



# Unfulfilled Promise

The Million Acres Initiative and the Need to  
Protect North Carolina's Open Spaces



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Protect North Carolina's Open Spaces

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# Executive Summary

From the Smoky Mountains to the Outer Banks, North Carolina is renowned for its natural beauty. Unfortunately, rapid development over the past several decades has threatened many of our most treasured open spaces.

Recognizing the importance of preserving our natural places for ourselves and future generations, North Carolina's General Assembly established the Million Acre Initiative to protect one million acres of land between January 1, 1999 and December 31, 2009. While many important and beautiful places were protected in the process, it is now clear that North Carolina has fallen short of this goal.

At the start of a new decade, it is vital that North Carolina redouble its commitment to protecting important natural lands from development.

## **Protecting open spaces is vital to North Carolina's future.**

- Protecting land near reservoirs, rivers and groundwater recharge zones improves the quality of drinking water. The U.S. EPA estimates that it is 20 to 400 times more expensive to treat

polluted water than to prevent contamination through watershed protection.

- Natural lands help the economy by attracting tourists, improving retail sales, and creating job opportunities. The Blue Ridge Parkway alone attracts 21 million visitors and contributes \$2 billion to the economy each year.

## **North Carolina's natural lands are threatened by development.**

- Between 1987 and 2007, an average of 325 acres of natural lands were converted to residential or commercial use in North Carolina every day.
- North Carolina has lost more than one million acres of natural lands in the past decade, more than any other state in the U.S.
- Rapid development is expected to continue, especially once the nation's economy recovers. By 2030, North Carolina's population will total

12 million people, an increase of nearly one third over current numbers.

**North Carolina's Million Acre Initiative has protected many important natural places, but the state has fallen far short of achieving the million acre goal.**

- North Carolina created the Million Acre Initiative in response to community meetings that highlighted the need for open space preservation. The Initiative set a goal of protecting one million acres between January 1, 1999 and December 31, 2009.
- Among the important natural places protected through the initiative are:
  - Grandfather Mountain located in Avery, Watauga and Caldwell counties. The conservation of this scenic, mountainous area enabled the creation of North Carolina's 34<sup>th</sup> state park—Grandfather Mountain State Park.
  - Chimney Rock - a place of great natural beauty, complete with unique geological formations, breathtaking vistas and spectacular waterfalls.
  - 64,000 acres of game lands surrounding the Roanoke, Upper Tar and Chowan Rivers in the northeast, and Juniper Creek in southeastern North Carolina. This transaction is the largest conservation deal in the state's history.
- By the end of 2008, 643,209 acres had been preserved under the Million Acre Initiative, less than two-thirds the amount originally pledged. Due to the downturn in the economy, land preservation efforts in North Carolina slowed dramatically in 2009.

- Failure to meet the Million Acre Goal is the result of insufficient funding throughout the life of the Initiative. In 2008, for example, there was a shortfall of over \$140 million between requested and allocated funds.
- The problem of insufficient funding intensified during the recent recession. Although the Clean Water Management Trust Fund board awarded more than \$65 million for land acquisition in 2008, most of that money was reallocated to other areas of the state budget. In its 2009 session, the General Assembly put another \$50 million into the Clean Water Management Trust Fund, but six months into the 2009-2010 fiscal year, the state has not released any of that money toward land acquisition.

**North Carolina must renew its commitment to land preservation.**

- The state must commit to achieving the original goal of the Million Acres Initiative at the soonest possible time to ensure protection for North Carolina's most valuable natural places.
- Recognizing the potential of land conservation to bolster the state's economy, the state must begin to release money from the Parks and Recreation Trust Fund, the Natural Heritage Trust Fund and the Clean Water Management Trust Fund for land acquisition.
- North Carolina must continue to pursue the protection of ecologically sensitive areas, such as land around Chimney Rock State Park, Hanging Rock State Park, and the Mountains-to-Sea Trail.

# Introduction

**N**orth Carolina is growing at a break-neck speed. Since 1980, our state has added 3.3 million new residents.<sup>1</sup> Over that time—a little more than a generation—our population has increased by an incredible 57 percent.

Growth has brought many good things to North Carolina, including new economic and cultural opportunities. But North Carolina's recent growth has often taken place in ways that put our environment and the state's natural heritage at risk. Sprawling development patterns have resulted in the conversion of open space to development at a rate faster than that of population growth.<sup>2</sup>

As North Carolina's rapidly growing metropolitan areas—from Charlotte to the Triangle to the Triad—have sprawled outward, important natural areas have been in the path of development. Forests, wetlands, prime farmland, and cherished pockets of nature have been lost at a dizzying rate.

Since 1987, over one million acres of forest land in North Carolina—an area the size of Wake, Durham and Mecklenburg counties combined—have been converted from natural area to developed area. In the last two decades alone, the coastal counties

lost 160,000 acres of cropland—lands that are important not only for the production of food, but also for local ecosystems.<sup>3</sup>

A decade ago, reflecting an increasing sense of urgency to preserve what was left of North Carolina's natural heritage before it was lost forever, the state committed to protecting a million acres of open space by the beginning of 2010. The Million Acre Initiative represented an important commitment to North Carolina's future—one insufficient to prevent the loss of all treasured open spaces in North Carolina, but one strong enough to ensure that at least our most precious natural areas would remain for ourselves and future generations of North Carolinians to enjoy.

As this report will show, North Carolina has fallen well short of achieving the million acres goal—a failure that will have repercussions for North Carolinians and our environment for the long term.

But while the deadline for the Million Acre Initiative may have passed, the job of protecting North Carolina's natural heritage is far from over. The current recession, with its easing of development pressure on the state's open spaces, gives North Carolina a reprieve—a time to reflect on the

successes and shortcomings of the Million Acre Initiative and to redouble our commitment to land preservation.

By renewing our commitment to the preservation of our forests, farms and open spaces—and by committing the resources

needed to fulfill that commitment—North Carolina can help bring about a welcome recovery of our economy and ensure that that recovery does not result in the unwelcome destruction of the open spaces we hold dear.



