” The constituent believed that the land re-vestment bill was “so minor compared with that.”<sup>74</sup> Civil rights and water continued to intersect throughout the 1950s and 1960s as the region navigated social and environmental problems. This correspondence placed civil rights slightly below the initial stimulus to write – topics pertaining to the Hartwell or Clarks Hill dam and lake project – and suggested that while civil rights was threatening, the federal government’s reach and growing power represented a more paramount threat compared to anything else.

By the 1960s, southerners’ frustration with federal water politics threatened an already fragile Democratic party. Constituent disappointment with Clarks Hill and reluctance over Hartwell morphed into opposition against the Trotters Shoals dam and reservoir project. The John F. Kennedy and Lyndon B. Johnson administrations began to address civil rights between 1960 and 1965, and left southern Democrats confused about the party’s direction. As one letter to Sen. Olin Johnston signed by eighteen men and women asked, “How can you kick Kennedy’s civil rights Bill and at the same time condone this power take over by the federal government” at Trotters Shoals?<sup>75</sup> Another asked Johnston to “oppose the so-called ‘public-accommodations’ legislation proposed by the Kennedy family,” while also asking him to reconsider his support for

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1957, STP; Numan Bartley, *The New South: The Story of the South’s Modernization, 1945-1980* (Baton Rouge: Louisiana State University Press, 1995), 196.

<sup>74</sup> R. L. Howell, Sr., Royal Crown Cola and Nehi Bottling Company, Thomson, Ga., to Senator J. Strom Thurmond, Washington, D.C., March 17, 1958, Folder Public Works 1 (Dams and Reservoirs) February 25 - September 4, 1958, Box 23, Subject Correspondence Series, 1958, STP.

<sup>75</sup> B. H. Tucker, et. al., to Sen. Olin D. Johnston, September 30, 1963, Folder Legislation 1963, Public Works, Dams, Trotters Shoals, Box 89, OJP.

Trotter Shoals.<sup>76</sup> While Senator Johnston sponsored Trotters Shoals, his partner in the Senate, Strom Thurmond, did not. Trotters Shoals was the first of the Corps' three Savannah River valley dams that Thurmond did not back, and he eventually bolted the Democratic party in favor of a Republican affiliation in 1964.

Not unlike previous writers from the South Carolina towns of Easley, Greenville, and Clemson, Trotters Shoals' opponents connected civil rights with proposals to solve the South's water problems. One letter commended Senator Olin D. Johnston on his decision not "to support the President on the Civil Rights package legislation demanded of Congress." Robert G. Heller explained that the action proved "to me that you are not willing to submit to the influence of the mob, and of the Kennedy Dynasty. You, as a representative of the South and of the state of South Carolina, must help curb the growing power of the 'liberals' and help restore the system of governmental checks and balances."<sup>77</sup> Another Trotters opponent who was angry about paying tax dollars for a tax exempt public power project stated, "I do not see any thing great about any government plan that will yield any more of our fast dwindling sovereignty to the Federal Government." Not unlike Frank Harrison years earlier, N. R. Marr and others clearly believed that federal water projects included recreation areas that would make white, care-free recreation impossible. Any public recreation areas at Trotters Shoals, or "any thing that has Federal money in it will have to be open to all races."<sup>78</sup> Another South Carolinian similarly fumed, if the Corps completed Trotters Shoals, "we shall have to use it as an INTEGRATED PARK just like all the

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<sup>76</sup> Jack H. Gunnells, Greenville, S.C., to Sen. Olin D. Johnston, July 22, 1963, Folder Legislation 1963, Public Works, Dams, Trotters Shoals, Box 89, OJP.

<sup>77</sup> E. H. Agnew, Starr, S.C., to Rep. W. J. B. Dorn, Washington, D.C., September 21, 1959, Folder Topical Files, 1962, Duke Power Co., Box 61, WDP.

Robert G. Heller, to Senator Olin D. Johnston, Washington, D.C., [n.d.], 1963, Folder Legislation 1963, Public Works, Dams, Trotters Shoals, Box 89, OJP.

<sup>78</sup> N. R. Marr, to Senator Olin D. Johnston, Washington, D.C., May 25, 1963, Folder Legislation 1963, Public Works, Dams, Trotters Shoals, Box 89, OJP.

rest of the areas in which the Federal Government had any money invested.”<sup>79</sup> In a vestige of the Redeemers harkening back to the Old South, Marr concluded by saying, “We are trying our best to preserve our way of life by having as little government control as possible.” Finally, “rights” were central components to these letters. In perhaps the most chilling connection, a Clemson College student linked his white supremacy with his opposition to Trotters Shoals in a letter to Thurmond. Like those before him, he considered Trotters Shoals a waste of taxpayers’ money, like the Hartwell project. Robert G. Heller continued to link the federal water project – perhaps as a manifestation of public welfare – to individual rights. He further declared that “When the President of the United States refuses to consider damage to life, property, and personal rights, it is time for citizens to rebel.” His reason for writing, to express his opinion of Trotters Shoals, also included an observation of the nation’s civil rights movement and what federal civil rights legislation meant to his personal freedom: “The citizens of this nation will not be safe from the terror of a tribal, barbaric, chanting, and sacrilegious mob until laws protecting lives and property can be enforced without federal interference.”<sup>80</sup> The public debate over Trotters Shoals clearly incorporated New Right rhetoric and conservative arguments found in other parts of the United States in the 1960s.

Opponents to the Clarks Hill, Hartwell, and Trotters Shoals drew the projects into a discourse of states, civil, and water rights in the post-1945 period. Constituents from small towns and rural counties used language that included throwbacks to the past while wrestling with the South’s race and water problems. These responses from the southern countryside – which ranged from the rational to the irrational – also trumpeted the merits of privatization and free

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<sup>79</sup> Ralph L. Brewer, Hampton, S.C., to Senator Olin D. Johnston, Washington, D.C., May 26, 1963, Folder Legislation 1963, Public Works, Dams, Trotters Shoals, Box 89, OJP.

<sup>80</sup> Robert G. Heller, Clemson, S.C., to Senator J. Strom Thurmond, Washington, D.C., July 19, 1963, Rivers and Harbors 3 (Dams and Reservoirs), Folder IV, July 5 - December 13, 1963, Subject Correspondence Series, 1963, Box 32, STP.

enterprise while criticizing public power and federal intrusion into the nation's economy. Finally, the conservatism stirred by water projects in the Savannah River valley paralleled the thoughts and activities of grass roots activists who organized around taxes, zoning, and busing in the California, Georgia, and North Carolina suburbs in the 1960s.<sup>81</sup> The conservative letter writers who shared their thoughts about Trotters Shoals and environmental politics identified entitlements – to local self-determination, to peaceful segregated recreation, or access to the water supply – as fundamental rights.

### **From the Countryside to the Potomac**

Trotters Shoals spanned a critical era in American history. Countryside conservationists and environmentalists faced formidable challenges in the post-1945 period. They were not alone, since the New South and New Deal institutions that promoted dams as solutions for the region's economic problems faced equal levels of resistance. Whereas conservationists helped put Trotter Shoals on the map, post-1970s environmentalists threatened to erase it. Trotters Shoals' boosters used conservation and environmental language to suit their purposes, and justify specific benefits such as aesthetic attributes, pollution control, or recreation facilities. When Trotters Shoals' proponents packaged the project in the 1960s, they never could have dreamed that a local, Savannah River project would become a national symbol.

In the end, the Corps transformed the Savannah River's Piedmont between the Hartwell dam and Clarks Hill reservoir. The Corps let the first construction contract in 1974 as they continued to purchase land for the project area from at least sixty families and property

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<sup>81</sup> Lisa McGirr, *Suburban Warriors: The Origins of the New American Right* (Princeton, N.J.: Princeton University Press, 2001); Kevin M. Kruse, *White Flight: Atlanta and the Making of Modern Conservatism* (Princeton, N.J.: Princeton University Press, 2005); Matthew Lassiter, *The Silent Majority: Suburban Politics in the Sunbelt South* (Princeton, N.J.: Princeton University Press, 2006).

holders.<sup>82</sup> When the first water flowed through the Richard B. Russell, Jr. Dam in January 1985, a nearly one hundred-year quest to maximize public benefits of the Savannah River Basin neared completion. Eight months later five thousand people turned out for the official dedication to celebrate, in Col. Daniel W. Christman's opinion, "the positive impact that the Richard B. Russell project has had and will have on the social, economic, recreational and cultural future of Georgia and South Carolina."<sup>83</sup> Georgia Senator Sam Nunn invoked the dam's namesake during the proceedings, reminding the crowd of Senator Richard B. Russell, Jr.'s dedication to rural electrification and his quest to bring light into dark farm homes.<sup>84</sup>

Unlike the iconic and towering Colorado River dams nestled in deep sandstone canyons, Russell Dam stood less than two hundred feet tall in a valley about eighty miles wide. A series of earthen and concrete dams stretched six thousand feet across and backed up the waters of the Savannah River almost to the foot of Hartwell Dam, some thirty miles upstream. The Hartwell dam releases filled a reservoir with a 26,650 acre lake surface in 1985 and the Russell dam's first four generators began producing electricity by 1985.<sup>85</sup> The project, the Corps' largest hydroelectric dam east of the Mississippi River, operated as a peak-power dam and only produced power during periods of high demand, and therefore did not operate continuously. The Southeastern Power Administration (SEPA, Department of Energy) signed electrical-sales contracts with cooperatives in Georgia, South Carolina, and North Carolina, and distribution contracts with the Duke Power and Georgia Power companies.

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<sup>82</sup> U.S. Corps of Engineers, *Final Environmental Impact Statement: Richard B. Russell Dam and Lake (Formerly Trotters Shoals Lake), Savannah River, Georgia and South Carolina* (Savannah, Ga.: U.S. Army Engineer, Savannah District, May 1979), p. 14, Environmental Impact 5/74 Report, Construction, 1975-1993 Series, RWC.

<sup>83</sup> "Dam Dedicated in Ceremony Saturday," *Elberton Star*, September 10, 1985, and Col. Daniel W. Christman, United States Army Corps of Engineers to Richard B. Russell Dedication Steering Committee, "Letter of Instruction," February 25, 1985, Correspondence 1985, Dedication and Power Distribution Series, RWC.

<sup>84</sup> Senator Sam Nunn, September 7, 1985, speech, Memorabilia [A], Dedication and Power Distribution Series, RWC.

<sup>85</sup> Henry E. Barber and Allen R. Gann, *A History of the Savannah District U.S. Army Corps of Engineers* (Savannah, Ga.: United States Army Corps of Engineers, 1989), 442-452.

The Savannah National Recreation Area never materialized, the Corps completed Trotters Shoals dam, and buried the last Piedmont stretch of Savannah River shoals with the new Richard B. Russell Lake in 1984. In the 1960s and 1970s, however, Georgia countryside conservationists and environmentalists did nearly won win concessions for rivers while also fighting pollution. Advocates fought for the Georgia Scenic Rivers Act of 1969, which was modeled after the National Wild and Scenic River Act (1968), and named four rivers to a state scenic river system and recommended further of study of others. The Georgia Scenic Rivers Act of 1969 would have created “a framework for a State Scenic Rivers System to preserve outstanding sections of Georgia streams in a natural state.”<sup>86</sup> The act would have prohibited dams, reservoirs, diversions, and other structural changes on the Jacks, Conasauga, Chattooga, and Ebenezer rivers, and was designed to help expedite rivers named at the state level more quickly through the national wild and scenic designation process. Another important Georgia river was missing from this list. The Flint River shared similarities with the Savannah River, namely, the Corps had plans to build a dam at Sprewell Bluff on the Flint River in the Georgia Piedmont. But the Sprewell Bluff dam never grew from the Flint’s river bed.

As Georgia’s Governor from 1971 to 1975, Jimmy Carter took on the state’s water problems. As a candidate for governor, Carter stood barefoot in the South River as raw sewage and refuse floated by to draw attention to one of metro Atlanta’s polluted rivers, identify problems he would fix as governor, and to woo environmental voters.<sup>87</sup> While campaigning, he was also convinced to paddle the state’s rivers, and according to Marc Reisner, “he immediately fell in love.”<sup>88</sup> Based on his personal experiences paddling the Chattahoochee, Flint, and other

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<sup>86</sup> A. Stephen Johnson, *Georgia Scenic Rivers Report*, prepared for the Georgia Natural Areas Council (1971).

<sup>87</sup> Harry Murphy, “Carter Stands Barefooted, Promises to Fight Pollution,” *Atlanta (Ga.) Journal*, August 5, 1970.

<sup>88</sup> Marc Reisner, *Cadillac Desert: The American West and Its Disappearing Water* (New York, N.Y.: Penguin Books, 1986, revised 1993), 309.

Georgia rivers, Carter supported the process that led to the Chattooga's designation as a Wild and Scenic River.<sup>89</sup> At the same time, and in what was a seminal environmental activist moment in Georgia's history, Governor Carter stopped the Corps on the Flint. He primarily cited an economic argument to protect the Flint River from the Corps' decades-old plan to build a dam at Sprewell Bluff. Carter claimed to have received thousands of letters and telephone calls from like minded Georgians, as well as those who were concerned about the project's potential to cause "environmental damages." The decision was not easy for Carter since he had served as the chairman of the Middle Flint River Planning and Development Council that, in his words, "was instrumental in securing passage of federal legislation" authorizing the Flint River project in the first place.<sup>90</sup> The Chattooga and the upper Flint River remain un-dammed today, but only the former is protected by the Wild and Scenic River system while developers again cast their eyes' on the later after the 2007-2008 drought. What Carter accomplished on the Chattooga and Flint rivers, he could not achieve on the Savannah. He stopped the Corps' Sprewell Bluff dam project on the Flint River, and stated that "the construction of unwarranted dams and other projects at public expense should be prevented."<sup>91</sup> Trotters Shoals, however, got a green light from Governor Jimmy Carter's office up until his last days in 1976.

President Jimmy Carter (1976-1980) thought differently. He announced his famous "hit list" in 1977 after less than six months in office and threatened to eliminate any water project in the country that was fiscally irresponsible, based on faulty accounting, an engineering folly, or

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<sup>89</sup> Jerry Alexander, "Georgia Governor Dunked By Canoe," Clayton (Ga.) *Tribune*, August 2, 1972, p. 6.

<sup>90</sup> For Carter quote, see: Leonard Ray Teel, "Cost of Flint Dam Project Gives Carter 2<sup>nd</sup> Thought," Atlanta (Ga.) *Journal*, February 25, 1973, p. 2A. For Carter's claim on Flint River correspondence, see: Bill Montgomery, "Cater Will Await Dam Impact Report," Atlanta (Ga.) *Journal*, June 1, 1973, p. 2A; and Prentice Palmer, "Carter Rejects Dam on Flint," Atlanta (Ga.) *Journal*, October 1, 1973, p. 1A. For letters supporting and opposing the Flint River project, see: Governor, Executive Dept., Governor's Subject Files (Aka Incoming Correspondence), 1781-2008, Gov. James Earl Carter (1971-1974), Subject Files, Flint River, Letters, Boxes RCB 31376 and RCB 31379, 001-08-045, Georgia Archives, Morrow, Georgia.

<sup>91</sup> Prentice Palmer, "Carter Rejects Dam on Flint," Atlanta (Ga.) *Journal*, October 1, 1973, p. 1A.

detrimental to the environment. Among the over thirty targeted pork barrel projects – previously promoted by chambers of commerce, local steering committees, the Army Corps of Engineers, the Bureau of Reclamation, and legions of elected representatives – was the Trotters Shoals project the former peanut farmer had supported as Georgia’s Governor.<sup>92</sup> But as the nation’s Executive, Carter’s hit list placed the Trotters Shoals dam and reservoir project – already scrutinized by critics for over twenty years – under the microscope again. Previous opponents had tried to eliminate the Corps’ last major valley project by championing free enterprise, defending potential industrial sites and new jobs, and raising the Environmental Impact Statement shield. President Carter’s newfound opposition to the Savannah River valley project represented only the latest attempt to kill Trotters Shoals. His hit list, however, crumpled under the weight of a Congressional backlash by members of his own party who mostly hailed from the American West. Before the end of 1977, Carter compromised with the Senate and nearly all of the projects were fully funded including the Trotters Shoals project. Journalists, former aides, and scholars have repeatedly asserted that Carter’s decision to reject the Corps’ Flint River project in Georgia informed his decision to critically examine the economic feasibility and environmental impact of the nation’s water projects in 1977.<sup>93</sup> But Carter was unable to apply those same lessons and convince Congress to reign in spending even as the national deficit grew. As Guy Martin, the former Assistant Interior Secretary during the Carter administration intimated, Carter pushed environmental issues more than economic issues. According to Martin, “Most Congressmen don’t really care about wild rivers,” and “the New Deal mentality is entrenched up there – even the right-wingers” treated dam and reservoir projects as entitlements.