*From Grandfather Mountain to the Blue Ridge Parkway, North Carolina is renowned for its natural heritage. Photo Credit: Mary Terriberry, under license from shutterstock.com.*

# North Carolina's Open Spaces Are Threatened by Development

**O**ur state's natural lands are vital to our economy and our environment. While North Carolinians have consistently placed a high premium on open spaces, many are being threatened by private development and urban sprawl. If unchecked, this dangerous trend will lead to the destruction of the many natural lands that are vital to our state's environment, economy and character.

## The Importance of Protecting Natural Spaces

From stunning mountain vistas to spectacular ocean views, North Carolinians are surrounded by natural beauty that improves our environment, our quality of life, and our economy.

### **Land Conservation Protects Water and Air Quality and Provides Habitat for Wildlife**

Land conservation is essential to protecting our health and our environment—particularly when it comes to the purity of

our drinking water. The greatest threat to our water quality today is from nonpoint-source pollutants, such as sediment, lawn chemicals, and bacteria that are washed into our rivers and lakes by rainwater. McDowell Creek, for example, is the main tributary to a lake providing drinking water to the residents of Charlotte, but it is rife with sediments and pollutants that originate at a subdivision development upstream.<sup>4</sup> Land preservation can mitigate the effects of these pollutants by providing a buffer zone between our sources of water and developed areas.<sup>5</sup> Protecting forested areas near watersheds is particularly important, as forests regulate soil erosion, decrease the velocity of rainwater runoff, and trap sediments in a layer of leaf litter. Riparian forests, or forests near sources of drinking water, have been found to reduce the runoff of pollutants such as nitrogen, phosphorus and sediment by 80 percent.<sup>6</sup>

The ability of protected lands to purify drinking water allows state and local governments to forgo costly investments in water purification technology. The U.S. Environmental Protection Agency estimates that it is 20 to 400 times more expensive to treat polluted water than to

prevent contamination through watershed protection.<sup>7</sup>

Forests also improve air quality by removing pollutants from the air. The forests in Mecklenburg County, for example, remove approximately 17.5 million pounds of pollutants from the air in Charlotte each year. It would cost the state approximately \$43.8 million annually to remove the same level of pollutants with man-made technology.<sup>8</sup>

Protecting wetlands also mitigates the effects of flooding across the state. Wetlands and floodplains absorb excess water after heavy rains, while forests slow runoff and allow more water to seep into the soil. By diminishing the harmful effects of heavy rains, wetlands and forests protect homes and reduce the need for the state to invest in expensive public works projects.<sup>9</sup>

Preserving our wetlands, farmlands and forests can also protect the water supply during times of drought. Groundwater recharge zones, areas where surface water percolates downward into groundwater, are vital to the sustainability of our state's aquifers.

Unfortunately, recharge zones can be damaged by the development of natural lands. This is a particularly important issue for North Carolina, as rising temperatures and lower rainfall may result in drought conditions similar to those experienced in 2007 and 2008.<sup>10</sup> By protecting our natural lands, we can ensure a more sustainable supply of drinking water in our aquifers. A 550,000-acre swamp in Florida, for example, has been valued at \$25 million per year for its ability to capture water and recharge the aquifer.<sup>11</sup>



*Land preservation improves the quality of our drinking water, while also providing habitats for rare and endangered species.* Photo Credit: Pam Burley, under license from shutterstock.com.

## Million Acres Success Story: The International Paper Tract

In 2008, North Carolina celebrated the completion of the largest conservation deal in the state's history, which included the preservation of 64,000 acres of new game land and the protection of water quality in four watersheds.<sup>12</sup> International Paper, the private owner of the land, sold the property to The Nature Conservancy in 2006 under a larger conservation deal that involved 220,000 acres in 10 southeastern states.<sup>13</sup> The Nature Conservancy has since transferred the majority of the land to the Wildlife Resources Commission, with small portions also going to the state Division of Parks and Recreation the Division of Cultural Resources. The state's conservation trust funds spent \$54.7 million to permanently preserve the property.<sup>14</sup>

Game lands play an important role in protecting the environment and improving water quality in the state, while providing opportunities for outdoor recreation and habitat for wildlife. The new Juniper Creek Game Land, for example, permanently protects an entire tributary for the Waccamaw River, which will improve the overall quality of the river. There are also many rare and endangered species in the Juniper Creek Game Land, such as the federally endangered Cooley's meadowrue and the rare Carolina pygmy sunfish, which is found only in the Lake Waccamaw drainage area. Now that this wide swath of land is permanently protected, these species may be able to grow and prosper.

The addition of 64,000 acres of new game land will also provide many economic benefits to the Tar Heel state. A study by Southwick Associates found that 3.4 million people participated in fish and wildlife-related recreation in the state in 2006. These individuals spent \$2.62 billion in retail sales, created \$1.26 billion in wages and supported 45,224 jobs—expanding the economy by over \$4 billion each year.<sup>15</sup> The addition of new game lands will provide more opportunities for people to become involved in wildlife recreation, benefiting the economy and improving the quality of life for residents.

Natural lands are also vital to the protection of the state's vibrant and diverse population of wildlife. North Carolina is home to more than 1,200 species of rare or endangered plants and animals that are threatened by development and pollution. Protecting the habitats of these species is essential to their continued survival.<sup>16</sup>

Development threatens important species across North Carolina. In the fast-growing Charlotte metropolitan area, for example, a 2005 study co-authored by the

National Wildlife Federation identified 13 imperiled species, including rare species of freshwater mussels and plants.<sup>17</sup> The mountains of western North Carolina host richly diverse communities of wildlife which are threatened by quickening development in the region. Hickory Nut Gorge, for example, is home to 37 rare plant species and 14 rare animal species, including rare species of bat and salamander.<sup>18</sup>

Meanwhile, along North Carolina's coast, sensitive species such as piping



*Game lands provide recreational opportunities for residents and habitats for wildlife.* Photo credit: Jill Lang, under license from shutterstock.com.

plovers have been put at risk by increasing coastal development. Piping plovers are facing more threats from predator species, such as foxes and raccoons, whose numbers have increased due to the availability of stray food near human development.<sup>19</sup> In 1989, there were 15 nesting pairs of piping plovers at the Cape Hatteras National Seashore; today, only 6 nesting pairs remain in that location.<sup>20</sup>

Besides threatened and endangered species, many other species of animals are affected by the loss or fragmentation of habitat. Migratory birds, for example, may find it more difficult to nest and rear their young in smaller patches of habitat carved out by roads and new residential and commercial development.<sup>21</sup> Thoughtful land preservation strategies can ensure that continuous tracts of natural land are available to serve as habitat for these and other species.