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<sup>92</sup> “Busbee hails proposals for 2 dams,” *Augusta (Ga.) Chronicle*, February 3, 1975, p. 1; Lou Cannon, “Rep. Derrick Defies Conventional Wisdom on Dam,” *Washington Post*, April 3, 1977, p. 4.

<sup>93</sup> Adam Clymer, “Carter’s Opposition to Water Projects Linked to ’73 Veto of Georgia Dam,” *New York Times*, June 13, 1977, p. 14; Scott A. Frisch and Sean Q. Kelly, *Jimmy Carter and the Water Wars: Presidential Influence and the Politics of Pork* (Amherst, N.Y.: Cambria Press, 2008), 40 note 8.

Governor Carter's rejection of a single dam and reservoir project on the Flint River was bold and formative, but President Carter could not easily apply the same logic on the national stage when pork was at stake.<sup>94</sup> As an outsider – or like a countryside conservationist or an environmentalist – Jimmy Carter could not overcome the Congressional and bureaucratic momentum on Capitol Hill to resolve the nation's water problems with a new approach.

Savannah River valley residents organized to oppose Savannah River watershed dams in Georgia and South Carolina for centuries. Early nineteenth century fishermen protested antebellum dams in the 1850s and anglers attempted to save migratory fish runs in the 1880s. Progressive preservationists unsuccessfully fought the Atlanta-based Georgia Power Company's Tallulah Falls project in northeast Georgia in the nineteen-teens. These events paralleled grassroots preservation and federal conservation movements observed in other parts of the nation. But in the post-1945 period, states rights, anti-pollution, conservation, and environmental activists became unaffiliated countryside associates who opposed the Trotters Shoals dam. These parties ultimately failed to stop the Trotters Shoals dam. President Jimmy Carter's attempt to apply a Georgia solution to the nation's water problem failed. He rescinded the hit list in response to Congressional resistance, and Trotters Shoals became the Corps' last the major Savannah River watershed project. This episode illustrated that the South's water problems had evolved beyond conserving water for power production, channeling water for navigation, controlling flood waters, and storing water for droughts. By 1970, the region's water problem encompassed the old problem of water quality and quantity, and a new demand to balance working rivers with recreational rivers.

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<sup>94</sup> For a synthesis of Carter's "hit list," see: Reisner, *Cadillac Desert*, chap 9, "The Peanut Farmer and the Pork Barrel," and p. 330 for Martin quote. For more on Carter's environmental presidency, see: Jeffrey K. Stine, "Environmental Policy During the Carter Presidency," in Gary M. Fink and Hugh Davis Graham, eds., *The Carter Presidency: Policy Choices in the Post-New Deal Era* ([Lawrence]: University Press of Kansas, 1998), 179-201.

## CHAPTER 7

### TAKEN AND DELIVERED: THE CHATTOOGA WILD AND SCENIC RIVER, 1968-1976

After nearly fifty fires burned across northeast Georgia's mountains on a single weekend in 1976, National Forest Service supervisor Patrick Thomas tried to make sense of the eight hundred smoldering acres of Rabun County's public land. With more forest burned in the first two months of 1976 than in the previous two years combined, Thomas linked the recent "fire style protest" to the 1974 creation of the Chattooga Wild and Scenic River. Thomas also identified with the group of local mountain residents allegedly responsible for the fires, noting: "I would think it was a hardship, someone taking away access to a place I'd always been able to take pleasure in." Thomas did not explicitly identify the "someone" who benefited from the Chattooga River's new identity, but his comment communicated that the process was not entirely equitable or welcome for those who lived in the upper reaches of the Savannah River valley.<sup>1</sup> Federal implementation of the Wild and Scenic Rivers Act of 1968 – a new national watershed management strategy – led to community protest and class conflict in the southern Appalachian mountains. This chapter will make sense of a how one solution for solving the South's water

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<sup>1</sup> "Blazes Blamed on Mountaineers," Atlanta (Ga.) *Constitution*, March 2, 1976, p. 2-A; for quote: "Arsonists fire NE Georgia woodlands," Clayton (Ga.) *Tribune*, March 3, 1976, p. 1; Jack Temple Kirby, "Retro Frontiersmen," in *The Countercultural South*, Mercer University Lamar Memorial Lectures, No. 38 (Athens: University of Georgia Press, 1995), 33-56.

problems signaled an end to the corporate and federal dam building eras, empowered grass-roots organizations, and invited “Retro Frontiersmen” to spark fire on the land.

The Chattooga River valley’s story encapsulates the American South’s nearly century-long history of water problems. Throughout the southern Piedmont and Blue Ridge provinces, energy corporations had built dams to generate electricity to stimulate economic growth across an urban and industrial South that lacked other fuel sources. Along the region’s more substantial rivers, federal agencies had deployed levees and dams to solve flooding and drought problems as well as improve navigation and generate electricity for rural electric cooperatives. Federal legislation had also improved water quality, implemented limited enforcement, and instituted a popular federal funding mechanism for municipal water and waste treatment systems in certain communities. Each of these solutions momentarily solved a particular water problem, and the Wild and Scenic Rivers Act (1968) continued this trajectory.

The Chattooga River, however, is unlike virtually all other southern Appalachian rivers within a fifty mile radius. In the Savannah River basin’s Blue Ridge province, the Georgia Power Company had dammed the Tallulah-Tugaloo Rivers before 1930 to generate electricity for Atlanta and the New South [Chapter 2], and in 1960s, the Duke Power Company was completing the Keowee-Toxaway River projects in the upstate to meet the Carolina’s electrical needs [Chap. 6]. And the U.S. Army Corps of Engineers toiled downstream in the Piedmont to complete multiple purpose projects inspired by the New Deal, initiated after war in the 1940s, and designed to provide the holy trinity of benefits for Sunbelt residents [Chaps. 4 & 5]. The Chattooga River, however, had escaped the concrete, spillways, generators, boat ramps, and reservoirs’ drowning waters. In fact, the private and federal dam building era slipped into decline in the late 1960s.

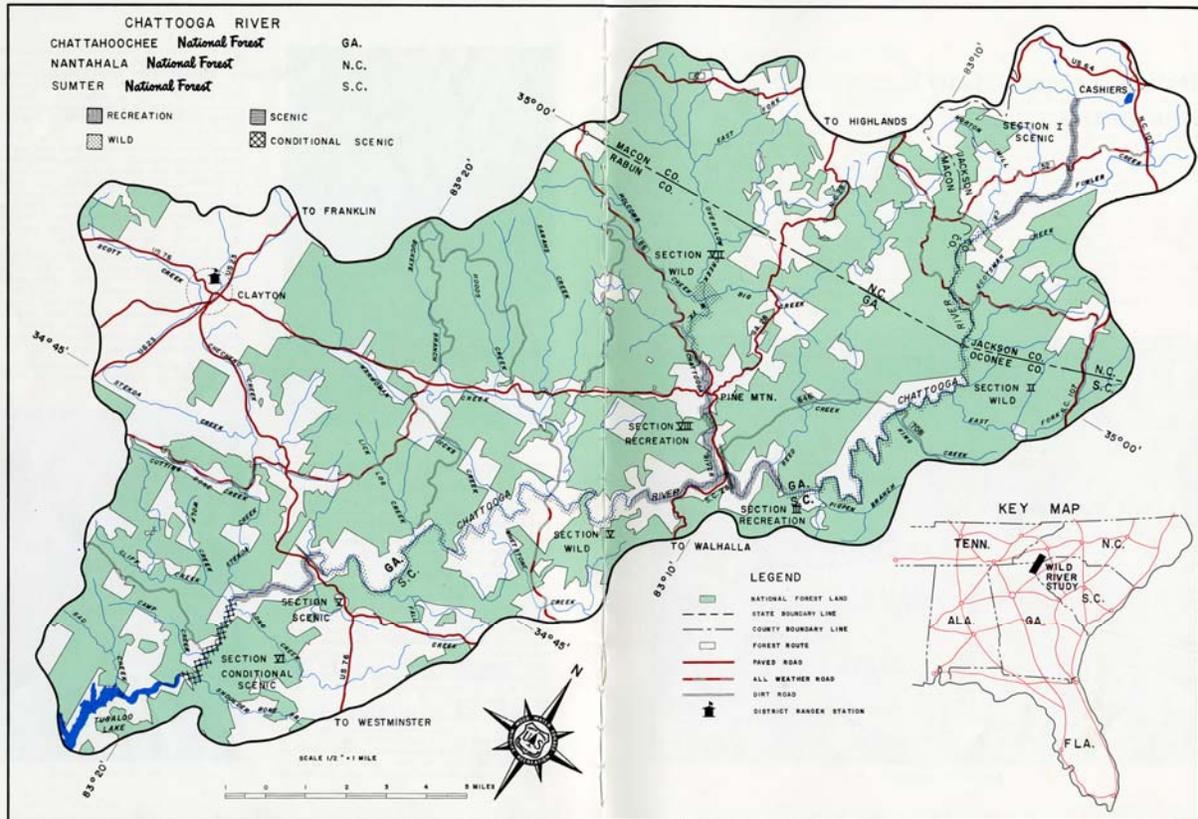


Figure 7.1: Chattooga River (Study River Proposal, 1970), including wild, scenic, and recreational section designations. *A Proposal: The Chattooga, 'A Wild and Scenic River'* (March 3, 1970). Courtesy of Hargrett Rare Book and Manuscript Library, University of Georgia Libraries.

For decades, hikers, anglers, and canoeists, had regarded the Chattooga River as a unique and endangered river, with breathtaking scenery, great fishing, and white-knuckle rapids. Corporate and federal power agencies had also evaluated the river as water power source for an even longer period of time. All of this changed after Congress enacted the National Wild and Scenic Rivers Act in 1968. The act set in motion a series of events that tasked U.S. Forest Service personnel to weigh rivers across the country – including the Chattooga – for inclusion in this new category of federal landscape protection. Forest Service staff discovered tremendous support for a protected river among local county governments, state natural resources agencies, and the general public in Georgia and South Carolina. Given this wide spectrum of enthusiasm,

the Chattooga easily moved from a Study River in 1968 to an official Wild and Scenic River in six quick years. The undammed river represented a scarce commodity for these interest groups, and thus, they considered the Chattooga an extremely valuable chunk of southern wilderness worthy of federal protection.

The victory, however, was surprising. The Chattooga River was not saved exclusively by crusading preservationists or wilderness advocates, such as those who successfully fought the Bureau of Reclamation's Echo Park dam project (Green River, Colorado) in the 1950s.<sup>2</sup> Instead, nearly every party involved in the Chattooga's case – multiple federal and state agencies, new environmental groups, and county residents – agreed that Congress should confer Wild and Scenic River status on the river. The surprising process was made much easier when the traditional enemies, private utility companies and federal agencies, engineered critical real estate deals to see the river through.

The victory was also bittersweet as demonstrated by the burning forest. Everyone may have agreed the Chattooga River was a scarce and valuable resource, but not everyone agreed with how the Chattooga Wild and Scenic River could be used. And most agreed the valley, after centuries of land use and habitation, was no wilderness. Based on arson events and Thomas' observations, one might assume that conservation management remapped the Chattooga River's watershed and resources without local input or consent. Historians have indeed linked resistance – including clandestine acts of arson and vandalism, or formal community and labor organization – to transitions in resource use, ownership, and management.<sup>3</sup> Thus, in the Chattooga's case,

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<sup>2</sup> Mark W. T. Harvey, *A Symbol of Wilderness: Echo Park and the American Conservation Movement* (Albuquerque: University of New Mexico Press, 1994).

<sup>3</sup> For nationally oriented interpretations of reactions to conservation regimes: Louis Warren, *The Hunter's Game: Poachers and Conservationists in Twentieth-Century America* (New Haven, Conn.: Yale University Press, 1997); Richard W. Judd, *Common Lands, Common People: The Origins of Conservation in Northern New England* (Cambridge, Mass.: Harvard University Press, 1997); Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley: University of California Press, 2001). For a

arson might look like a local anti-statist protest in response to the taking of private land, or the disruption of local subsistence economies. However, the story behind the northeast Georgia fires is much more complicated than a narrative of victimization or monolithic-state power. The fires set within this southern Appalachian river's narrow corridor were the consequence of turning a site of local leisure – a local commons – along the Chattooga River into a national commons popularized by James Dickey's major motion picture *Deliverance* (1972) and protected by the Wild and Scenic Rivers Act in 1974. The fires, however, did not occur during the negotiation and designation process to preserve a special environment, nor were they the result of declarations of eminent domain. This violent response emerged later and during a management stage that was not nearly as smooth as the designation phase due to river users' reluctance to adhere to new federal management policies and the crush of Sunbelt visitors who were stimulated by Hollywood's visual representation of the Chattooga's wilderness landscape and wild rapids in *Deliverance*.

The Chattooga River's story encapsulated the history of American South's nearly century-long water problems, and it also recast the relationship between people and the region's rivers in important ways. First, national citizen action and engagement in water politics had ramifications for how people thought about and considered wild rivers like the Chattooga. River advocates argued that free flowing rivers had ecological and economic values that benefited local environments and service economies. Second, the nation's continued use of coal and new nuclear experimentations signaled a shift away from hydroelectricity and the necessity for massive reservoirs. These new energy generation sources still depended upon rivers and water to

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context to Appalachian reactions to conservation regimes: Stephen L. Fisher, ed., *Fighting Back in Appalachia: Traditions of Resistance and Change* (Philadelphia, Pa.: Temple University Press, 1993); Kathryn Newfont, "Grassroots Environmentalism: Origins of the Western North Carolina Alliance," *Appalachian Journal* 27, 1 (Fall 1999): 46-61; and Suzanne Marshall, "*Lord, We're Just Trying to Save Your Water*": *Environmental Activism and Dissent in the Appalachian South* (Gainesville: University Press of Florida, 2002).

generate base loads, but not on dams. Finally, a protected Chattooga River was a victory for the local watershed as much as it was for all of the Savannah River valley's inhabitants. Whereas the Georgia Power Company had built a hydraulic system that expropriated energy from the Tallulah and Tugaloo Rivers in the 1920s, the company delivered the adjacent Chattooga River to the environmental and paddling community for safe keeping in the 1960s. Not all of the American South's water problems could be solved so easily, but the Chattooga River's history illustrates how water and power continued to cycle in the southeast with important consequences for southeastern rivers and reservoirs.

### **An Undeveloped River in a Sea of Reservoirs**

Private energy corporations and federal agencies funded large dam projects in every cardinal direction and every southern Appalachian watershed neighboring the Chattooga's before 1970. The Chattooga River tumbles from the Eastern Continental Divide and the base of Whitesides Mountain's 700-foot granite rock-face near Cashiers, North Carolina. The river's tributaries drain an 180,000-acre watershed ringed by mountains that reach nearly 5,000 feet above sea level and can receive over eighty inches of annual precipitation. (The only other area in the lower forty-eight United States to see this much precipitation is the Pacific Northwest.) The majority of this river forms about forty-miles of the South Carolina and Georgia border. The Chattooga flows between the Chattahoochee-Oconee and Sumter National Forests, crashing over boulders and ledges before the current slacks and fills the Georgia Power Company's Lake Tugaloo – an uninspiring, flat-water reservoir behind a hydroelectric dam that fills the former Tugaloo River's valley – one of many short stops on a 300-plus mile journey to the Atlantic Ocean via the Savannah River.