### **Land Conservation Provides Economic Benefits to North Carolina**

North Carolina's natural areas are also a boon to the state's economy. Tourism in North Carolina is a \$17 billion industry that employs more than 200,000 people. According to the State Division of Tourism, the single largest attraction for these tourists is our natural scenery. By conserving and protecting more land, we can capitalize on this industry and provide greater benefits to the region. The Blue Ridge Parkway alone attracts 21 million visitors and contributes \$2 billion to the economy each year.<sup>22</sup>

Land preservation is also vital to our agricultural sector, a \$70 billion industry in North Carolina. Since 2002, developmental pressures have contributed to the loss of more than 1,400 farms and 600,000

acres of farmland.<sup>23</sup> This loss of productive agricultural lands has destroyed the livelihoods of many North Carolina families and has resulted in lower yields of locally produced foods. In addition, it has had a negative impact on our environment as farmlands protect groundwater recharge zones and provide important habitats for wildlife.

Finally, preserving natural spaces can even have a positive effect on the budgets of local governments because they place little demand on municipal services. Residential development, by contrast, can be extremely expensive to maintain—often costing the government more in expenditures than it receives in tax income. In fact, based on national averages, residential developments provide only 87 cents in revenue for each dollar expended by the local government. Farmlands and open spaces, by contrast,

generate \$2.70 in revenue for each dollar expended.<sup>24</sup>

## Open Spaces Under Threat

Despite the importance and beauty of our natural areas, they are under the constant threat of destruction. Between 1987 and 2007, North Carolina lost an average of 325 acres of natural lands to residential or commercial development every day.<sup>32</sup> In the last two decades alone, the amount of developed land in North Carolina has increased by 52 percent in the coastal counties and 44 percent in the mountains.<sup>33</sup> In fact, North Carolina has lost more than one million acres of natural lands in the past decade—more than any other state in the U.S.<sup>34</sup>



*21 million people visit the Blue Ridge Parkway each year to enjoy beautiful vistas and scenery.*  
Photo Credit: Robert Donovan, under license from shutterstock.com.

## Million Acres Success Story: Grandfather Mountain State Park

In 2009, North Carolinians witnessed the historic designation of their 34th state park—Grandfather Mountain State Park.<sup>25</sup> The acquisition of this land was made possible by the conservation ethic of its private owners, the Morton Family, and the assistance of private preservation groups such as The Nature Conservancy and The Conservation Fund.<sup>26</sup>

In 2008, the Morton family approached the North Carolina government about the long-term preservation of its property, Grandfather Mountain. The family agreed to sell 2,456 acres of the mountain, valued at \$25 million, to the Parks and Recreation and Natural Heritage Trust Funds for \$12 million.<sup>27</sup> In 2009, the General Assembly unanimously passed and Governor Perdue signed the legislation authorizing the creation of the new park.<sup>28</sup>

The preservation of Grandfather Mountain represents a major achievement for the state. The deal makes accessible the scenic parts of the mountain that were previously closed to the public, which will allow residents and tourists to more fully appreciate the wonder and beauty of the mountain. Local tourist officials also predict that the mountain's scenic vistas and 11 trails will be a major tourist attraction, and they are currently lobbying the federal government to designate a Grandfather National Scenic Area, which would cover more than 25,000 acres of public land. Researchers at the Colorado State University suggest that such a designation would attract an additional 1.5 million visitors annually to the area, produce 724 new jobs, and increase economic output an additional \$38.4 million per year.<sup>29</sup>

In addition to the main amenities at the state park, the Morton family will retain 749 acres, with a conservation easement, to continue operating Grandfather Mountain attractions. These attractions, enjoyed by visitors to the mountain since the 1950s, include the “mile-high swinging bridge,” a nature center, wildlife habitats and other amenities.<sup>30</sup>

Conservation of Grandfather Mountain is also important for environmental concerns. The area supports the headwaters of the Linville and Watauga rivers, and it is home to 16 different ecosystems. At least 70 rare species of plants and animals have been identified on the mountain, 32 of which are considered endangered.<sup>31</sup> Protecting the mountain from development will ensure the continued survival of these threatened species. In addition, The Grandfather Mountain State Park is part of a larger network of conservation lands, providing a safety corridor to threatened and endangered species. The new state park is adjacent to or near other protected areas, such as the Blue Ridge Parkway, Pisgah National Forest, and land held by the Nature Conservancy.

Without additional conservation measures, this pattern of destruction will continue. By 2030, North Carolina will be populated by 12 million people, an increase of nearly one-third.<sup>35</sup> These new residents will need homes, jobs, schools, and commercial centers. Promoting smart land-use patterns that reduce the amount of land used per person is a key part of protecting the state's open spaces. Yet, it is also critical that the state move quickly to preserve our most precious natural spaces.

The state's Million Acres Initiative was designed to ensure that North Carolina's most important natural areas would remain protected, even in the face of rampant development. That initiative, while it has achieved notable successes, has not achieved the results North Carolinians expected—or that our environment needs.



*Without stronger conservation measures, residential development may threaten some of our most beloved places.* Photo credit: Zhong Chen, under license from shutterstock.com.



*The creation of the Grandfather Mountain State Park will allow residents and tourists to appreciate the beauty of the mountain for generations to come.* Photo credit: Joye Ardyn Durham, under license from shutterstock.com.

# The Million Acre Initiative Has Preserved Important Lands, But Has Fallen Short of its Goal

Recognizing the importance of our natural lands and the threat of development, North Carolina's General Assembly made a commitment to preserve one million acres of land by the end of 2009. The Million Acres Initiative has bolstered land preservation efforts in North Carolina, resulting in the preservation of hundreds of thousands of acres of open

"The State of North Carolina shall encourage, facilitate, plan, coordinate, and support appropriate federal, State, local, and private land protection efforts so that an additional one million acres of farmland, open space, and conservation lands in the State are permanently protected by December 31, 2009."

S.L. 2000-23, codified at N.C. General Statutes § 113A-241.

space. However, the initiative has fallen short of its target, with negative consequences for the state's environment.

## The Million Acre Initiative

In 1999, Governor Jim Hunt created an interagency task force to study smart growth policies. The committee held community meetings across the state in both rural and urban areas to listen to the concerns of the general public. One of the strongest messages they heard time and again was the need for open space preservation.<sup>36</sup>

In response to the findings of the task force, the General Assembly enacted a goal in 2000 to protect an additional one million acres of farmland, open space, and other conservation lands between January 1, 1999 and December 31, 2009. The secretary of the North Carolina Department of Environment and Natural Resources is responsible for overseeing the realization of this goal.<sup>37</sup>

To be counted towards the million acre goal, the land must be permanently protected

from development. This protection can be obtained through outright public ownership of the property, acquisition by a private conservation-oriented entity, or by a conservation easement.

The Million Acre Initiative, which was created to fulfill this promise, is not responsible for acquiring the lands itself. Rather, the Initiative coordinates and assists the preservation efforts of federal, state and local governments, conservation groups, and private citizens. It also encourages cooperation among the various parties and provides technical assistance necessary for land acquisition. Funding for the program is provided by North Carolina's conservation trust funds and the federal government's Farm Bill program.<sup>38</sup>

This new approach to land conservation was groundbreaking. Too often, states fund diverse and uncoordinated conservation programs without a stated goal. This results in a haphazard and unmotivated approach to preservation that often fails to take advantage of large opportunities that require teamwork and advanced planning. The Million Acre Initiative avoids these pitfalls by coordinating the conservation activities of numerous parties and providing a clear goal.

This framework better enables the state to fulfill certain environmental, economic, and quality-of-life objectives. These include the protection of water quality and natural resources areas, conserving farmlands and forestlands, managing floodplains and mitigating natural hazards, preserving historic places, and enhancing recreational opportunities.<sup>48</sup>

The four major state trust funds that fund land acquisition are:

**Clean Water Management Trust Fund (CWMTF)** – is funded by appropriations from the legislature for the purpose of financing projects that address water pollution problems. The trust fund issues grants to local governments, state

agencies or non-profit groups for projects that protect or restore waterways.<sup>49</sup>

**Parks and Recreation Trust Fund (PARTF)** – The PARTF funds the acquisition of land for state parks, as well as improvements in state park facilities. The fund also issues grants to local governments and to expand access to the state's beaches.<sup>50</sup> Funding comes from a portion of the state's deed excise stamp tax.<sup>51</sup>

**Agricultural Development and Farmland Preservation Trust Fund (ADFPTF)** – The ADFPTF works to arrange conservation easements on farmland to prevent the loss of agricultural land to development, and undertakes other programs to increase the viability of farming in North Carolina.<sup>52</sup> The trust fund receives funding from legislative appropriations.

**Natural Heritage Trust Fund (NHTF)** The NHTF preserves important natural areas throughout North Carolina. It is funded through a portion of the state's deed excise stamp tax and a portion of the fees from the sale of personalized license plates.<sup>53</sup>



*The State Trails Program envisions a statewide network of trails that are available to all residents of the state.<sup>78</sup>*

## Million Acres Unfinished Business: Mountains-to-Sea Trail

In 1977, Howard Lee, then secretary for the N.C. Department of Natural Resources and Community Development, proposed a revolutionary idea for North Carolina—building a trail across the entire state, connecting the majestic Smoky Mountains to the vast Atlantic Ocean.<sup>39</sup> Today, this visionary path is becoming a reality, with over 450 miles of trail available to hikers, bikers, equestrians, and paddlers.<sup>40</sup>

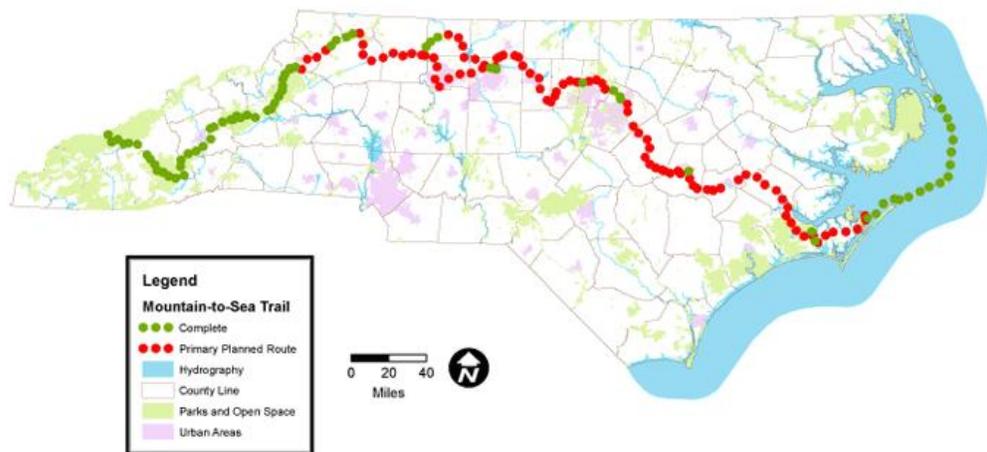
The Mountains-to-Sea Trail is being built as part of the State Trails Program, which envisions a statewide network of trails that are available to all residents, from occasional walkers to ambitious hikers.<sup>41</sup> This vision was codified into law under the North Carolina Trails System Act, passed in 1973.<sup>42</sup>

Constructing trails is an important part of conservation, as they improve the quality of life for all citizens by providing recreational opportunities and economic benefits. They also help to safeguard the environment by ensuring connected corridors for wildlife and protecting lands that improve our air and water quality. Thus, it is unsurprising that a survey by North Carolina State University in 1998 found that 75 percent of North Carolinians felt that trail availability was important.<sup>43</sup>

Once completed, the Mountains-to-Sea Trail will span approximately 1,000 miles across the state, connecting Clingman's Dome in the Great Smoky Mountains National Park to Jockey's Ridge State Park on the coast.<sup>44</sup> It will eventually pass through 37 counties that contain 40 percent of the state's population, and will provide access to three national parks, eight state parks, two national wildlife refuges, and two wilderness areas.<sup>45</sup> Along the way, hikers on the trail will encounter lakes, waterfalls, mountains, and many other breathtaking sights.<sup>46</sup>

With almost half of the trail completed, North Carolina is close to realizing Howard Lee's dream. However, as Figure 1 shows, the completed trail is concentrated in the western and eastern parts of the state. To ensure that all residents have access to this magnificent project, North Carolina must continue to allocate sufficient state and federal funding over the next decade.