A bird's eye view of the southern Appalachian headwaters clearly illustrates how the Chattooga River differs from other Savannah River and mountain South watersheds. Looking south and west, the Georgia Power Company effectively transformed the Tallulah and Tugaloo Rivers into one large water-storage pond. These two rivers became a connected series of six lakes behind six dams between 1913 and 1927 in order to supply Atlanta – the New South's symbol of private economic investment – with electricity to power southern modernization.<sup>4</sup>

Looking west and north, the headwaters to the Tennessee River feed the Gulf of Mexico on the other side of the Eastern Continental Divide. There, Alcoa, the Tennessee Electric Power Company, and other energy corporations dammed the Tennessee River system's southern Appalachian tributaries – the Tuckasegee, Nantahala, Little Tennessee and Hiwassee Rivers – extensively before 1930. The more well known New Deal era Tennessee Valley Authority assumed control of that river and tributaries after 1933 and initiated a comprehensive plan to build more than twenty multiple purpose dams to provide agricultural, navigational, flood control, and hydroelectric benefits for purportedly democratic and decentralized economic development in one area of a larger region labeled the “nation's no. 1 economic problem.”<sup>5</sup>

Turning east from the bird's eye vantage point back to the Savannah River's headwaters, the Duke Power Company began building dams in southern Appalachian mountain valleys to create Lakes Jocassee and Keowee by drowning South Carolina's Whitewater, Toxaway, and Keowee Rivers in the late 1960s. Duke – not unlike other southern electrical companies – harnessed “white coal” to supply power to mill villages, tobacco towns, urban planners, southern

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<sup>4</sup> See Chapter 2. Wade H. Wright, *History of the Georgia Power Company, 1855-1956* (Atlanta, Ga.: Georgia Power Company, 1957), 127-133, 179-183; Andrew Beecher McCallister, “A Source of Pleasure, Profit, and Pride: Tourism, Industrialization, and Conservation at Tallulah Falls, Georgia, 1820-1915” (M.A. thesis, University of Georgia, 2002).

<sup>5</sup> Bruce J. Schulman, *From Cotton Belt to Sunbelt: Federal Policy, Economic Development & the Transformation of the South, 1938-1980* (Durham, N.C.: Duke University Press, 1994), 35-36; Robert Ernest McFarland, Jr., “Of Time and the River: Economy, People, and the Environment in the Tennessee River Valley, 1500-1990” (Ph.D. diss., University of Alabama, 1997).

boosters, and northern investors throughout the Carolinas' Piedmont in 1905.<sup>6</sup> When we reorient to the south, and look further down the Savannah River valley itself, the Corps' three massive hydroelectric installations appear (first Hartwell, then Trotters Shoals/Richard B. Russell and finally Clarks Hill/J. Strom Thurmond) – all appear above the river's Augusta, Georgia fall line. The Corps built these dams between 1945 and 1985 to provide cheap electricity for rural electric co-operatives and national defense, and to create new recreational and regional development opportunities.<sup>7</sup> In contrast to these adjacent watersheds, the fifty-mile Chattooga River flowed wild and free as an anomaly, undeveloped by corporate or federal agencies.

The Chattooga may have been alone in the southeast, but wild rivers across the country continued to run wild and were equally threatened by development. Environmental historians have long considered the battle of Echo Park a critical national battleground for the rise of postwar environmentalism and the wilderness movement. At Echo Park, the Bureau of Reclamation planned to build a dam across the Green River that threatened Dinosaur National Monument (Colorado and Utah) and the National Park Service's mission, mandate, and function. At the time, Park Service units across the country were threatened by dams and development, and the situations were all reminiscent of the Hetch Hetchy conflict decades earlier in Yosemite National Park. Echo Park defenders marshaled a national campaign that saved the canyon and park monument from the dam in 1956, and the success, as historian Mark Harvey states, "gave birth to a generation of preservationists who had substantial expertise of their own [and] who knew how to scrutinize" the federal agencies' data and information. The skills they achieved and

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<sup>6</sup> Robert F. Durden, *Electrifying the Piedmont Carolinas: The Duke Power Company, 1904-1997* (Durham, N.C.: Carolina Academic Press, 2001), 64 for "white coal" quote.

<sup>7</sup> The comprehensive Flood Control Act (1944) had approved a general plan for the Army Corps to build dams across the country, and specifically listed eleven potential dams in the Savannah River Basin. The Corps built three of the dams and the Duke Power Company built three. *Flood Control Act of 1944*, P.L. 78-534, December 22, 1944; Henry E. Barber and Allen R. Gann, *A History of the Savannah District U.S. Army Corps of Engineers* (Savannah, Ga.: United States Army Corps of Engineers, 1989), 428-447.

the accomplishment at Echo Park “carried over into subsequent wilderness and water controversies,” according to Harvey.<sup>8</sup>

The wild and scenic river system was one such example. In the late 1950s, brothers John C. and Frank E. Craighead, Jr., began to formalize a river classification system that directly influenced the National Wild and Scenic Rivers Act (1968). They were avid outdoorsmen, naturalists, and wildlife biologists best known for their lengthy grizzly bear study in Yellowstone National Park in the 1960s. But their personal experiences also connected these two paddlers with rivers. They spent much of their childhood playing and fishing in the eastern Potomac River and their adult lives in Wyoming’s Snake River Valley. The brothers’ also developed an intimate knowledge of the American West’s rivers, and the Craigheads acted on behalf of the nations’ rivers as they watched them deteriorate in the 1950s.<sup>9</sup>

At the very same moment that the Craigheads spoke for wild rivers, Congress identified water quality and scarcity with national economic development in the 1950s. As environmental policy historian Paul Charles Milazzo has argued, Congressional interest in regulating water pollution was directly linked to healthy economic development. But, Milazzo argues, “unlikely environmentalists” in Congress achieved significant success before the mainstream environmental movement even began. In an effort to “bring Congress back” into the historical narrative as a central actor, Milazzo did not evaluate constituent engagement with Congressional members. The same Senate Select Committee on National Water Resources that toured twenty-four American cities and towns to hear about water pollution, also heard from John Craighead in October 1959. John leaned heavily on evolving ecological systems theory when he characterized watersheds as “both ecological and economic entities” where the whole was “equal to more than

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<sup>8</sup> Harvey, *A Symbol of Wilderness*, xvi.

<sup>9</sup> Vicki Constantine Croke, “The Brothers Wild,” *Washington Post Magazine* (November 11, 2007).

the sum of its parts.”<sup>10</sup> John believed that those best equipped to identify rivers in need of protection were people like himself, and others at “the grass roots.”<sup>11</sup> In individual statements before the Senate Select Committee, in *National Geographic* publications, and in academic articles, the Craighead brothers argued that free-flowing rivers had to be protected for educational and recreational purposes, and to maintain a clean and healthy water supply. Combined, these conditions would stimulate outdoor recreation and tourism.<sup>12</sup> In short, congressionally designated wild and scenic rivers like the Chattooga could help solve the nation’s wide ranging water problems.

Beginning in the late 1950s the Craigheads helped develop and write an equivalent to the Wilderness Act (1964) for the nation’s undeveloped rivers since the legislation had purposely excluded rivers.<sup>13</sup> In an interview with river historian and activist Tim Palmer, John stated that he “had worked on the wilderness legislation with Olaus Murie, Howard Zahniser, Stewart Brandborg, and others...but they were not interested in rivers,” and were more focused on wilderness areas that lacked “rivers because the lands were at high altitudes.” The more he became involved, John continued, “the clearer it became that we needed a national river preservation system based on the wilderness system but separate from it.” So the Craigheads joined forces with Sigurd Olson (The Wilderness Society), Joe Penfold (Izaak Walton League), Bud Jordahl (a close colleague of Gaylord Nelson), and Leonard Hall (Missouri journalist), and together they bent the bureaucratic ears of Ted Swem (National Park Service) and Ted Schad

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<sup>10</sup> U.S. Congress, Senate, Select Committee on National Water Resources, *Water Resources Hearing*, 86<sup>th</sup> Congress, 1<sup>st</sup> sess., October 9 & 12, 1959, see p. 460.

<sup>11</sup> John J. Craighead, “Wild Rivers,” *Naturalist* 16, 3 (Autumn 1965): 1-5, see 5.

<sup>12</sup> U.S. Congress, Senate, Select Committee on National Water Resources, *Water Resources Hearing*, 86<sup>th</sup> Congress, 1<sup>st</sup> sess., October 9 & 12, 1959, see p. 457-463.

<sup>13</sup> Tim Palmer has made significant contributions to the national history of wild and scenic rivers, and the most helpful books are: *The Wild and Scenic Rivers of America* (Washington, D.C.: Island Press, 1993), and *Endangered Rivers and the Conservation Movement*, 2<sup>nd</sup> ed. (New York, N.Y.: Rowman and Littlefield Publishers, Inc., 2004), 155-6 for quotes.

(Staff director, Senate Select Committee on National Water Resources). Collectively, these river enthusiasts, recreation professionals, and water experts helped to produce the first proposed wild and scenic river legislation in 1965 while Congress simultaneously addressed water pollution, clean water, and civil rights legislation. Wild and scenic rivers got a boost in February from President Lyndon Baines Johnson's *Natural Beauty Message* to Congress (1965) when he noted the importance of "free flowing stretches" of natural rivers. One year later in 1966, the Senate introduced and passed a wild and scenic river bill with a vote of 71 to 1, only to have it ignored by the House.<sup>14</sup> President Johnson's January 30, 1967 message to Congress also included support for a national river protection program, and the Senate again took up the issue through two bills, S. 119 (procuring land for wild rivers) and S. 1092 (procuring land for scenic rivers), before initiating another round of hearings before the Committee on Interior and Insular Affairs. All seventeen members of this committee represented states west of the Mississippi River, and fifteen were from the western side of the 100<sup>th</sup> meridian.<sup>15</sup> This time the momentum pushed forward, and in 1968, Congress created a National Wild and Scenic River System. The act immediately protected eight rivers (and four tributaries), and slated twenty-seven as study rivers, including the Chattooga. In accordance with the act, Congress asked for a report describing the characteristics that made study rivers worthy of designation, as well as information on landownership, land uses, state cooperation, and what federal agency would take on management functions.<sup>16</sup>

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<sup>14</sup> Palmer, *Endangered Rivers*, 156, for Craighead quote. President Lyndon Baines Johnson, *Special Message to the Congress on Conservation and Restoration of Natural Beauty*, February 8, 1965, available online, <http://www.lbjlib.utexas.edu/johnson/archives.hom/speeches.hom/650208.asp>, last accessed March 29, 2010.

<sup>15</sup> U.S. Congress, Senate, Committee on Interior and Insular Affairs, *Wild and Scenic Rivers, Hearings Before the Committee On Interior and Insular Affairs*, 90<sup>th</sup> Congress, 1<sup>st</sup> sess., April 13, 1967.

<sup>16</sup> U.S. Congress, House, Committee on Interior and Insular Affairs, *Amending the Wild and Scenic Rivers Act by Designating the Chattooga River, North Carolina, South Carolina, and Georgia as a Component of the National Wild and Scenic Rivers System, submitted by the Committee on Interior and Insular Affairs*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., November 29, 1973, House Report 675, page 2; Palmer, *The Wild and Scenic Rivers of America*, 25-26.

## Wild and Scenic in the South

As wild and scenic river proponents like the Craighheads worked with Senate colleagues in the early 1960s to produce the Wild and Scenic Rivers Act, the United States Department of the Interior announced a national “Wild River Study” of twelve rivers. In 1964, Interior staff tasked the Forest Service with executing an investigation that included the Savannah River’s Georgia and South Carolina tributaries.<sup>17</sup> Secretary of the Interior Stewart Udall was well aware that southern rivers were threatened by dams. The Duke Power Company had announced formal plans to build three dams on South Carolina’s Keowee and Toxaway Rivers in 1965.<sup>18</sup> Duke filed an application for a Federal Power Commission license, and the licensing process solicited comments from parties affected by power projects and from other federal agencies. In response to Duke’s proposed project, Secretary Udall explained that the project would have an influence on rivers that the Wild River Study Team was technically studying for inclusion in the then undefined national system of protected rivers. Udall also noted that the Chattooga River in Georgia would not be touched, but based on this situation, Udall “strongly” believed “that at least one major tributary of the Savannah River – the Chattooga – should be preserved in its free-flowing condition for the benefit of future generations and for the purpose of giving needed balance to the comprehensive development of this river.”<sup>19</sup> As early as 1965, the Department of the Interior went on record as recommending that any company or agency seeking approval to build a dam in the Chattooga River valley be denied a Federal Power Commission license. But

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<sup>17</sup> U.S. Department of the Interior, news release, “Wild Rivers Team Selects Twelve Rivers For Detailed Study,” August 5, 1964, Folder Topical Files, 1964, Duke Power, Box 68, The William Jennings Bryan Dorn Papers, South Carolina Political Collections, The University of South Carolina, hereafter WDP.

<sup>18</sup> “Duke Plans \$700 Million Oconee, Pickens Projects,” Anderson (S.C.) *Mail*, January 2, 1965, Folder Legislation Clippings, Industry, Box 158, Olin DeWitt Talmadge Johnston Papers, South Carolina Political Collections, The University of South Carolina, hereafter OJP.

<sup>19</sup> Stewart L. Udall, Secretary of the Interior, to Joseph C. Swidler, Chairman, Federal Power Commission, July 28, 1965, p. 3, Folder Topical Files, 1965, Keowee-Toxaway, Box 72, WDP.

Udall and the Department of the Interior were not the only ones interested in protecting the Chattooga.

As Udall promoted a national wild rivers study group, Georgians and South Carolinians joined the initiative. The Mountain Rest (S.C.) postmaster wrote Congressman W. J. Bryan Dorn, claiming that he was “born and raised here near the Chattooga River” and thought a fully designated wild and scenic river would be good for the region. Jack Brown expressed a keen interest how the “tourist potential” might be developed. He supported Forest Service acquisition of additional land only if such land was necessary for “something like the National Wild River System which I understand will preserve and develop [sic]” the property for recreation. Brown’s correspondence exposed his opinion that the National Forest Service’s general land acquisition process limited timber cutting, and thus forestry-related jobs, but the Wild and Scenic River idea seemed to balance recreational jobs and preservation in his opinion.<sup>20</sup> Other conservationists like Ramone Eaton also acted on behalf of the Chattooga’s watershed. Eaton – a pioneer in southeastern boating culture, a former Atlanta educator, and then an American Red Cross executive in Washington, D.C. – reminded Greenville, South Carolina attorney C. Thomas Wyche in 1967: “You may remember that the Toxaway Gorge area was lost to the Duke Power [Company’s dams and reservoirs] because of the complete indifference of the South Carolina citizenry.”<sup>21</sup> Wyche also encouraged South Carolina’s Rep. W. J. B. Dorn and Senator Ernest F. Hollings to support inclusion of the Chattooga in the 1968 Wild and Scenic Act because, he feared, “too often South Carolina does not have a voice in matters of this sort simply because

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<sup>20</sup> Jack L. Brown, Postmaster, Mountain Rest, S.C., to Rep. W. J. B. Dorn, Washington, D.C., May 25, 1966, Folder Topical Files, 1966, Savannah River, Box 77, WDP.

<sup>21</sup> Ramone Eaton, Vice President, American Red Cross, Washington, D.C., to C. Thomas Wyche, Greenville, S.C., December 18, 1967, Chattooga Conservancy Files, Clayton, Georgia; Henry Wallace, “Ramone Eaton – A Tribute,” *American Whitewater* 25, 3 (May-June 1980): 15-19; John Lane, *Chattooga: Descending Into the Myth of Deliverance River* (Athens: University of Georgia Press, 2004), 35-37; Payson Kennedy, “River Exploration in the Southern Appalachians,” *First Descents: In Search of Wild Rivers*, eds. Cameron O’Connor and John Lazenby (Birmingham, Ala.: Menasha Ridge Press, 1989), 146-154.

there is no organized group in this area that has any interest in such things and we let matters of this sort go by default.”<sup>22</sup> Brown, Eaton, Wyche, and an established contingent of southeastern conservationists recognized in 1968 that the Chattooga, unlike the downstream Savannah River where two dams had come online between 1954 and 1962, could remain wild and free of dams. The unimproved Chattooga’s scenic attributes, exemplary white water, and lack of development perfectly fit the specifications of the evolving national wild, scenic, and recreational rivers policy promoted by the Craigheads.

The Chattooga River’s 1968 designation as a study river – spurred on by cooperative and competitive contingents – fits well within the larger national process that produced the Wild and Scenic Rivers Act. River advocate Tim Palmer has written extensively about the United States’ river and conservation movement, and how national dam planning and construction initiated in the 1920s slowed during the Great Depression only to resume with intensity in the 1950s. These public water development programs typically placed secondary emphasis on recreation, water quality, and free flowing rivers valued by individuals like Brown, Eaton, and Wyche. The existing wild and scenic river narrative also follows wilderness crusaders who were against dams and “for a river,” as the famous environmentalist and former Sierra Club executive David Brower would say.<sup>23</sup> The Chattooga’s story closely paralleled the nation’s other wild and scenic river stories in this sense. Many southerners organized, challenged river development, and spoke on the river’s behalf.