**Figure 1. The Mountains-to-Sea Trail<sup>47</sup>**



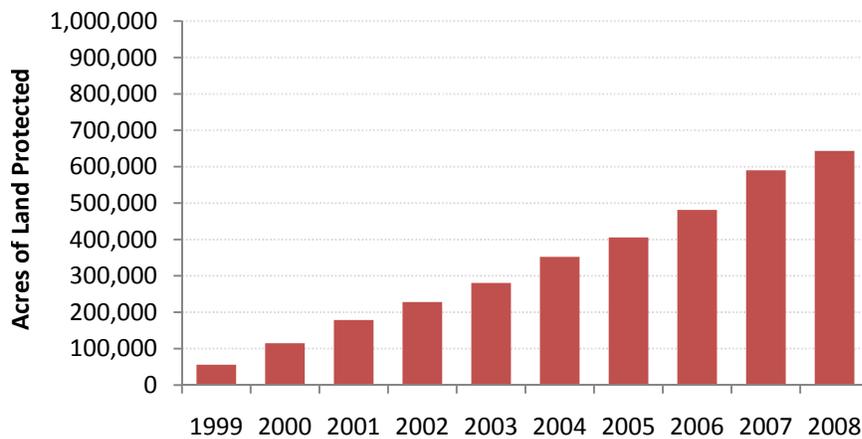
## An Assessment of North Carolina's Conservation Efforts

The Million Acre Initiative has moved North Carolina in the right direction by drastically increasing the number of acres protected from development.<sup>54</sup> However, it is now clear that the state has fallen far short of its pledge to protect one million acres. By the end of the 2008, only 643,209

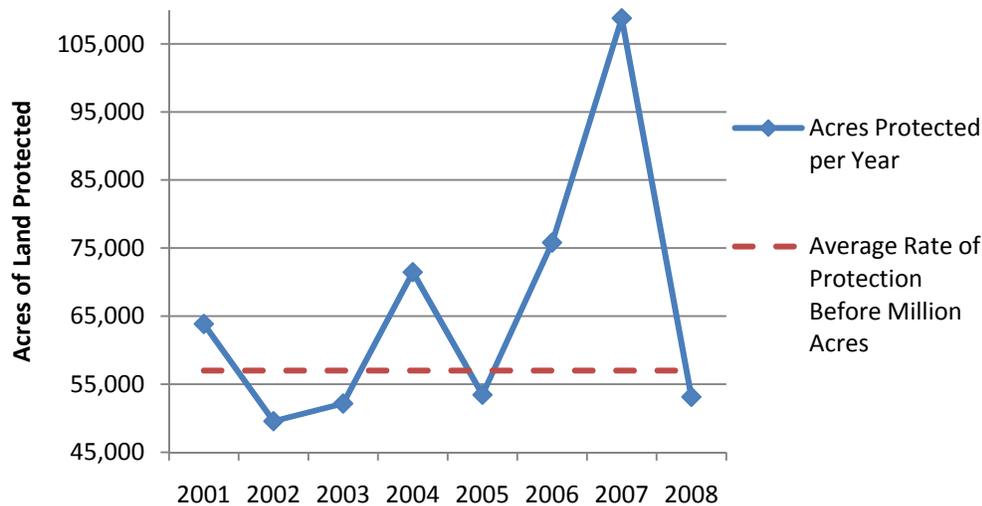
acres had been conserved under the Million Acre goal, as shown in Figure 2.

Though data are not yet available for 2009, it is unlikely that enough land was conserved in that year to bring the state substantially closer to its goal of one million acres. In fact, the rate of conservation actually declined during 2008 and 2009 as a result of the economic crisis and the loss of funding for key land acquisition programs.<sup>62</sup>

**Figure 2. Acres of Land Preserved Under North Carolina Million Acres Initiative**



**Figure 3: Rate of Land Preservation Under Million Acres Initiative Compared to Prior Annual Average**



## Million Acres Unfinished Business: Chimney Rock State Park

Chimney Rock is a place of great natural beauty, complete with unique geological formations, breathtaking vistas and spectacular waterfalls. Until a few years ago, very little land around Chimney Rock and the greater Hickory Nut Gorge region was protected from development. That changed in 2005 when the state began acquiring land through its conservation trust funds, in coordination with other nonprofit organizations. By the end of 2006, North Carolina had protected 2,264 acres of land on both the north and south sides of the Hickory Nut Gorge.<sup>55</sup>

The protected lands around Hickory Nut Gorge were later expanded by the acquisition of the privately owned Chimney Rock Park. In 2007, the Morse family put their 996-acre plot of land on the market, raising fears that it would be bought and subsequently developed. After two-and-a-half years of negotiations, the state managed to purchase the property for \$24 million and permanently protect it from development.<sup>56</sup>

Chimney Rock, the centerpiece of the new state park, is a 315-foot-tall rock formation that offers 75-mile views. It has been a tourist attraction since 1885 when Jerome B. Freeman built a stairway to the summit. Over the years, the park has been developed by the Morse family, who built a nature center and began documenting the rare plants and natural communities on the mountain.<sup>57</sup>

Protecting Chimney Rock and the Hickory Nut Gorge area provides critical environmental safeguards. Hickory Nut Gorge was one of 47 sites designated as a place of conservation importance, scoring high in terms of natural resource significance and recreation potential. The area is home to 36 rare plant species and 14 rare animal species, and it supports at least six separate natural communities. Acquisition of the Chimney Rock Park completes a C-shaped arc of protected lands, which offers the potential for a critical wildlife corridor in the future.<sup>58</sup>

Local officials also expect the new state park to be a boon to the local economy. Under private management, visitation to the park averaged about 250,000 people annually, with 28 full-time employees and 20 seasonal employees.<sup>59</sup> Mayor Jim Proctor of Lake Lure, located in Hickory Nut Gorge, believes that land conservation is essential to protecting the local economy of his town. As he stated, "Our economy is totally centered on scenic beauty. If that goes away, our economy goes away with it."<sup>60</sup>

Though protecting Chimney Rock Park is a major achievement for the state, there is still a significant amount of land around Hickory Nut Gorge that is threatened by development. For this reason, the state parks systems and its conservation partners continue to look for other land acquisition opportunities in the area. It is important that they continue this process of conservation so more unique ecosystems can be protected, and provide a source of enjoyment and recreation for generations to come.<sup>61</sup>

Though North Carolina did not meet its goal of protecting one million acres by 2010, the average rate of land conservation increased as a result of the Million Acre Initiative. Prior to the Initiative, the state had conserved 2.8 million acres of land, at a rate of approximately 57,419 acres per year.<sup>63</sup> As Figure 3 displays, between 2001 and 2008, North Carolina exceeded this baseline rate of protection in only four out of the eight years.<sup>64</sup> However, between 1999 and 2008, the state conserved an average of 63,150 acres per year—an additional 5,731 acres preserved each year.

Unfortunately, while the rate of protection may have increased, it fell far short of the goal of protecting 100,000 acres per year. In fact, North Carolina exceeded that rate in only one year, 2007. Furthermore, though the rate of land acquisition increased, it was not sufficient to replace the amount of natural land developed in the state—approximately 100,000 acres per year.<sup>65</sup>

At the current rate of land protection and funding levels, North Carolina will not meet its million acre goal until 2014.<sup>66</sup>

### Funding Shortfalls

North Carolina's failure to reach the Million Acre goal is the result of funding shortfalls, which have been exacerbated during the recent economic downturn.

At the outset of the Million Acre Initiative, the Environmental Finance Center at the University of North Carolina at Chapel Hill estimated that the state would need to allocate an additional \$95 million to \$270 million per year to meet its million-acre goal. However, this level of funding has not been maintained.

The last two years of the decade were particularly difficult. The economic downturn reduced the budgets of the state's major trust funds, and private donations quickly dwindled. Thus, even though lower real estate values may have encouraged more private parties to consider conservation easements, there



*Chimney Rock's 75-mile views have been attracting residents and tourists since 1885. Photo Credit: Frank Kehren.*

was simply no money available to purchase and protect the land. In 2008, for example, conservation groups requested \$354 million for preservation projects from the state's trust funds, but they received only \$212 million. This left a 40 percent shortfall. Similarly, in the 2008-2009 budget year, the Agricultural Development and Farmland Preservation Trust Fund received requests for \$29 million, but only had \$7.6 million available.<sup>67</sup>

The problem was compounded by the recession. Despite the fact that the Clean Water Management Trust Fund board of trustees had awarded more than \$65 million for 2008 projects, most of that money was never released by the state. As part of her emergency powers, Gov. Beverly Perdue used those dollars elsewhere in the state budget and, unlike with other trust funds that were used temporarily during the crisis last spring, the conservation dollars were never returned to the trust fund. In essence, the majority of conservation funding in 2008 was wiped off the slate.

Unfortunately, the 2009-2010 budget continues this pattern of inadequate funding. The General Assembly approved only \$50 million per year for the Clean Water Management Trust Fund over the next two years, which is a 50 percent reduction from past allocations.

An additional \$2 million was allocated to the Agricultural Development and Farmland Preservation Trust Fund, while the existing dedicated revenues sources for the Parks and Recreation and Natural Heritage trust funds were maintained.<sup>75</sup>

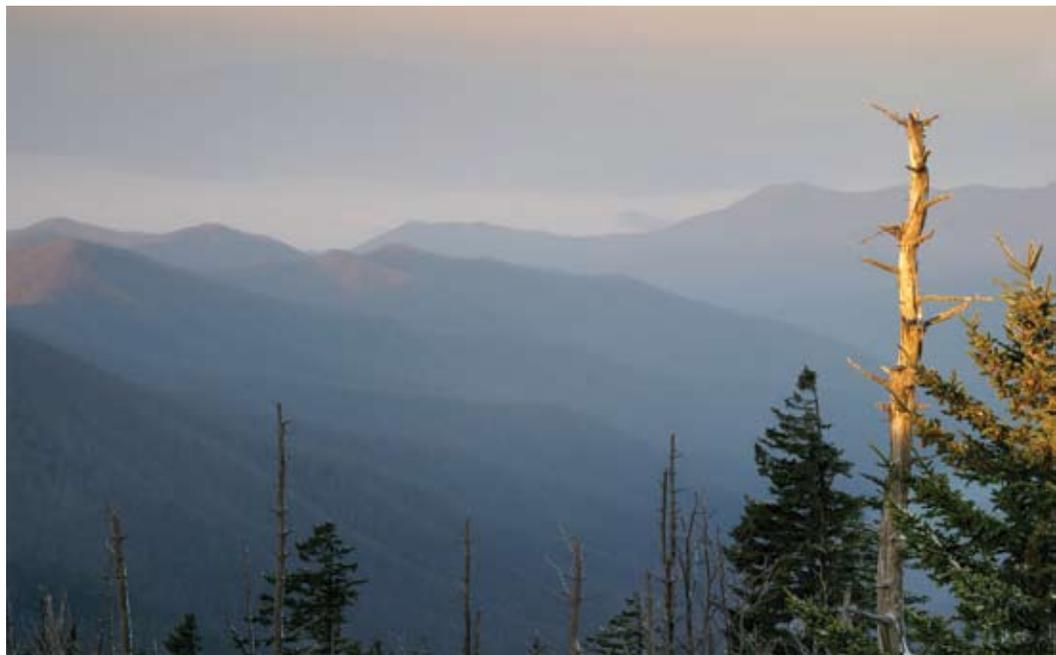
Because of ongoing concerns with the budget, the state has placed a hold on using funds for land acquisition allocated in the 2009-2010 budget—including for the Natural Heritage Trust Fund and the Parks and Recreation Trust Fund, both of which continue to accrue funds. It is unclear whether the state will allow those funds to be spent prior to June 30. There is a good possibility that there will be little, if any, conservation land acquisition in this fiscal year, which leaves the state having to play an even larger game of catch up in the acquisition of conservation lands.

The state has plans to expand public natural areas, including Chimney Rock State Park and Carver's Creek State Park, but public dollars for the acquisitions are part of the funds that were reallocated in 2009,

or are to be funded through the 2009-2010 allocation that has yet to be released.