This point is important because Palmer and others have generalized about the regional differences in river conservation, protection, and designation, going so far as to state that

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<sup>22</sup> C. Thomas Wyche, Greenville, S.C., to Senator Ernest Hollings (August 10, 1967) and Rep. W. J. B. Dorn (August 10, 1967), both letters located in the Chattooga Conservancy Files, Clayton, Georgia.

<sup>23</sup> John McPhee, *Encounters With the Archdruid* (New York, N.Y.: Farrar, Straus, and Giroux, 1971), 159 for Brower quote.

Northern and Midwestern environmental, political, and cultural factors made river protection easier. The South, Palmer claims, “has typically followed later” in social and environmental reforms.<sup>24</sup> Not unlike Palmer, historian Samuel Hays once classified the South as a “lagging region” in environmental action based on a tabulation of Congressional votes pertaining to the environment between 1970 and 1977.<sup>25</sup> In essence, both authors associate limited legislation with a lack of a grass-roots environmental mentality – or what Hays would call an environmental culture – that inspired Congressional action. Palmer correctly noted that individual “southerners are fiercely devoted to their rivers,” as the Chattooga’s story reveals.<sup>26</sup> However, both writers and most other historians of the environmental movement have overlooked the contributions of southern scientists and advocacy groups to the region’s and the nation’s environmental consciousness.<sup>27</sup>

The American South has a rich conservation and environmental history. For example, Georgians led grass-roots opposition to Georgia Power’s Tallulah Falls hydroelectric dam (1911).<sup>28</sup> The inter-war period was particularly fertile: Georgia volunteers organized one of dozens of Appalachian Trail clubs (1930) to complete the national trail, and the idea for the

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<sup>24</sup> Palmer, *The Wild and Scenic Rivers of America*, 54.

<sup>25</sup> Samuel P. Hays, “From Conservation to Environment: Environmental Politics in the United States Since World War II,” in Kendall E. Bailes, ed., *Environmental History: Critical Issues in Comparative Perspective* (Lanham, Md.: University Press of America and the American Society for Environmental History, 1985), 20, and 35, n. 23; Samuel P. Hays, *A History of Environmental Politics Since 1945* (Pittsburgh, Pa.: University of Pittsburgh Press, 2000), 94-95.

<sup>26</sup> Palmer, *The Wild and Scenic Rivers of America*, 53.

<sup>27</sup> Robert Gottlieb, *Forcing the Spring: The Transformation of the American Environmental Movement* (Washington, D.C.: Island Press, 1993); Andrew Hurley, *Environmental Inequalities: Class, Race, and Industrial Pollution in Gary, Indiana, 1945-1980* (Chapel Hill: University of Chapel Hill Press, 1995); Adam Rome, *Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York, N.Y.: Cambridge University Press, 2001). For one account of southern activism, see historian Suzanne Marshall’s account of grass-roots activism in a broadly defined Appalachian South. She does identify southern academic and professional scientists who worked with federal land managers to set aside public land for wilderness after 1950, but in the case of Georgia, talks more about Georgia’s forests than Georgia’s rivers. See: “*Lord, We’re Just Trying to Save Your Water*,” in particular chapter 4 – “Early Activism in the Southern Appalachians.” See also: Jeffrey K. Stine, *Mixing the Waters: Environment, Politics, and the Building of the Tennessee-Tombigbee Waterway* (Akron, Ohio: University of Akron Press, 1993).

<sup>28</sup> McCallister, “A Source of Pleasure, Profit, and Pride”

Wilderness Society was hatched outside of Knoxville, Tennessee (1934).<sup>29</sup> Marjory Stoneman Douglass, Herbert Stoddard, Archie Carr, and Marjorie Carr, campaigned, respectively, to save the Everglades, cultivated long leaf pine ecosystems, contributed to the conservation biology field, and campaigned to defeat the Cross Florida Barge Canal.<sup>30</sup> Also active during the inter-war era, regionalists Rupert Vance, Howard W. Odum, and others repeatedly linked human behavior with environmental problems and solutions. Following in their father's footsteps, ecologists Eugene and Howard T. Odum translated the ecological principals they developed in southern fields and springs in the 1950s into a vernacular for national consumption after 1970.<sup>31</sup> These examples illustrate how southern citizens, outing clubs, academics, and scientists contributed to an environmental culture in the South responsible for conserving national landscapes and restoring southern riverscapes like the Chattooga River. Georgians and South Carolinians who spoke for the Chattooga River in the 1960s and 1970s had much in common with other environmental activists in the South and around the country.

### **Georgia Environmentalism**

Two associations established in the 1960s reveal how Sunbelt residents cultivated a cooperative relationship with corporate and federal leaders by utilizing state institutions, grassroots initiative, and scientific expertise to speak for a wild and scenic Chattooga River. The Georgia Legislature established the first association – the Georgia Natural Areas Council – in

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<sup>29</sup> Frank Wright, "Anchor of the Deep South," *AT Journeys: The Magazine of the Appalachian-Trial Conservancy* 1, 3 (November-December 2005): 24-28; Paul S. Sutter, *Driven Wild: How the Fight Against Automobiles Launched the Modern Wilderness Movement* (Seattle: University of Washington Press, 2002), 3-4.

<sup>30</sup> Jack E. Davis, *An Everglades Providence: Marjory Stoneman Douglas and the American Environmental Century* (Athens: University of Georgia Press, 2009); Frederick R. Davis, "A Naturalist's Place: Archie Carr and the Nature of Florida," in Jack E. Davis and Raymond Arsenault, *Paradise Lost? The Environmental History of Florida* (Gainesville: University Press of Florida, 2005), 72-91; Albert G. Way, "Burned to Be Wild: Herbert Stoddard and the Roots of Ecological Conservation in the Southern Longleaf Pine Forest." *Environmental History* 11, 3 (July 2006): 500-526; Steven Noll and David Tegeder, *Ditch of Dreams: The Cross Florida Barge Canal and the Struggle for Florida's Future* (Gainesville: University of Florida Press, 2009).

<sup>31</sup> Betty Jean Craige, *Eugene Odum: Ecosystem Ecologist and Environmentalist* (Athens: University of Georgia, 2001).

1966 to survey the state's rare and valuable plant and animal species, "or any other natural features of outstanding scenic or geological value."<sup>32</sup> Georgia State University ecologist, trout fisherman, and activist Dr. Charles Wharton drafted the Council's founding legislation, which freshman state senator, and future governor, Zell Miller introduced.<sup>33</sup> The Council – composed of eight members selected from four state agencies and four Georgia academic institutions – possessed no explicit regulatory or direct management authority over natural resources and served primarily in an advisory capacity to the state of Georgia. Robert Hanie – the Council's first executive director and a recipient of multiple Emory University degrees – collaborated with state resource managers and university scientists like Charles Wharton and Eugene P. Odum to make recommendations on what natural areas the state should consider protecting. Hanie maintained a skeleton staff of volunteers and academic scientists who developed policy recommendations like the Georgia Scenic Rivers Act (1969).<sup>34</sup>

If the Georgia Natural Areas Council championed the Chattooga River as a prime example of a *state* natural area worthy of protection, a second institution, the Georgia Conservancy, molded opinion on behalf of the river as an irreplaceable *national* resource. The Georgia Conservancy played an important role as a mechanism for change during the Chattooga's Wild and Scenic River study phase and campaign. James A. Mackay – a former Decatur legislator and Congressional representative – served as the founding president for the

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<sup>32</sup> State Council for the Preservation of Natural Areas Act (March 10, 1966), Ga. L. 1966, 330. See also: Georgia Council for the Preservation of Natural Areas, *Report of the First Year of Operation, 1967-69* (Decatur, Ga.: [n.pub.], [n.d.]).

<sup>33</sup> Marshall, "Lord, We're Just Trying to Save Your Water," 111-113. For a tribute to Wharton, see: Jerry L. McCollum, "President's Column: Charles Wharton – Champion of Georgia's Unspoiled Places," *The Call* 14, 1 (Winter 2004), available online: <http://www.gwf.org/presvol14no1.htm>, last accessed June 4, 2006.

<sup>34</sup> Georgia was among a half-dozen states that attempted to, or did, establish state-level river protection acts before 1970. See: Palmer, *Endangered Rivers*, 158; *Georgia Scenic Rivers Act of 1969* (April 28, 1969), Ga. L. 1969, 933; "Georgia Scenic Rivers Bill In Senate, Has Chattooga," *Clayton (Ga.) Tribune*, February 13, 1969; A. Stephen Johnson, *Scenic Rivers of Georgia: A Report Prepared for the Georgia Natural Areas Council*, 1971; Phil Garner, "The Master Grantsman," *Atlanta Journal-Constitution Magazine*, May 14, 1978, p. 12.

Atlanta-based non-profit Georgia Conservancy in 1967, an organization modeled after the Western Pennsylvania Conservancy (established in 1932) and the nationally-oriented Nature Conservancy (1951).<sup>35</sup> Georgia Conservancy representatives sold their group to potential members and corporate donors as an organization that followed “a vigorous study and action program” and served as a “responsible voice for conservation.”<sup>36</sup> The Conservancy was primarily an advocacy and educational organization, and though the organization did purchase land – the first such deal involved Panola Mountain, which is now a Georgia State Park – the Conservancy was not focused upon land acquisition. Members considered the Conservancy “a vital” and “purposeful organization” dedicated to conservation activism in Georgia and participation in the democratic process. (For all this talk of grassroots participation and democracy, it is worth noting that some frustrated Conservancy members eventually splintered from the Conservancy before 1970 over the issue of tax-exempt and direct lobbying issues. Members who wanted to “attack environmental problems from a non-tax-exempt platform” broke with the Conservancy and formed a new organization, Save America’s Vital Environment.<sup>37</sup>) The Conservancy’s members – mostly white, affluent, and well educated “businessmen, housewives, scientists, teachers, artists, naturalists, sportsmen, botanists, students, and young people” – gathered every fourth Saturday to explore their state’s wild, scenic, and

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<sup>35</sup> Letter from Robert E. Hanie, to Dr. H. S. Alden, Atlanta, Georgia, May 13, 1967, Folder: History of the Conservancy, Box 7, Georgia Natural Areas Council, Records, 1966-1973, State Parks and Historical Sites (of the Georgia Dept. of Natural Resources collection), 30-8-43, Georgia Department of Archives and History, Morrow, Georgia, hereafter GNAC; “Georgia Conservancy Receives Charter; Officers, Committees Named,” *Georgia Conservancy Quarterly* (Winter 1968), Box 22, Folder: “Miscellaneous re Various Civic Activities,” James A. Mackay Papers, Special Collections Department, Robert W. Woodruff Library, Emory University, Atlanta, Georgia, hereafter JMP.

<sup>36</sup> Georgia Conservancy, “Your Georgia Conservancy,” [n.d.], membership packet, Folder: History of Conservancy, Box 7, GNAC.

<sup>37</sup> Merle Schlesinger Lefkoff, “The Voluntary Citizens’ Group as a Public Policy Alternative to the Political Party: A Case Study of the Georgia Conservancy,” (Ph.D. dissertation, Emory University, 1975), 25-34.

recreational areas.<sup>38</sup> The Conservancy promised to provide “members a living awareness” of given ecological problems “by conducting field trips to natural areas,” including a well-attended mid-1967 outing to the Chattooga River. In the Chattooga’s case, the Conservancy teamed up with the Georgia Canoe Association (established in 1966) on more than one occasion to sponsor canoe and hiking trips for members and the general public, as well as state and federal officials. Both the Georgia Conservancy and the Georgia Natural Areas Council offered advice, expertise, and resources to keep the Chattooga free of dams and commercial development, but more importantly, running wild.<sup>39</sup>

Eugene P. Odum was one of a handful of Georgians who circulated within the state’s environmental community and beyond. Odum was a University of Georgia professor who became a vocal proponent for watershed protection and awareness based on his own Institute of Ecology research at the Atomic Energy Commission’s Savannah River Plant, and his familiarity with research conducted by Department of Agriculture staff at the Coweeta Hydrological Laboratory (North Carolina) and the Hubbard Brook Experimental Forest (New Hampshire).<sup>40</sup> One month after Congress named the Chattooga a Study River and eligible for full protection in accordance with the Wild and Scenic Rivers Act, Odum delivered an important paper to a 1968 Kent State audience: “The Watershed as an Ecological Unit.” At this Ohio conference, where the Cuyahoga River served as a focal point before the river’s famous June 1969 fire, Odum

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<sup>38</sup> “Georgia Conservancy Receives Charter; Officers, Committees Named,” *Georgia Conservancy Quarterly* (Winter 1968), Folder: “Miscellaneous re Various Civic Activities,” Box 22, JMP; Lefkoff, “The Voluntary Citizens’ Group,” 156.

<sup>39</sup> “Field Trips – Rare Good Fun,” *Georgia Conservancy Quarterly* (Winter 1968), Folder: “Miscellaneous re Various Civic Activities,” Box 22, JMP.

<sup>40</sup> Frank Benjamin Golley, *A History of the Ecosystem Concept in Ecology: More Than the Sum of the Parts* (New Haven, Conn.: Yale University Press, 1993), 145-151; Wayne T. Swank, Judith L. Meyer, and Deyree A. Crossley, Jr., “Long Term Ecological Research: Coweeta History and Perspectives,” in Gary W. Barrett and Terry L. Barrett, eds., *Holistic Science: The Evolution of the Georgia Institute of Ecology, 1940-2000* (Ann Arbor, Mich.: Sheridan Books, 2001); Mary Beth Reed, Barbara Smith Strack, et. al., *Savannah River Site at Fifty* (Washington, D.C.: U.S. Department of Energy and Government Printing Office, 2002), see chapter 17 – “Early Stewardship.” Research at Coweeta has been underway since the late 1920s, and at Hubbard Brook since the 1950s.

described how a watershed served as a useful tool to analyze the culture-nature interface. According to Odum, “The drainage basin is an ecological system large enough for the practical exercise of integrative study and control, yet not so large as to include too many uncooperative political units. Another beauty of the watershed idea is that it is easy to visualize; one can draw a discrete [sic] line around it on a map.”<sup>41</sup> Odum conceded that the watershed as a unit for study and experimentation was not new. But he explained that too many previous studies only measured “the behavior of the water itself:” sediment loads, erosion rates, or what water did to the land in a watershed. Too few experiments examined energy input and output, nutrient cycling, or how pollutants moved through watersheds. Odum advanced this structural approach to help academics, grassroots organizers, and municipal planners appreciate a deeper understanding of the water cycle, energy flows, and the function of open ecosystems. Odum also offered a concrete solution for the Cuyahoga’s water problems by comparing water quality challenges in Ohio to Georgia’s.<sup>42</sup>

The well-traveled Odum praised those in attendance for their hard work in establishing a cooperative body of scientists, professionals, and activists. “You have everything going for you,” Odum observed in a national atmosphere of nascent wilderness, air, and water legislation, and charged by the civil rights movement and increasing concern over the Vietnam War. His talk, of course, took place eighteen months before the Kent State shooting (1970) that left nine students dead after National Guard troops opened fire on a student demonstration. But, Odum continued, “you’re in the same place as all the rest of the region in that you completely lack a mechanism, and this is true everywhere apparently. You completely lack a mechanism to get the

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<sup>41</sup> Dr. Eugene P. Odum, “The Watershed as an Ecological Unit,” Kent State Symposium, Nov. 1, 1968, Professional Meetings, Symposia, Seminars, Conferences and Lecture Trips 1937-1968, Eugene P. Odum Papers, Institute of Ecology, 97-045, Hargrett Rare Book and Manuscript Library, University of Georgia, Athens, Georgia, hereafter EOP.

<sup>42</sup> Ibid.

action you need.” Odum reminded his listeners that water quality problems originated on the land above the banks, and not between the riverbanks. To improve water quality, Odum recommended two things. First, community activists needed to look for pollution sources above the river banks. Second, Odum suggested that the community form a non-partisan citizens’ organization dedicated to resource protection that could lobby regional and federal officials. “In Georgia there’s one that was started [twelve months ago]...called the Georgia Conservancy.”<sup>43</sup> Odum singled out the Conservancy as an example of an organization that fundamentally improved the relationship between people and watersheds, and he recommended mid-westerners consider a similar avenue.