Even in the best year for land protection, 2007, there was a \$109.5 million gap between requested and available funds.<sup>76</sup> Despite that shortfall, though, over 100,000 acres were saved when the state drastically increased funding for conservation efforts. This renewed commitment occurred following a report from the Joint Legislative Commission on Land and Water Conservation that concluded that there was a pressing need for land and water protection. The General Assembly responded by authorizing \$120 million in Certificates of Participation in the 2007-2008 budget, which enabled agencies to take advantage of many large projects.<sup>77</sup>

Ultimately, insufficient funding is to blame for our failure to conserve one million acres over the past decade. In the future, North Carolina must commit financially to conservation efforts, or we risk losing many of our beautiful and natural landscapes. Even in the wake of



*State leaders must allocate sufficient funding to protect many of our beautiful natural lands from development.* Photo credit: Mary Terriberry, under license from shutterstock.

budget shortfalls, we must hold true on our promise to the environment, for the benefits to our quality of life and environment far outweigh the costs.

In fact, the current economic climate presents a unique opportunity for conservation efforts. In the past few years, developmental pressures have diminished and

property values have plummeted as a result of the economic downturn. These trends enable North Carolina to preserve more lands at a substantially reduced rate—if we make the necessary investments. By fully committing ourselves to land preservation today, we have the opportunity to meet our million-acre goal at a fraction of the cost.

## Million Acres Unfinished Business: Hanging Rock State Park

In the early 1900s, beautiful mountain vistas and spectacular waterfalls inspired local residents near the Sauratown Mountains to place the land under permanent protection. This historic conservation effort began in 1936 when the Winston-Salem Foundation sold its property in the area to North Carolina for only \$10. Through the assistance of the Civilian Conservation Corps, local politicians and a citizens' group, that land was eventually transformed into the Hanging Rock State Park, which featured breathtaking views and visitor facilities.<sup>68</sup>

Hanging Rock State Park is of great ecological importance to North Carolina. The park is home to three registered natural areas and it contains seven rare plant species, such as the witch-alder and Bradley's spleenwort, and two special animal species, the Wehrle's salamander and the brown elfin butterfly.<sup>69</sup>

Hanging Rock's unique geological formations continue to be a draw to residents across the state. The Sauratown Mountains were formed by a 200-foot-thick layer of quartzite. Over time, this quartzite has been eroded and exposed, creating numerous large outcrops and cliffs such as the Moore's Knob, Devil's Chimney, Wolf Rock and Hanging Rock. At some locations, these outcrops combine with steep terrain to form beautiful waterfalls.<sup>70</sup>

More than 500,000 individuals travel to Hanging Rock State Park each year to see these unique rock formations and enjoy the spectacular views from summits of more than 1,700 feet. The park has many undeveloped areas that provide excellent hiking opportunities, along with opportunities for trail walking, canoeing and fishing.<sup>71</sup>

Though Hanging Rock State Park has long been under the protection of the state of North Carolina, more must be done to protect this ecologically sensitive area. The NC Division of Parks and Recreation's master plan calls for a total acreage of 9,563 acres in the park; today, the state park encompasses only 6,968 acres.<sup>72</sup> Additional land is necessary to protect and buffer the natural and scenic aspects of the park, as well as to provide access to the Mountains-to-Sea trail. As part of this effort, the state acquired Flat Shoals Mountain in 2001, which permanently safeguarded the view of the Hanging Rock Overlook from the intrusion of residential development or cell phone towers.<sup>73</sup> Other areas must also be protected, however, such as portions of Ruben Mountain and the escarpments known as Moore's Wall and Cook's Wall, which are privately owned.<sup>74</sup>

## Conclusion and Recommendations

**N**orth Carolina's failure to conserve one million acres of land is not due to a lack of threatened land. Conservation groups have identified millions of acres of land in our state that are in need of protection, and these organizations worked dutifully over the past 10 years to preserve as much open space as possible.

To protect North Carolina's natural heritage for future generations, state leaders must ensure there is adequate funding for conservation efforts. North Carolina should follow through on grant awards already committed by the boards of the state's natural resource trust funds, which will allow the planned expansions and acquisitions of

public natural areas to be completed during a period of diminished property values. In addition, state leaders should establish a dedicated source of funding for the Clean Water Management Trust Fund and the Agricultural Development and Farmland Preservation Trust Fund.

North Carolina must also commit itself to achieving the Million Acre goal by a certain date. Establishing this goal will provide the vision and support necessary to successfully conserve one million acres. Finally, officials should review the state's land preservation efforts and the current state of development in North Carolina to develop a new goal for the current decade.

# Notes

- 1 North Carolina Office of State Budget and Management, *Annual North Carolina Population Growth*, downloaded from [www.osbm.state.nc.us/ncosbm/facts\\_and\\_figures/socioeconomic\\_data/population\\_estimates/demog/ncpopgr8.html](http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/demog/ncpopgr8.html), 22 December 2009.
- 2 Center for Urban and Regional Studies, UNC-Chapel Hill, "The Impacts of Growth and Sprawl in North Carolina," *CURS Update*, May 2003.
- 3 Land for Tomorrow, *Continued Investment in Land and Water Conservation is Essential*, downloaded from [www.landfortomorrow.org/stuff/contentmgr/files/f4f9d85319d4b0ae5e84ccb05355ca/misc/lft\\_2009\\_fact\\_sheet\\_january\\_2009.pdf](http://www.landfortomorrow.org/stuff/contentmgr/files/f4f9d85319d4b0ae5e84ccb05355ca/misc/lft_2009_fact_sheet_january_2009.pdf), 16 November 2009.
- 4 The Trust for Public Land, *Building Green Infrastructure: Land Conservation as a Watershed Protection Strategy*, 2000.
- 5 Nigel Dudley and Sue Stolton, The World Bank and WWF Alliance for Conservation and Sustainable Use, *Running Pure: The Importance of Forest Protected Areas to Drinking Water*, August 2003.
- 6 Jade Freeman, et al, The Trust for the Public Land, *Statistical Analysis of Drinking Water Treatment Plant Costs, Source Water Quality, and Land Cover Characteristics*, 2008.
- 7 Debbi Crane, Land for Tomorrow, *2009 Green Book. Conservation Funding: Good for the Economy, Good for Public Health*, available at [www.landfortomorrow.org/stuff/contentmgr/files/c3fcbb3f14f9ae37fd8f1f0842fc5adb/misc/green\\_book\\_2009\\_lowres.pdf](http://www.landfortomorrow.org/stuff/contentmgr/files/c3fcbb3f14f9ae37fd8f1f0842fc5adb/misc/green_book_2009_lowres.pdf).
- 8 See note 3.
- 9 Adam W. Rome, "William Whyte, Open Space, and Environmental Activism," *Geographical Review*, April 1998.
- 10 Sarah Jamison, National Weather Service, *North Carolina Drought 2007-2008* [Power Point presentation], downloaded from [www.erh.noaa.gov/mhx/Powerpoints/Drought0708.ppt](http://www.erh.noaa.gov/mhx/Powerpoints/Drought0708.ppt), 8 December 2009.
- 11 Ducks Unlimited, *Groundwater Recharge*, downloaded from [www.ducks.org/Conservation/Habitat/1547/GroundwaterRecharge.html](http://www.ducks.org/Conservation/Habitat/1547/GroundwaterRecharge.html), 8 December 2009.
- 12 See note 7.
- 13 "Nature Conservancy Protection Creates New Game Land at Juniper Creek," *Targeted News Service*, 12 September 2008.
- 14 See note 7.
- 15 Prepared by Southwick Associates Inc., for North Carolina Wildlife Resources