The Georgia Conservancy and Georgia Natural Areas Council shared members, executive officers, and scientific experts who likewise enhanced the way people related to their local environments. These organizations influenced the relationship between water and power in a democratic society managed by narrowly focused special interests. Robert Hanie organized a “Chattooga River Seminar” at the Dillard House in Dillard, Georgia, in November 1968, two months after the National Wild and Scenic Rivers Act declared the Chattooga an official Study River, and three weeks after Odum’s Ohio talk. Two groups – a collection of bureaucrats and special interest groups, including forty representatives from the Forest Service, the Bureau of Outdoor Recreation, state development organizations, and resource managers from three states – met to discuss how they might shift the Chattooga from Study River to Wild and Scenic River. Lynn Hill, the Georgia Conservancy’s director, and William Dunlap, assistant to the president of the Georgia Power Company, also attended the meeting. Dunlap, a longtime executive with the company, frequently paddled the Chattooga’s whitewater, and his respect for the conservation

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<sup>43</sup> Dr. Eugene P. Odum, type-script of an audio recording of remarks before the Cuyahoga River Watershed Symposium panel “Gaps in the Watershed – Knowledge, Communication, Application, Management,” November 1, 1968, Folder: “The Watershed as an Ecological Unit,” Kent State Symposium, Nov. 1, 1968, EOP.

community and his relationship with the company made him a valuable member of the river lobby in the late 1960s.<sup>44</sup> This November meeting initiated a collaborative and cooperative coalition between federal and state bureaucrats and public and private interest groups who would continue to speak for Georgia's environment well into the future.<sup>45</sup>

Ironically, one of those interests was the Georgia Power Company. Long a player in state water history, Georgia Power was again a major and unique player in the Chattooga River's story. Since 1920, the company had owned approximately 37 percent of the property (5,690 acres) necessary for the Chattooga's fifty-mile long and approximately three-mile wide protective corridor.<sup>46</sup> The company intended to build a series of hydroelectric dams and replicate the Tallulah-Tugaloo Project to power the New South. But a chronology of factors – including the public-private power debates over Muscle Shoals during and after World War I, a regional drought, a shift to coal-fired generation, and a lack of capital during the Great Depression, plus an interest in atomic energy sources after World War II – led Georgia Power executives to forgo developing the Chattooga's five potential hydropower sites.<sup>47</sup> By the late 1960s, the fast growing company also encountered a racial discrimination suit, faced rising construction costs for fossil fuel and hydroelectric plants, and faced competition as other energy companies invested in nuclear power. To further complicate the company's public standing,

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<sup>44</sup> William Dunlap, telephone conversation with author, September 1, 2005, notes in author's possession.

<sup>45</sup> Andrew Sparks, "Can We Keep the Chattooga Wild?" *Atlanta Journal and Constitution Magazine* (September 22, 1968): 12; "Group Discusses Development and Objectives For Chattooga River," Clayton (Ga.) *Tribune*, November 28, 1968; "Chattooga Has Friends," Atlanta (Ga.) *Journal Constitution*, December 8, 1968. See also a sample letter sent to the Dillard meeting invitees by Robert Hanie, Executive Director, Georgia Council for the Preservation of Natural Areas, October 22, 1968, Folder: Chattooga Seminar, Nov. 20-21, Box 10, GNAC.

<sup>46</sup> The watershed drains approximately 180,000 acres. Today, the Forest Service manages about 122,000 acres, with 14,000 acres making up the Wild and Scenic River Corridor. U.S. Department of Agriculture, Forest Service, Southern Region, *Wild & Scenic Study Report: Chattooga River*, June 15, 1971, p. 31; U.S. Congress, House, Subcommittee on Interior and Insular Affairs, *Wild and Scenic Rivers Act Amendments, Part II*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 29-30, 1973, 11; U.S. Department of Agriculture, Forest Service, Southern Region, *Revised Land and Management Plan: Sumner National Forest*, Management Bulletin R8-MB 116A, January 2004, p. 4-5 and chapter 4, "Management Area 2 – Chattooga River."

<sup>47</sup> Wright, *History of Georgia Power*, 212

Georgia Power encountered customer resistance to a proposed rate increase to finance these future power projects while simultaneously reporting high revenues and profits.<sup>48</sup> In a cagey opinion on the Chattooga river's future, Duke Power executive Carl Horn, Jr., thought there was "no need for further impoundments or power developments on the Savannah beyond Trotters Shoals." Horn was primarily interested in making sure that the Corps did not build four proposed Chattooga projects, but he must have had ulterior motives. Horn protested more dams in the upper reaches of the Savannah River watershed while the Duke Power Company moved forward with the Keowee-Toxaway project, where the company completed four dams and a nuclear facility between 1965 and 1991.<sup>49</sup> It's not clear if Horn was more concerned about competition from Georgia Power's or the Corps' Chattooga river plans. In light of these challenges, and after over half a century of land ownership in the Chattooga watershed, the Georgia Power Company looked for a way out in 1968. Anticipating the Wild and Scenic Rivers Act's passage, the Georgia Power Company's public relations representatives announced that the company would "be most willing in the matter of land ownership to cooperate with groups interested in the Chattooga River," and that the company did not intend to develop the river's hydropower potential because such projects were "marginal from the economic view point."<sup>50</sup> With this decision, a wild river's greatest enemy, the dam builders, backed away from the Chattooga. In this wilderness battle, there wasn't much of a fight.

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<sup>48</sup> "10 Industries Get Power," *Atlanta (Ga.) Journal*, October 27, 1966, p. 61; "Atom Site Chosen by Georgia Power," *Atlanta (Ga.) Journal*, November 2, 1967, p. 22-A; "Georgia Power, Union Cited in Race Suit," *Atlanta (Ga.) Journal*, April 13, 1968, p. 3-A; "Georgia Power Company Faces Job Bias Suit," *Atlanta (Ga.) Journal*, January 10, 1969, p. 2-A.

<sup>49</sup> Carl Horn, Jr., Vice President, Duke Power Company, to Rep. W. J. B. Dorn, Washington, D.C., June 26, 1967, Folder Topical Files, 1967-68, Duke Power, Box 79, WDP.

<sup>50</sup> For quotes: Sparks, "Can We Keep the Chattooga Wild?" p. 17; *Wild & Scenic Study Report: Chattooga River*, June 15, 1971, see Appendix A: *Statement of Georgia Power Company to the Public Hearing regarding the Study of the Chattooga River in the National Wild and Scenic River System, Highlands, North Carolina, December 5, 1969*, p. 117-118. See also: Buzz Williams, "The Wild and Scenic Chattooga River," *Chattooga Quarterly* (Spring 2004): 3-4.

The Wild and Scenic River process presented Georgia Power with an extraordinary opportunity to extract itself from the Chattooga watershed. The situation provided the company with a chance to swap their Chattooga land with Forest Service property adjacent to the company's Tugaloo Lake and the inundated Tugaloo River. This combined land purchase and exchange signified that the Chattooga land held little value for the company; indeed, it may have actually represented a liability from the perspective of management and taxation.<sup>51</sup> The Tugaloo land, on the other hand, increased the company's land holdings in a recreational and leisure oasis owned primarily by Georgia Power. If the land transfer benefited the company and the Chattooga, the transfer also delivered the river to the Georgia Natural Areas Council and the Conservancy because the deal eliminated the dam builders, the traditional opponents to wild and scenic rivers. Even an Army Corps of Engineers representative eventually conceded that dams on the Chattooga did not make economic sense.<sup>52</sup> But this cooperative relationship between Georgia Power and the Forest Service, while technically for the public good, ultimately served very narrow recreational ends and constituencies.

This entangling relationship between private business and public officials gained traction with the addition of private environmental lobbyists, but the process included few full-time Rabun County (Ga.) and Oconee County (S.C.) residents. By 1970 both counties were in the midst of striking economic shifts, and these Sunbelt transformations only intensified after 1970. Rabun County, with less than 1% non-white population, experienced a nominal population increase of just over nine hundred people between 1960 and 1970, when it had a total population

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<sup>51</sup> Del W. Thorsen, Forest Supervisor, Columbia, S.C., to Rep. W. J. B. Dorn, Washington, D.C., March 10, 1971, Folder Topical Files, 1971-1972, Rivers and Harbors, Chattooga River, Box 97, WDP.

<sup>52</sup> *Wild & Scenic Study Report: Chattooga River*, June 15, 1971, see *Appendix B: Statement of Colonel John S. Egbert, District Engineer, U.S. Army Engineer District, Savannah, Georgia*, p. 119. The same document indicated that the only federal opposition to river protection came from the Federal Power Commission, and the FPC recommended the river not receive protected status so dams might be built to meet future national energy needs, p. 27-29.

of about 8,300 people. The 370-square mile county's shift from agricultural and forestry employment was more significant with a loss of more than 175 positions and a corresponding increase of nearly 500 manufacturing positions primarily in the "textiles and fabricated textiles" sectors.<sup>53</sup> On the South Carolina side of the Chattooga River, the nearly five times more populous Oconee County (over 40,000 residents with an 11% non-white population) grew much more slowly. But Oconee (650 sq. miles) gained over 2000 manufacturing positions while losing over 1000 agricultural-related jobs. In this Sunbelt socio-economic context, the Chattooga River represented a cultural retreat for a large body of non-agricultural employees in two states who lived within sixty miles of the river and recreation destination. Rabun and Oconee County residents found themselves increasingly tied to time clocks that regulated not only labor, but also their recreational time in easily accessible southern Appalachian leisure landscapes like the Chattooga River corridor.

Rabun and Oconee residents participated in discussions pertaining to the Chattooga's federal designation to varying degrees. The 'locals' who had long visited the river to fish, socialize, or for other community uses have been described by wild and scenic river advocates as non-participants in the many private or public discussions about the river's future. One non-participant, John Ridley, grew up on the Chattooga's South Carolina bank, just upriver from the Highway 28 bridge, before attending Clemson University in 1961, where he received a horticulture degree. According to him, South Carolina and Georgia locals who had lived near the river did not participate in the process for two reasons.<sup>54</sup> First, there was limited communication between folks who lived along the river and those who lived in Walhalla, Oconee's county seat. As an illustration of this disconnect, Ridley explained that his family

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<sup>53</sup> Rabun County, Georgia, and Oconee County, South Carolina: Eighteenth U.S. Census, 1960, *Characteristics of the Population*; Nineteenth U.S. Census, 1970, *Characteristics of the Population*.

<sup>54</sup> John D. Ridley, telephone conversation with the author, March 27, 2006, notes in author's possession.

never had a phone and did not receive electricity until 1952, despite his region's extensive hydroelectric development before 1930. Their neighbors – the Russells – obtained the first community phone connection in 1968, and were among the last to sell their property to the Forest Service in 1970. (The Forest Service has since turned the Russell property into an interpretive site highlighting the property's nineteenth century use, but an arsonist targeted one structure in 1988.<sup>55</sup>) Second, Ridley put the Chattooga's example in a larger historical context of southern Appalachian community reaction to Forest Service policy. He explained that the Forest Service's history of land condemnations in Georgia and South Carolina dating back to 1915 left an impression on local residents that when the Forest Service threatened to condemn property, little could be done to stop the process. This early fear likely dated back to the Forest Service's condemnation of thousands of acres of private property when it began to acquire land under the auspice of watershed protection and the Weeks Act (1911).<sup>56</sup> It is worth noting that the Wild and Scenic River Act (1968) made land condemnation for river corridors very difficult, but land adjacent to the future corridor was indeed condemned.<sup>57</sup> Given this context, local people "did not think they could do anything or did not know about the process because they lived so far away." Furthermore, farming families like Ridley's, who lived along the river before moving out in 1970, "lost interest after losing their land." These families may have chosen not to participate, but that did not mean they did not care about the river. Ridley explained that the

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<sup>55</sup> Ray Chandler, "Forest Service to Allow More Public Comment on Proposed Oconee Pioneer Farmstead," Anderson (S.C.) *Independent Mail*, September 4, 2009, <http://www.independentmail.com/news/2009/sep/04/forest-service-allow-more-public-comment-proposed-/>, last accessed December 21, 2009.

<sup>56</sup> Nicole Hayler, *Sound Wormy: Memoir of Andrew Gennett, Lumberman* (Athens: University of Georgia Press, 2002), 101-106, 112-113, 209 n. 8; Susan Lewis Koyle, *Genealogy Extracted from Forest Service Court Cases in Rabun County, Georgia* (Bowie, Md.: Heritage Books, 2001); R. C. Nicholson, "The Federal Forestry Service," in *Sketches of Rabun County History, 1819-1948*, ed. Andrew Jackson Ritchie (Chelsea, Mich.: Rabun County, Georgia Historical Society, 1995), 358-366.

<sup>57</sup> Handwritten notes on map, U.S. Forest Service, *Chattooga River: As A Wild and Scenic River* (1971), Folder: Chattooga River, Box 28, Special Projects and Issues and Areas Files, Commissioner's Office, Georgia Department of Natural Resources (86-01-12), Georgia Archives, Morrow, Georgia.

“locals knew they took better care of the river,” and he believed that the “general public doesn’t take care of the property.” He also claimed that today’s visitors from outside of the region – mostly raft, kayak and canoe recreationists – leave their trash along a river that once provided his family with trout.<sup>58</sup> Ridley was not alone in the opinion that local residents who cared about the Chattooga did not vocalize significant opposition to the river’s designation. Newspaper editors and their coverage on both sides of the river portrayed the initial wild and scenic river designation process as a love-fest, with one paper noting “almost no opposition” at advertised public “listening sessions” as the designation process began in 1968.<sup>59</sup>

But beginning in 1969 conservation-minded critics – particularly from South Carolina – warned Forest Service officials facilitating study sessions and public hearings that designating the Chattooga a Wild and Scenic River would require users – including local residents and outside visitors – to adjust their behavior within the river corridor. One participant at a Clemson, South Carolina, meeting observed: “You are not going to make woodsmen out of Sunday sightseers.”<sup>60</sup> Attention to planned road and trail closures on the South Carolina side of the river, as well as potential restrictions on hunting and fishing rights, occupied more than passing conversation at the same Clemson meeting and foreshadowed future points of contention.<sup>61</sup> Tension flared at yet another Chattooga related public meeting when a lawyer from Greenville – a South Carolina city located about sixty-five miles east of the river – attacked the Forest Service’s clear-cutting policy, only to be rebuffed by resident loggers in the audience who

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<sup>58</sup> John D. Ridley, telephone conversation with the author, March 27, 2006, notes in author’s possession.

<sup>59</sup> “Chattooga’s Role Under Rivers Act Discussed,” Keowee (Walhalla, S.C.) *Courier*, December 4, 1968, p. 3; “Proposals Outlined To Make Wild, Scenic Site Of Area Along Chattooga River,” Greenville (S.C.) *News*, April 16, 1969, p. 10; “Hearing On Chattooga River Project Set For December 5,” Clayton (Ga.) *Tribune*, December 4, 1969, p. 1. For quote: “Group Studies Chattooga Wild River; To Have Camping Facilities,” Clayton (Ga.) *Tribune*, March 26, 1970, p. 1.

<sup>60</sup> Sparks, “Can We Keep the Chattooga Wild?” 18; “Proposals Outlined to Make Wild, Scenic Site of Area Along Chattooga River,” Greenville (S.C.) *News*, April 16, 1969, p. 10.

<sup>61</sup> “Proceeding of Chattooga River Study Meeting,” Clemson House, Clemson, SC, April 15, 1969, Folder: Chattooga Seminar, Nov. 20-21, Box 10, GNAC.

responded that clear-cutting operations improved the forest's health and provided jobs for South Carolina residents. These South Carolina meeting participants, as countryside conservationists of varying degrees, clearly identified the river as a local leisure and labor landscape, and worried that the river's official designation might result in reduced recreational access or a loss of forestry-related jobs in the face of increasingly centralized federal authority.<sup>62</sup>

River enthusiasts from Atlanta and Greenville, however, envisioned the river primarily as a leisure landscape for nearby Sunbelt residents. Members of the Georgia Conservancy, paddlers from the Georgia Canoe Association, Georgia Power employees, and the Sierra Club's Joseph LeConte Chapter formed a coalition. Private interests – such as the Georgia Power Company – spoke primarily for investors and corporate interests. Another private interest that cast itself as publicly minded – the Georgia Conservancy – really only spoke for local and extra-local elites.<sup>63</sup> For example, Conservancy member Fritz Orr, Jr., who lived part-time in Atlanta, and North Carolinian Frank Bell, spoke before Congress in support of the river.<sup>64</sup> Orr and Bell, both path-breaking southern paddlers, also owned and operated summer camps that utilized the Chattooga's headwaters. To further entangle these interests, one of Orr's Atlanta neighbors was Georgia Power executive Harlee Branch, Jr.<sup>65</sup> But these extra-local elites were not the only river enthusiasts. Greenville attorney Ted Snyder, who grew up in Walhalla twenty miles east of the Chattooga, had spent time on the river as a young adult and understood that the Chattooga represented the last of its kind in the mountain South. He spoke for the river on behalf of the

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<sup>62</sup> "Opinions On Developing Chattooga River Differ," Greenville (SC) *News*, September 1, 1971.

<sup>63</sup> Louis Warren articulates the difference between locals and elites, as well as their residence status, to illustrate how local and state authorities negotiated access to, and protection of, resources. See: *The Hunter's Game*, 23-27, 177.

<sup>64</sup> U.S. Congress, House, Subcommittee on Interior and Insular Affairs, *Wild and Scenic Rivers Act Amendments, Part II*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 29-30, 1973, pages 54, 65-68.

<sup>65</sup> Sparks, "Can We Keep the Chattooga Wild?" 17; Kennedy, "River Exploration in the Southern Appalachians," 146-154.

local Sierra Club chapter and before Congressional committees in Washington, D.C. as a Walhalla “transplant” living in Greenville.<sup>66</sup>

The Conservancy and the Council – which shared members and executives – continued to speak for the Chattooga River after 1970 to conserve a unique southeastern river. And agents from Georgia Power worked with Forest Service employees to finalize the land purchase and exchange. When the Forest Service released and made available by mail the much anticipated and predictably favorable report, *A Proposal: The Chattooga, ‘A Wild and Scenic River’* in 1970, local newspapers and the Conservancy’s newsletter encouraged members to comment on the study to show support for the Chattooga’s “unspoiled wilderness,” wild water, and “virgin banks.”<sup>67</sup>

Three years later, Reps. Roy A. Taylor (N.C.), William Jennings Bryan Dorn (S.C.), James R. Mann (S.C.), and Phil Landrum (Ga.) co-sponsored a bill to add the Chattooga River to the official list of wild and scenic rivers.<sup>68</sup> This legislative introduction sparked a Congressional hearing process, and Dr. Claude Terry – an Emory University microbiologist, avid whitewater boater, and Georgia Conservancy spokesman – testified before a subcommittee charged with hearing public input on the Chattooga’s Wild and Scenic status in 1973. Terry followed standard discourse on the need for balanced water management, and declared: “Using a river for power production, building industries or homes along its bank or in its flood plains...are all consumptive uses which damage or destroy the stream itself.” Terry became a contributor to

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<sup>66</sup> “Chattooga Well Worth Effort,” Keowee (S.C.) *Courier*, April 23, 1969; U.S. Congress, House, Subcommittee on Interior and Insular Affairs, *Wild and Scenic Rivers Act Amendments, Part II*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 29-30, 1973, pages 59-60.

<sup>67</sup> Forest Service, U.S. Department of Agriculture, *A Proposal: The Chattooga, ‘A Wild and Scenic River,’* March 3, 1970; Jim Morrison, “Chattooga Wild River Study Release, Is It Strong Enough to Save River?” *Newsletter of the Georgia Conservancy, Inc.*, March 18, 1970; “March 17 Meeting to Hear Forest Service Proposal,” Clayton (Ga.) *Tribune*, March 12, 1970, p. 1.

<sup>68</sup> “Bill would add Chattooga River to Wild, Scenic Rivers System,” Sylva (N.C.) *Herald and Ruralite*, July 26, 1973, p. 6; U.S. Congress, House, Hearings Before the Subcommittee on Interior and Insular Affairs, *Wild and Scenic Rivers Act Amendments, Part II*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 29-30, 1973.

Georgia Conservancy publications and other organizations' outreach, and he often wrote about the dangerous consequences of flood plain development and Soil Conservation Service channelization.<sup>69</sup> The Georgia Canoe Association's Cleve Tedford echoed concerns over development on southern rivers while shifting his focus during the hearing. Tedford testified, "If the watershed of the Chattooga is not protected, then many of the values for which the wild and scenic river is cherished will vanish even though the stream bed and banks are preserved." He expanded the discussion of river protection in language not unlike the Craighead brothers in the 1950s, and Tedford distinguished between river protection and watershed protection in an effort to push his Congressional audience in the direction of the latter.<sup>70</sup> He tapped into a growing ecological systems theory expressed by scientists like Terry, but more clearly articulated by Eugene Odum who viewed whole watersheds as more valuable than individual rivers. Terry and Tedford presented persuasive arguments to shift the Chattooga from a Study River to a Wild and Scenic River.

Despite the introduction of ecology and water quality concerns before these Congressional committees, South Carolina's and Georgia's delegations spoke in less scientific terms for their constituencies to support free flowing rivers. James Mann, a Congressman from Greenville, recalled recreating on the riverbanks "since [his] earliest years as a school boy." Georgia Senator Herman E. Talmadge described the Chattooga as a "primitive, free flowing river" that offered excellent recreational values. Talmadge's counterpart, Senator Sam Nunn,

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<sup>69</sup> Dr. Claude Terry, Watershed Development Subcommittee of the house Public Works Committee, Macon, Georgia, October 12, [1969?], Folder: Georgia Conservancy, 1969-1970, Box 9, Department of Game and Fish (25-01-008), Georgia Department of Archives and History, Morrow, Georgia; Dr. Claude Terry, "What is a Floodplain?" *Georgia Conservancy quarterly Magazine: The Rivers and Streams of Georgia* (August, 1972), Georgia Room, Hargrett Rare Book & Manuscript Collection, University of Georgia, Athens, Ga.; U.S. Congress, Senate, Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, *Proposed Wild and Scenic Chattooga River and the Conveyance of Certain Public Lands*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 10, 1973, p. 81.

<sup>70</sup> U.S. Congress, Senate, Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, *Proposed Wild and Scenic Chattooga River and the Conveyance of Certain Public Lands*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 10, 1973, p., 89.

painted a slightly different picture and worried that visiting crowds threatened the Chattooga's recreational integrity. In Nunn's opinion, such overuse and impact justified federal management and "development of the proper facilities."<sup>71</sup> Each of these spokesmen articulated important reasons for maintaining a wild and scenic Chattooga River as one solution for the region's ever present water problems. Their interests in balancing the old policy of dam construction, preserving wild riverscapes, and maintaining watershed integrity joined together with two other major foundational aspects of the Wild and Scenic Rivers Act – recreation and ecological restoration – as intended by the act's authors, wildlife biologists and river enthusiasts John J. and Frank C. Craighead. The act did not specifically use ecological terminology but stated that "each component of the national wild and scenic rivers system shall be administered in such manner as to protect and *enhance*" the characteristics that contributed to a river's inclusion in the national system.<sup>72</sup> To enhance implies some degree of improvement, or a landscape in need of hands-on management after centuries of human impact. The Chattooga indeed had been worked over by the lumber industry at the beginning of the twentieth century and was not the primitive wilderness many supporters claimed. But in the case of the Chattooga River, Senator Nunn and Forest Service staffers were less interested in watershed protection and more interested in hands-on management to deal the hordes of inexperienced paddlers who soon flocked to the river. Recreation – at the expense of ecological restoration – became a central part of the Chattooga's story, but not necessarily in the "educational and spiritual" sense expressed by the Wild and Scenic River Act's authors.<sup>73</sup> The river's popularity was a problem in and of itself.

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<sup>71</sup> U.S. Congress, Senate, Subcommittee on Public Lands of the Committee on Interior and Insular Affairs, *Proposed Wild and Scenic Chattooga River and the Conveyance of Certain Public Lands*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 10, 1973, pages 46 & 58.

<sup>72</sup> *Wild and Scenic Rivers Act*, P.L. 90-542, October 2, 1968, see Section 10(a), emphasis added.

<sup>73</sup> John Craighead, "Wild River," *Montana Wildlife* (June 1957): 15-20, see 16-17, 20; U.S. Congress, Senate, Select Committee on National Water Resources, *Water Resources*, 86<sup>th</sup> Congress, 1<sup>st</sup> sess., October 9 & 12, 1959, p. 457-463; Palmer, *Endangered Rivers*, 155-6.

## “Deliverance Syndrome”

The book and film versions of James Dickey’s *Deliverance* help explain the role recreation played in pushing the Chattooga from Study River to Wild and Scenic River in 1974. Dickey’s novel (1970) and his subsequent screen adaptation (1972) introduced the country to the stunning and adrenaline filled Chattooga River. The basic story followed the epic trials of four Atlanta suburban-professionals who floated the fictional Cahulawasee River before a hydroelectric dam and reservoir drowned the wild river forever. The film opened with construction images of the Duke Power Company’s Jocassee dam (one component of the Keowee-Toxaway hydro-nuclear project) as a stand-in for the fictional Cahulawasee’s dam. Lewis, a lead character played by Burt Reynolds, intoned in an opening voice-over that the Cahulawasee was “Just about the last wild, untamed, unpolluted, unfucked up river in the South.”<sup>74</sup> Dickey effectively communicated his opinion about special rivers, and his narrative revealed the risky transformative powers that wild nature and rivers could impart on people. For example, as the soft, inexperienced Sunbelt suburbanites descended an increasingly chaotic river, one member of the party was raped by a woodsman, two others committed murder, and a third drowned after the party ‘voted’ to bury the first casualty without notifying the authorities. In the process of commenting upon modernization’s dulling affect on individual freedom and the perilous consequences, Dickey’s screenplay also reinforced negative Appalachian stereotypes about a land of dueling banjos and backwards mountain people.<sup>75</sup> But despite the dark tale of male rape and murder that leaves even today’s campers apprehensive about spending a night in the Chattooga’s watershed, the wild and raging riverscape on the big screen attracted thousands to the real Chattooga River.

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<sup>74</sup> John Boorman, *Deliverance*, 109 minutes (1974), DVD.

<sup>75</sup> John C. Inscoe, “Appalachian Otherness, Real and Perceived,” in *The New Georgia Guide* (Athens: University of Georgia Press, 1996), 165-170.

In 1971, the year before the *Deliverance* film was released, the Forest Service estimated that 800 people visited the river annually. Most of these early visitors learned about the unmanaged river from a network of paddlers or national boating journals like *American Whitewater*, which published two Chattooga boating guides before the river's designation.<sup>76</sup> The first generation of southern paddlers – including Fritz Orr, Sr., Ramone Eaton, Randy Carter, Hugh Caldwell, and Frank Bell – also brought new boaters to the river in the 1950s. Many of these men either owned or worked for summer camps – such as Merrie-Wood and Camp Mondamin – in the southern Appalachians. This older generation introduced succeeding generations of paddlers – including Payson Kennedy, Fritz Orr, Jr., Claude Terry, and Doug Woodward – to southern rivers who in turn established the leading guiding business of today like the Nantahala Outdoor Center (Kennedy) and Southeastern Expeditions (Terry and Woodward), in the early 1970s.<sup>77</sup> The film, however, introduced the river to a much larger and more inexperienced throng of leisure and thrill seekers. After *Deliverance* popularized the Chattooga's wild rapids – with Terry, Woodward, and Kennedy hired as body-paddler-doubles for Jon Voigt and Ned Beatty – river visitation jumped to an estimated 21,000 visitors in 1973.<sup>78</sup> The movie infected would-be paddlers with a “Deliverance Syndrome” that led many to their deaths, according to Terry.<sup>79</sup>

Recreation, danger, and tragedy helped move the Chattooga closer to Wild and Scenic River designation. According to a *Georgia Outdoors* writer, the movie spawned traffic jams

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<sup>76</sup> Donal R. Mayrick, “Spelunkers on the Chattooga River,” *American Whitewater* 17, 4 (Winter 1972): 142-147; Donald H. Wilson, “Chattooga!” *American Whitewater* 18, 3 (Autumn 1973): 113-117.

<sup>77</sup> Kennedy, “River Exploration in the Southern Appalachians;” Doug Woodward, *Wherever Waters Flow: A Lifelong Love Affair with Wild Rivers* (Franklin, N.C.: Headwaters Publishing, 2006).

<sup>78</sup> Woodward, *Wherever Waters Flow*, 162-170. Visitor statistics: Don Belt, “Chattooga River Country: Wild Water, Proud People,” *National Geographic* 163, 4 (April 1983): 458-476, see 471. Beginning in 1970, the Forest Service began to record Chattooga River statistics for “Fatalities or Near Fatalities,” and these can be found online: <http://www.fs.fed.us/r8/fms/sumter/recreation/documents/FatalitiesChattooga.pdf>, last accessed March 8, 2010.

<sup>79</sup> “River Bill Backed Without a Ripple,” *Atlanta (Ga.) Journal*, October 10, 1973, p. 10-C.

“and all but choked every access point; the river filled with jaunty adventurers in varied vessels – in kayaks and canoes, in rafts and rickety inflatable contraptions – each seeking in one way or another to prove himself (or herself)” equal to star Jon Voight or the other lead superstar. On screen, Burt Reynolds was the movie’s wet-suit clad, cigar-smoking, bow-hunting, and whitewater-paddling embodiment of 1970’s masculinity. The Chattooga’s popularity, however, led to an increased number of recreation-related fatalities on the river. The banks “echoed the calls of search parties seeking the remains of those whose carelessness or naiveté proved terribly expensive,” according to T. Craig Martin.<sup>80</sup> Some whitewater guide companies, including Claude Terry’s newly formed Southeastern Expeditions, and other paddling clubs had formed explicitly on the premise to safely introduce visitors to the river. But not all river runners sought guides or advice, and the mounting recreational dangers and a proliferation of guide services ultimately contributed to the river’s use, abuse, and upgrade from Study River to full Wild and Scenic River.<sup>81</sup> In May 1974, the Chattooga Wild and Scenic River became an official component to the national system of protected rivers, and with Congressional authorization, the Forest Service could maintain a river ranger staff and institute a permit system to better manage guide companies and individual paddlers.

Saving the Chattooga in 1970s – made possible by the combined efforts of the Forest Service, the Georgia Power Company, and new environmental organizations – was not a wilderness battle. The river’s official designation in 1974 and the general agreement over the river’s unique qualities signified the end of the designation chapter, but the management chapter chronicled the deteriorating relationship between the river corridor’s users and managers. The

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<sup>80</sup> For quotes: T. Craig Martin, “Chattooga,” *Georgia Outdoors* 2, 7 (July 1973): 16-23, see 20.

<sup>81</sup> “No Place For Amateur: The Chattooga Is Dangerous,” *Atlanta (Ga.) Constitution*, May 4, 1973, p. 9-A; “Many Try to Beat the River,” *Atlanta (Ga.) Constitution*, August 26, 1973, p. 8-F; *An Act to Amend Wild and Scenic Rivers*, P. L. 93-279, May 10, 1974.

entangling public and private coalition that shifted the Chattooga from a Study River to a Wild and Scenic River did so in a closed and selectively cooperative manner that increasingly alienated a body of local river corridor enthusiasts. According to Max Gates, the first official Chattooga Wild and Scenic River ranger, “mostly outsiders” supported the river’s designation. The former Sumter National Forest (S.C.) land manager explained that the Forest Service sponsored multiple, well-advertised public meetings in three counties in the three states adjacent to the Chattooga River before 1970, as well as additional meetings after 1974.<sup>82</sup> But apparently only a “few locals” from North Carolina, South Carolina, or Georgia attended. Furthermore, the Forest Service had solicited comments from the newspaper reading public before 1971, and received over 1000 responses in support of the designation with only three out-right dissents.<sup>83</sup> While Gates may have exaggerated the lack of local participation, he adequately described the conflict that emerged after designation as a result of a “clash of classes,” or a clash between the local folks who preferred the ease of recreating on the banks and the growing number of visitors intent on traveling the whole corridor’s length on the river’s back.<sup>84</sup>

As Georgians and South Carolinians navigated the Chattooga Wild and Scenic River designation process in 1974, they took part in a much larger regional discussion about public land management. For example, at the time the Forest Service was revising national policy in the late 1960s and early 1970s. This topic is beyond this chapter’s scope, but it is sufficient to say that the Forest Service was in the midst of reshaping national forest management policy in an effort to balance “even-aged management” – also referred to as clear-cutting – with recreation,

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<sup>82</sup> “Proposals Outlined To Make Wild, Scenic Site Of Area Along Chattooga River,” Greenville (S.C.) *News*, April 16, 1969, p. 10; “Hearing On Chattooga River Project Set For December 5,” Clayton (Ga.) *Tribune*, December 4, 1969, p. 1; “March 17 Meeting To Hear Forest Service Proposal, Chattooga River,” Clayton (Ga.) *Tribune*, March 12, 1970, p. 1; “Chattooga Listening Sessions,” Clayton (Ga.) *Tribune*, January 24, 1974, p. 4.

<sup>83</sup> Williams, “The Wild and Scenic Chattooga River,” 4; *Wild & Scenic Study Report: Chattooga River*.

<sup>84</sup> Max Gates, telephone conversation with author, February 21, 2006, notes in author’s possession.

wildlife, and biological diversity.<sup>85</sup> Nobody liked clear-cutting, according to Max Gates, and locals chastised Forest Service officials for cutting hard wood trees that produced nuts. Game hunters and anglers in particular thought clear cutting was bad for squirrel populations and fish. Indeed, Forest Service writers attempted to convince Rabun County residents through annual columns in local newspapers that forest management and clear cutting would improve all wildlife populations. Lastly, the Forest Service provided locals with access to free fire wood for personal consumption, and established specific sites and guidelines for such activity.<sup>86</sup> But in the end, and in Gates' opinion, local people resisted anything that disrupted the "way of life" in what they considered their forest community.<sup>87</sup> Or more plausibly, as historian Kathryn Newfont argued about another southern Appalachian community, rural and mountain residents understood the forests and rivers as places "to live rather than to visit." For people who lived close to the Chattooga River, the valley was "a part of the fabric of everyday life rather than a retreat from the ordinary."<sup>88</sup>

In the larger federal policy context, the southern Appalachians also became a battleground in the 1960s and 1970s as mountain communities faced repeated intrusion by external interests. Not only did outsiders move in, buy second homes and erect "No Trespassing" signs, but federal policy also imposed restrictions on public and private land. New policies included: declarations of eminent domain to acquire Appalachian Trail lands (National Trails System Act, 1968); the creation of eastern wilderness areas (Roadless Area Review and

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<sup>85</sup> Paul W. Hirt, *A Conspiracy of Optimism: Management of the National Forests Since World War II* (Lincoln: University of Nebraska Press, 1994), 177, 183.

<sup>86</sup> "Forest Service lists sites for fuelwood without Permit," Clayton (Ga.) *Tribune*, September 12, 1974; "Free firewood areas prove to be successful," Clayton (Ga.) *Tribune*, January 29, 1976, p. 11.

<sup>87</sup> Max Gates, telephone conversation with author, February 21, 2006, notes in author's possession. See also: "News from the US Forest Service," Clayton (GA) *Tribune*, December 11, 1975, p. A12; "News From the Forest Service," Clayton (Ga.) *Tribune*, January 8, 1976.

<sup>88</sup> Kathryn Newfont, "Grassroots Environmentalism: Origins of the Western North Carolina Alliance," *Appalachian Journal* 27, 1 (Fall 1999): 46-61, see 57.

Evaluation I, 1972 and the Eastern Wilderness Act, 1975); and a proposed extension of the Blue Ridge Parkway along Georgia's ridgelines. Against this backdrop, Rabun County (Ga.) and Oconee County (S.C.) communities felt besieged by the federal government's reach into the mountain landscape.<sup>89</sup> For example, at the time of the Chattooga's full Wild and Scenic River designation in 1974, parcels of South Carolina's public land near the river – such as Ellicott's Rock and over 37,000 acres in the Chauga watershed – were under consideration for wilderness and road-less designations. In both cases these federal designations would have eliminated logging and forestry jobs in those specific areas – a point articulated by local wilderness opponents as early as 1971.<sup>90</sup> In response to these encroachments, residents on both sides of the Chattooga River began to vent their frustrations over increasingly restrictive land management policy that dated back to the Weeks Act (1911) when the Forest Service began acquiring property in the southern Appalachians, but that centered on the Chattooga's 1974 designation as a Wild and Scenic River.

No other issue sparked greater confrontation in the Chattooga region than the Forest Service's decision in October 1974 to close roads that crossed Forest Service land and entered the Chattooga's new Wild and Scenic River corridor.<sup>91</sup> Under the terms of the Wild and Scenic River Act (1968), river sections designated as "wild" were supposed to be "generally inaccessible except by trail." "Scenic" sections could be "accessible in places by roads," and

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<sup>89</sup> "Public Vs. Private Land Use," Clayton (Ga.) *Tribune*, March 11, 1976, p. 4; Shelley Smith Mastran and Nan Lowerre, *Mountaineers and Rangers: A History of Federal Forest Management in the Southern Appalachians, 1900-81*, FS-380 (Washington, D.C.: USDA, Forest Service, April 1983), see chapter 8 – "Recreational Development of the Southern Appalachians: 1960-81." The Clayton (Ga.) *Tribune* published numerous articles on the Blue Ridge Parkway's proposed extension into the Georgia mountains. Residents of Rabun County mounted a very organized and successful campaign, beginning in 1968 and lasting nearly a decade, to keep the Parkway out of the state.

<sup>90</sup> "Opinions On Developing Chattooga River Differ," Greenville (S.C.) *News*, September 1, 1971.

<sup>91</sup> U.S. Forest Service, "For Immediate Release" (copy), Rivers and Harbors 4 (Rivers), May 13 - October 1, 1974, Box 34, Subject Correspondence Series, 1954-1976, J. Strom Thurmond, Mss 100, Special Collections Unit, Clemson University Libraries, Clemson, South Carolina.

“recreational” sections could be “readily accessible by road or railroad.”<sup>92</sup> The Chattooga’s Wild and Scenic corridor – or the distance between the river bank and the corridor boundary – was rarely more than one-quarter-mile wide, and the corridor itself was generally surrounded by Forest Service land. Chattooga River Chattooga River study personnel intent on meeting the designation standards first introduced the idea to close corridor roads and selected foot trails in 1969, and they met resistance mainly from state fish and game managers who were concerned about how they would reach the river to restock fish or check hunting licenses.<sup>93</sup> Oconee County (S.C.) commissioners eventually transferred all the required road rights-of-way to the Forest Service prior to 1974, but their Rabun County (Ga.) counterparts did not. As early as 1972 the Rabun County Commissioners began to hear arguments from both the Forest Service’s Max Gates and county residents on the issue of future road closures. Gates argued that unimproved roads posed a significant sedimentation threat to the river, and he wanted the roads shut down. But County Commissioners and residents countered, declaring that the Forest Service’s “clear cutting...along the river was more of a contributing factor” to declining water quality than the unimproved roads.<sup>94</sup> No public resolution emerged from an early meeting of concerned Rabun County residents and the Commission, and after a relative quiet over the issue the Forest Service made the road closures official in October 1974. By this time, Chattahoochee National Forest (Ga.) supervisor William Patrick Thomas, a northeast Georgia native, had facilitated a localized and back-channel road-closure plan between Rabun County Commissioners and representatives from South Carolina’s Sumter National Forest – the official Chattooga Wild and Scenic River

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<sup>92</sup> *Wild and Scenic Rivers Act*, P.L. 90-542, October 2, 1968, see Section 2(b), emphasis original.

<sup>93</sup> *Proceedings of Chattooga River Study Meeting*, Clemson House, Clemson, S.C., April 15, 1969, Folder: Natural Areas Council, Georgia, Scenic Rivers, Chattooga River, 1969, Box 12, Department of Game and Fish (25-01-008), Georgia Department of Archives and History, Morrow, Georgia.

<sup>94</sup> Rabun County (Ga.) Board of Commissioners – Monthly Board Meeting, October 2, 1972, PDF page 2, available on-line through MCCi Online Library: <http://www.mccinnovations.com/weblink/login.aspx>, last accessed March 8, 2010.

managers. Georgia Senator Herman Talmadge, chairman of the Senate Committee on Agriculture and Forestry, helped Thomas and Rabun County Commissioners broker a deal that closed some state and country roads while keeping others open in spite of the Wild and Scenic Rivers Act's requirements.<sup>95</sup> Plus, the Forest Service maintained three bridge crossings – including on U.S. highway, one state road, and one Forest Service road – within the protected river corridor for managerial and logistical reasons.

After 1974, Forest Service policy continually used a public safety argument to justify the selective road closures in Georgia and South Carolina. In light of the high fatality rates that resulted from *Deliverance*'s popularity, Forest Service personnel wanted to limit easy access to the river's dangerous sections where visiting hikers and swimmers might get swept over rapids or pinned by the river's current. Most of the local users did not float the river, but they had used old roads to access favorite campsites, swimming spots, and picnic areas. Or, as former Forest Service Recreation Planner Charlie Huppuch recalled, people would drive vehicles into the Chattooga River and wash them.<sup>96</sup> When the Forest Service gated roads after 1974, most trout fishermen faced less than a one-mile walk "to their favorite holes." Rangers did police paddlers and rafters; if visitors lacked the proper safety equipment before when launching boats, rangers could deny access to the river.<sup>97</sup> These restrictions and user policies drastically changed the river's recreational use from a site of local leisure to regional and national destination for select or well-equipped river runners. Despite the Forest Service's and local newspapers' attempts to explain the road closures before and after the fact, local residents who may not have chosen to

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<sup>95</sup> "Corridor of Chattooga Closed to Vehicles," Clayton (Ga.) *Tribune*, October 10, 1974, p. 1; Senator Herman E. Talmadge, Washington, D.C., to Brian Webb, Blairsville, Ga., May 20, 1976, letter reprinted in the Clayton (Ga.) *Tribune*, June 3, 1976, p. 4.

<sup>96</sup> Charlie Huppuch, Interview notes found in, Tetra Tech EC, Inc., *Chattooga River History Project: Literature Review and Interview Summary*, prepared for USDA Forest Service, Atlanta, Georgia, August 25, 2006, available online, <http://www.fs.fed.us/r8/fms/sumter/resources/documents/History.pdf>, last accessed March 8, 2010.

<sup>97</sup> "Chattooga Included in Wild Rivers Act," Clayton (Ga.) *Tribune*, June 6, 1974, p. 1; "Chattooga Access to be Limited," Clayton (Ga.) *Tribune*, June 6, 1974, p. 1.

participate in the designation process responded to what they saw as a continued loss of local control and traditional access rights to the river.

“Retro Frontiersmen” who had watched individuals, corporations, and federal agencies close the ‘open range’ and enclose resources once considered freely accessible for generations, turned to an old tool and instrument of protest. The forest fires that raged between 1974 and 1978, according to one local historian reported, were arsonists’ response to the Chattooga’s final designation as a Wild and Scenic River.<sup>98</sup> Arson, as a form of protest was certainly not new to the Chattooga River’s valley. In early 1972, two men and one woman were caught “setting woods fires” in the Warwoman Wildlife Management Area Dell.<sup>99</sup> Wet conditions, however, thwarted attempted arson in the spring and fall of 1975, but drier conditions in February 1976 contributed to over fifty fires that burned 800 acres on a single weekend in Georgia’s Rabun County. Chattahoochee Forest Service supervisor Thomas attributed the arson to a “fire-style protest of state and federal restrictions” by a minority of “angry mountaineers” deprived of access and “exiled” from the Chattooga River corridor. But he also linked the more recent fire-style protest to the past, dating to 1911 “when the Forest Service began regulating timber cutting, closing access to protect rivers and blocking off old logging roads.” In the course of two short months during 1976, Georgia’s Chattahoochee National Forest lost 3,800 acres to fire in three counties – approximately as much forest burned in sixty days as had been burned in the previous two years – all in part of the larger local reaction to forest policy and federal intrusion throughout the mountain region in the 1970s.<sup>100</sup> According to another source, between 1969 and 1973,

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<sup>98</sup> Kirby, 33-56; “Environmental Legislation,” *Mountain Rest Community Club: US Forest Service* (Oconee County, South Carolina, April, 2003), available online: <http://sciway3.net/scgenweb/oconee-county/archived-txt/history/mr-02.txt>, last accessed March 8, 2010.

<sup>99</sup> “Suspected Arsonist Captured; Charged With Shooting Ranger,” Clayton (Ga.) *Tribune*, March 16, 1972, p. 1.

<sup>100</sup> “Mountain Men Rekindle Feud With Government,” Sumter (S.C.) *Daily Item*, March 1, 1976, p. 16; “Blazes Blamed on Mountaineers,” Atlanta (Ga.) *Constitution*, March 2, 1976, 2-A; “Forests Burned in timber Feud,” Ocala

South Carolina's Andrew Pickens Ranger District – which the Chattooga River borders – “averaged five fires and eighteen acres burned each year.” But in the five-year period between 1974 and 1979, the same Sumter National Forest District averaged twenty-three fires and 687 acres burned each year.<sup>101</sup> After 1974, South Carolina and Georgia residents – initially respectful of the local commons – assumed similar tactics to protest forest policy in Sumter and Chattahoochee National Forests, with residents displaying signs proclaiming: “You put it in wilderness and we'll put it in ASHES.”<sup>102</sup>

### Conclusion

Arson in the Chattooga River's corridor represented latent protest against turning a local commons into a federal commons. It is important to remember that in the Chattooga's case, the Forest Service did not ‘take’ private land from unwilling sellers by declaring eminent domain – the Wild and Scenic Rivers Act made this tactic extremely difficult to implement, but never impossible to threaten. Prior to the road closures, Georgia Power and the Forest Service already held title to 84 percent of the proposed Wild and Scenic River corridor including some roads, and theoretically controlled access to existing informal campsites, swimming spots, and fishing holes.<sup>103</sup> But after 1974, the conflict between insiders and outsiders, and between locals and extra-local elites, materialized over the issue of what constituted appropriate recreation in Georgia and South Carolina's National Forests.

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(Fla.) *Star-Banner*, March 2, 1976, p. 6; “Arsonists fire NE Georgia woodlands,” Clayton (Ga.) *Tribune*, March 3, 1976, p. 1.

<sup>101</sup> “Environmental Legislation,” *Mountain Rest Community Club: US Forest Service* (Oconee County, South Carolina, April, 2003), available online: <http://sciway3.net/scgenweb/oconee-county/archived-txt/history/mr-02.txt>, last accessed March 8, 2010. A search in the Clayton (Ga.) *Tribune* between March 1976 and May 1978 did not reveal if anybody was ever caught or charged in connection with these fires.

<sup>102</sup> Marshall, “*Lord, We're Just Trying to Save Your Water*,” 133; Mastran, *Mountaineers and Rangers*, 169.

<sup>103</sup> U.S. Congress, House, Subcommittee on Interior and Insular Affairs, *Wild and Scenic Rivers Act Amendments, Part II*, 93<sup>rd</sup> Congress, 1<sup>st</sup> sess., October 29-30, 1973, p. 11.

Congress' Wild and Scenic Rivers Act (1968) was a useful instrument. The entangled public and private representatives from the Georgia Power Company, the Georgia Natural Areas Council, the Georgia Conservancy, and the Forest Service participated in local and national hearings, communicated with elected officials, and mobilized a grassroots constituency to serve specific and narrow ends. These parties – the “someone” Patrick Thomas identified as responsible for “taking away access” to the Chattooga – justified the river’s federal protection based on post-*Deliverance* safety concerns, but more importantly because the Chattooga was the last major undammed river in the mountain South.<sup>104</sup>

The process also did not accommodate all local recreational realities and elicited a response that left the woods burning when the river corridor became a linear recreation space that catered to national consumers and extra-local elites. Initially a fragmented local landscape composed of fishing holes and camping spots, the Chattooga became a unified Wild and Scenic River with clear start and end points for paddlers and boaters that muted the older intermediate recreation spaces. The Forest Service closed roads to secret spots and campsites, and transformed fishing trails along the river’s edge into hiking trails on parallel ridgelines. This imperfect process maintained a wild and free flowing river, but some local users lost a perceived freedom to access the river. While the Chattooga River’s story highlights how a coalition of public and private powers transformed a local commons into a federal commons, the story also illustrates that the conflict did not revolve around *whether* the river should have been conserved, but over *how* this federally managed and unique river would be used and by whom.

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<sup>104</sup> Congress eventually designated other wild, scenic, and recreational rivers in the greater Southeastern United States after 1974, but the Chattooga remains the longest Appalachian and southern mountain river with segments in all three categories. See the National Park Service’s “National Wild and Scenic Rivers System” for statistics: <http://www.rivers.gov/wildriverslist.html>, last accessed March 8, 2010.

Author John Lane recently described his personal Chattooga experiences to illustrate why the river attracts people and what the river delivers to those who know and use it today. As a nature writer, Lane tapped into what people have taken from, and what expectations people have of, the rivershed including: long-time headwaters' residents concerns about current water quality issues; literary and academic visitors' observations of the riverscape; backpackers seeking backcountry experiences; and Clayton residents' ambivalence over *Deliverance's* long-term impact on their community. Ultimately, he interprets the southern landscape as sublime on its own terms, in terms which Rabun and Oconee County residents from yesterday and today would agree with, including those residents who continue to believe the river was taken from them.<sup>105</sup> Bearing Lane's context in mind, we should remember that in the end, a series of decisions delivered the spectacular Chattooga River, the star of *Deliverance* – consciously left wild, or at least undammed by the Georgia Power Company and the Corps of Engineers in a century of change – to the national whitewater boating and environmental community for safekeeping.

New South to the Sunbelt economic interests had attempted to resolve the region's water problems with canals, dams, reservoirs, levees, and deeper channels. Private and public engineers changed the shape and form of rivers to deal with problematic flooding and drought, and rivers increasingly lost their form and function in the process. Another coalition of postwar and Sunbelt southerners reevaluated those old solutions to the region's water problems and moved in a completely different direction. Like allies around the nation, they thought dams and river structures were the problems and not the solutions. For this new group, the Wild and Scenic Chattooga River solved a new problem. In a region that lacked significant free flowing

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<sup>105</sup> Lane, *Chattooga*, 97; Max Gates, telephone interview with author, February 21, 2006, notes in author's possession; John D. Ridley, telephone conversation with the author, March 27, 2006, notes in author's possession.

rivers, the Chattooga's new designation broke with the past and was symbolic of a new relationship between people and the region's rivers.

## CONCLUSION

### WATER AND POWER

While Georgia and its neighbors rotated from record drought in 2007 to record flooding in 2009, a U.S. District Court Judge added a wrinkle to the region's historic water problems. In July 2009, Paul Magnuson determined that Congress had never authorized Lake Lanier as a water supply source and that some metro Atlanta communities were illegally tapping the federal reservoir. Magnuson ordered the Corps of Engineers to reduce water allocations from Lanier and water releases from Buford Dam to 1970s levels by 2012 unless Alabama, Florida, and Georgia approved a Chattahoochee River compact to end a twenty-year long tri-state water war. According to the Judge's strict interpretation of legal and political history, Congress had only authorized the Lake Lanier reservoir and Buford Dam project in the 1940s for flood control, to produce power, and to regulate stream flows for downstream navigation and other benefits. Even Atlanta's well-known Mayor William B. Hartsfield clearly understood Congress' and the Corps' intent behind Lake Lanier. He quipped before a Senate subcommittee in 1948 that Atlanta needed a reliable water supply, but the city was "not in the same category" as cities "in arid places in the West."<sup>1</sup>

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<sup>1</sup> Memorandum and Order, Re: Tri-State Water Rights Litigation, United States District Court, Middle District of Florida, Case No. 3:07-md-01 (PAM/JRK), Document 264, July 17, 2009, see p. 11 for Hartsfield quote, <https://www.georgiaconservancy.org/uploads/images/Water%20War%20Room/Judge%20Magnusons%20ruling%20full.pdf>, last accessed March 10, 2010.

Within days of Magnuson's 2009 legal order, the power struggle over water continued after Georgia Governor Sonny Perdue launched a four point response that affected all of the state's rivers, including the Savannah. The Governor planned to appeal the order, seek Congressional authorization to use Lake Lanier for municipal water supplies, continue negotiating the Chattahoochee River compact with Alabama and Florida, and formulate contingency plans in case Lake Lanier was indeed no longer an available water source. Most important, Governor Perdue drafted Michael Garrett, the Georgia Power Company's CEO, to "quarterback" the state's response. This selection was a very calculated choice. Garrett had climbed corporate ladders in the Southern Companies' subsidiaries, and served management and executive stints with the eighty-year old Atlanta-based corporation's even older Mississippi Power and Alabama Power subsidiaries.<sup>2</sup> On the contingency front, Perdue hastily assembled a Water Contingency Task Force. Co-chaired by Coca-Cola Enterprises' CEO John Brock and loaded with eighty-eight individuals who primarily represented metro Atlanta's corporate interests (including Home Depot, Delta Air Lines, Sun Trust Bank, Georgia-Pacific, and UPS), the Task Force looked around the state for solutions to an impending water shortage as Georgia emerged from the region's punishing 2007-08 record drought amidst record flooding in fall 2009. After holding a series of closed door meetings, the powerful Task Force released an official report on water supply alternatives for the sprawling southern megalopolis that brought all of the state's working reservoirs and rivers into clearer focus.

The Task Force's December 2009 report provided Governor Perdue with a lengthy list of possible solutions for metro Atlanta's water supply problem. Among the proposed water supply alternatives – including "no regret" conservation measures, new reservoirs, and desalination –

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<sup>2</sup> Kristi E. Swartz, "Perdue Forms Team to Fight Water Ruling," Atlanta (Ga.) *Journal-Constitution*, July 23, 2009, <http://www.ajc.com/news/georgia-politics-elections/perdue-forms-team-to-99459.html>, last accessed March 10, 2010. For Garrett's corporate bio, see: <http://www.georgiapower.com/about/ceo.asp>, last accessed March 9, 2010.

the Task Force also considered interbasin transfers (IBT) to pipe water from corporate and federal reservoirs found throughout the state to slake Atlanta's thirst. Two of the Task Force's suggestions specifically targeted the Savannah River valley's water resources. One of the proposed interbasin transfers would have pumped fifty million gallons-per-day from the Georgia Power Company's Lake Burton – on the Tallulah River and surrounded by million-dollar homes – over a low ridge that divides the Savannah and Chattahoochee River basins. Pumps and pipes would then direct the water into Raper Creek where the water would continue flowing downhill into the Chattahoochee River and metro Atlanta's municipal water treatment and distribution systems. Another Task Force suggestion included a one-hundred million gallons-per-day water withdrawal from the Corps' Hartwell Lake project in rural Elbert County. After pulling water from Hartwell Lake the pumps would transmit water over hills and through valleys via an eighty-mile pipeline to suburban Gwinnett County in metro Atlanta.<sup>3</sup> These proposals reignited a “two Georgias” rhetoric that has forever pit the metro region against the rest of the state and the Savannah River valley.<sup>4</sup> During the 2010 legislative session, the Georgia State legislature did not consider specific interbasin transfers to resolve metro Atlanta's current water problem. Legislators from around the state did attempted to introduce – with limited success – new interbasin transfer regulations to make it more difficult for water poor cores like metro Atlanta to drop straws in water rich hinterlands like the Savannah River valley. Needless to say, it would

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<sup>3</sup> Governor Sonny Perdue, *Water Contingency Task Force: Final Report*, December 21, 2009, p. 9-12, and Appendix III, *Findings and Recommendations*, p. 123-141, both available online, [http://www.georgia.gov/vgn/images/portal/cit\\_1210/0/57/155134868Water%20Contingency%20Planning%20Task%20Force%20Report%20-%20Appendix%20III%20-%20Complete%20set%20of%20options%20evaluated.pdf](http://www.georgia.gov/vgn/images/portal/cit_1210/0/57/155134868Water%20Contingency%20Planning%20Task%20Force%20Report%20-%20Appendix%20III%20-%20Complete%20set%20of%20options%20evaluated.pdf), last accessed March 29, 2010.

<sup>4</sup> Editorial Staff, “Watch Out for Our Water,” *Augusta Chronicle*, December 6, 2009, [http://chronicle.augusta.com/stories/2009/12/06/edi\\_558272.shtml](http://chronicle.augusta.com/stories/2009/12/06/edi_558272.shtml), last accessed March 10, 2010; Sen. Jim Butterworth, “Hey Atlanta, Hands Off Our Water,” *Atlanta (Ga.) Journal Constitution*, December 12, 2009, <http://www.ajc.com/opinion/hey-atlanta-hands-off-237175.html>, last accessed March 10, 2010; Rep. Alan Powell, “Hands off the Savannah River,” *Savannah Morning News*, December 12, 2009, <http://savannahnow.com/column/2009-12-12/powell-hands-savannah-river>, last accessed March 10, 2010;

not the first time that water figured prominently in Georgia's internal power politics. After all, back in 1912 a small-town newspaper columnist had lamented that the beautiful Tallulah River and majestic Tallulah Falls were slated for destruction by a Georgia Power Company dam to produce electricity "to turn Atlanta's wheels" ninety miles away.<sup>5</sup> In 2009, not unlike 1912, water and power fixed resource poor cores to water rich hinterlands in Georgia.

The dams and reservoirs that Georgia Power built at Tallulah Falls, the Corps completed at Lake Lanier, and other companies assembled across the southeast between the mid-nineteenth and late twentieth centuries continue to operate and function today. The South's numerous artificial lakes and working reservoirs are artifacts from the region's complex environmental history and they illustrate some of the ways that the southeast has negotiated its water problems. Additionally, this study makes environmental manipulation central to southern industrial history, and makes southern water problems a part of the region's labor and racial problems. Industrial and recreational histories are further enriched by a close examination of southern water history because they telegraph the relationship between water and social power. Today's citizens increasingly ask the structures' private and public operators to manage these water projects to provide benefits for which they were never designed. The more recent conflict over Lake Lanier during the 2000s drought and metro Atlanta's flooding poignantly demonstrate the persistent nature of the American South's water problem and the political landscape. Georgians have toiled for over a century to make use of and control the region's water resources. But for all the corporate, state, and citizen investment, the flooding and droughts continue to threaten communities, impact economies, and shape river valleys.

The southeast's water problems are not going away given the historical evidence of flooding and drought over the last 150 years. Technology – such as new reservoirs or extensive

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<sup>5</sup> "Tallulah the Terrible," *Madisonian* (Madison, Ga.), July 12, 1912, p. 4.

pipeline networks to move water – can provide short term solutions for the region’s water supply deficiencies. Flood control solutions – floodplain zoning, improved municipal stormwater infrastructure, and managing water where it falls – will also help. These adaptations will manage risks but also manufacture future risks and create new environments that will require additional hands on attention. Building new reservoirs to increase water supplies or piping water to people far from the source, however, will also create a false sense of security and assumptions about availability. Like levees and flood control measures, water supply technologies shift risk without eliminating hazards or identifying crisis’ root causes. And, as time has demonstrated, droughts and flooding will return, and they will damage communities and economies unless consumers and voters understand the full implications of the water and power dynamic.

Southern energy companies continue to define and mask the relationship between water and power. Duke Energy and the Southern Company (and its Alabama Power and Georgia Power company subsidiaries) do more than generate energy for residential, commercial, and industrial consumers. These companies cannot function without access to the region’s water supplies, and without reliable energy sources, states cannot lure industry and stimulate economic development. Governor Perdue’s appointment of Georgia Power’s Michael Garrett to “quarterback” the state’s response to the Judge Magnuson decision should make this very obvious. This situation also places the energy companies in a position help consumers and policy makers see the connection between water supply and electricity. Garrett’s company is part of a larger corporate family that depends on the southeast’s major rivers – including the Coosa, Tallapoosa, Chattahoochee, Flint, Apalachicola, Altamaha, and Savannah – since all energy companies depend upon on water for daily operations to generate electricity. In the American South, energy companies and major industries will continue to play critical roles in

shaping the region's water policy, and these companies will also influence how people interact with and think about the southern rivers.

The regional relationship between water and power is not difficult to map, but the “energy-water nexus” is invisible to most Americans. Energy and water are intertwined in ways that consumers do not see, and legislators rarely consider energy and water policy together. According to the United States Department of Energy, “in most regions, energy planning and water planning are done separately” or considered separate agendas. Additionally, solving the nation's water problems will require “consideration of the impact that water polices and regulation have on energy supplies and demands, and the impact energy policies and regulations have on water demands and availability.”<sup>6</sup> Fossil fuel power plants that burn coal and gas, and nuclear power facilities need water to fill boilers and condensers to produce steam and turn turbines to generate electricity. Proposed bio-mass energy plants will be no different. In the American South, as in other parts of the nation, energy production and consumption took place together where fires burned or at riverside mills and gins. During the late nineteenth and early twentieth centuries, energy production and consumption began to move apart from each other. New transmission and energy generating technologies – not to mention concentrations of capital – made it possible for factories to slip the restraints of geography. As energy production and consumption separated, energy became invisible to residential, commercial, and industrial consumers across the nation. This separation also masked water's role in generating energy.

Water and power, topics more common in the American West's history, have been equally intertwined in the American South. Antebellum dam operators who represented a new

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<sup>6</sup> U. S. Department of Energy, *Energy Demands on Water Resources: Report to Congress of the Interdependency of Energy and Water* (December 2006), 49. To access this report, visit the Energy-Water Nexus website of Sandia National Laboratories, [http://www.sandia.gov/energy-water/congress\\_report.htm](http://www.sandia.gov/energy-water/congress_report.htm), last accessed March 9, 2010. See also: Robert Glennon, *Unquenchable: America's Water Crisis and What To Do About It* (Washington, D.C.: Island Press, 2009), 59-64.

economic force and fishermen from an agrarian past clashed over the height of dams and fish passage on the fall line at Augusta. During the critical New South period, textile mill owners and energy company executives laid claim to the area's rivers and put families to work in factory towns scattered across a Piedmont region cultivated by tenants and sharecroppers. Between the wars, champions of a privatized Super Power electrical transmission system clashed with regional planners who countered the New South water and power dynamic with liberal economic planning. New Dealers looked at the monopolistic Super Power system and recoiled, and their solutions included the Tennessee Valley Authority, the Rural Electrification Administration, and similar programs designed to use and distribute resources equitably while balancing industry with agriculture. Private energy companies fired back and successfully lobbied against the TVA, but their success emboldened a sleeping giant as water and power continued to drive the Sunbelt South's economic and environmental future. After 1945, the Army Corps of Engineers embarked on a program to build multiple purpose dams and reservoirs born out of New Deal regional planning that transformed into pork barrel projects. In this context, the energy corporations found a new enemy as the Corps developed public power projects and unlikely allies in the postwar environmental and conservative movements. Conservatives defended free enterprise and freedom from federal intervention in the economy, and environmental advocates challenged the federal dam builders by defending free flowing watercourses in the Savannah River watershed in the 1970s. The current conflict over Lake Lanier in the Chattahoochee River valley, the Water Contingency Task Force's recent gaze into the Savannah River valley, and a relatively recent bi-state water war between North Carolina and South Carolina over Duke Energy's allocation of the Catawba River's water demonstrate how water and power continue to influence southern economies, political relationships, and communities.<sup>7</sup>

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<sup>7</sup> Bruce Smith, "More Water Wars Predicted," Atlanta (Ga.) *Journal Constitution*, October 15, 2008,

When it comes to conflict over water, the American South is not exceptional. Historic water problems, such as flooding and droughts, are the products of material environmental conditions. Low pressure tropical storms and heavy rain at any time can produce record rainfalls and flooding, and high pressure systems can generate record droughts. As environmental factors, these climatic events became problems for people when the built environment in valleys flooded, when urban and industrial centers faced electrical shortages, and more recently, when municipal stormwater systems failed or water supplies nearly ran dry. How people navigated through these problems in the past and the present to reach solutions highlight the central role water and power has played throughout the American South's history. When compared in this way, the southeast, the arid west, and the other parts of the country wrestling with their own water problems do not look different. In this context, the American South has much to share with, and learn from, other regions grappling with what are clearly national problems.

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[http://www.ajc.com/metro/content/printedition/2008/10/15/waterwars.html%3Fcxntlid%3Dinform\\_artr](http://www.ajc.com/metro/content/printedition/2008/10/15/waterwars.html%3Fcxntlid%3Dinform_artr), last accessed March 10, 2010; Sammy Fretwell, "Water Settlement Long Way Off," *The (Columbia, S.C.) State*, January 23, 2010, <http://www.thestate.com/2010/01/23/v-print/1123337/mcmasters-office-says-talks-dont.html>, last accessed March 10, 2010; Glennon, *Unquenchable*, 83-88.

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