- Commission, *The 2006 Economic Benefits of Hunting, Fishing and Wildlife Watching in North Carolina*, 30 June 2008.
- 16 One North Carolina Naturally, *North Carolina Million Acre Initiative: Why Protect Open Space?* Downloaded from [www.onencnaturally.org/pages/FN\\_Why\\_Protect\\_Open\\_Space.htm](http://www.onencnaturally.org/pages/FN_Why_Protect_Open_Space.htm) on 16 November 2009.
- 17 Reid Ewing and John Kostyack, National Wildlife Federation, Smart Growth America and Nature Serve, *Endangered by Sprawl: How Runaway Development Threatens America's Wildlife*, 2005.
- 18 Blue Ridge Forever, *Hickory Nut Gorge*, downloaded from [www.blueridgeforever.info/docs/FA14-HickoryNutGorge.pdf](http://www.blueridgeforever.info/docs/FA14-HickoryNutGorge.pdf), 22 December 2009.
- 19 Defenders of Wildlife, *Piping Plover Background and Recovery*, downloaded from [www.defenders.org/programs\\_and\\_policy/wildlife\\_conservation/imperiled\\_species/plover/background\\_and\\_recovery.php](http://www.defenders.org/programs_and_policy/wildlife_conservation/imperiled_species/plover/background_and_recovery.php), 8 December 2009.
- 20 Defenders of Wildlife, *Piping Plover*, downloaded from [www.defenders.org/programs\\_and\\_policy/wildlife\\_conservation/imperiled\\_species/plover/index.php](http://www.defenders.org/programs_and_policy/wildlife_conservation/imperiled_species/plover/index.php), 8 December 2009.
- 21 Mike Campbell and Mark Johns, North Carolina Wildlife Resources Commission, *Habitat Fragmentation and Birds*, downloaded from [faculty.ncwc.edu/mbrooks/pif/Fact%20Sheets/fragmentation%20fact%20sheet.htm](http://faculty.ncwc.edu/mbrooks/pif/Fact%20Sheets/fragmentation%20fact%20sheet.htm), 22 December 2009.
- 22 North Carolina Land Trusts, "Protecting 'America's Favorite Drive': The Blue Ridge Parkway Project," *Conservation Trust for North Carolina*, available at [www.ctnc.org/site/PageServer?pagename=prot\\_brp](http://www.ctnc.org/site/PageServer?pagename=prot_brp).
- 23 North Carolina Department of Agriculture and Consumer Services, *Agricultural Statistics—2007 Census of Agriculture Released February 4*, downloaded from [www.ncagr.gov/stats/census/highlights.htm](http://www.ncagr.gov/stats/census/highlights.htm), 22 December 2009.
- 24 Jeffrey Dorfman, Alliance for Quality Growth, *The Economics of Growth, Sprawl and Land Use Decisions*, 17 August 2004.
- 25 See note 7.
- 26 North Carolina Division of Parks and Recreation, *2009 Annual Report*, available at [www.ncparks.gov/Visit/main.php](http://www.ncparks.gov/Visit/main.php).
- 27 The National Association of State Park Directors, N.C. Department of Environment and Natural Resources, *National Award Recognizes Morton Family for Conservation Efforts* [press release], 15 September 2009.
- 28 Ibid.
- 29 See note 7.
- 30 749 acres: see note 27.. Attractions: N.C. Division of Parks and Recreation, "Grandfather Mountain State Park," *North Carolina State Parks*, downloaded from [www.ncparks.gov/Visit/parks/grmo/main.php](http://www.ncparks.gov/Visit/parks/grmo/main.php), 5 December 2009.
- 31 See note 7.
- 32 Elizabeth Ouzts, Environment North Carolina Research & Policy Center, *Losing Our Natural Heritage: Development and Open Space Loss in North Carolina*, April 2007.
- 33 See note 3.
- 34 See note 16.
- 35 North Carolina's 2008 population: see note 1. Population projection: U.S. Census Bureau, *Interim State Projections of Population by Sex: July 1, 2004 to 2030*, 2005.
- 36 One North Carolina Naturally, *North Carolina Million Acre Initiative Status Report*, 1 September 2000.
- 37 One North Carolina Naturally, *North Carolina Million Acre Initiative: Overview*, downloaded from [www.onencnaturally.org/pages/FN\\_Million\\_Acres\\_Overview.htm](http://www.onencnaturally.org/pages/FN_Million_Acres_Overview.htm), 16 November 2009.
- 38 Ibid.
- 39 N.C. Department of Environment and Natural Resources, *Mountain-to-Sea Trail Property Acquired in Alamance County* [press release], 19 February 2009.
- 40 See note 26.

- 41 Ibid.
- 42 N.C. Division of Parks and Recreation, *About Us: The Park System*, downloaded from [www.ncparks.gov/About/system\\_main.php](http://www.ncparks.gov/About/system_main.php) on 3 December 2009.
- 43 Land for Tomorrow, *2009 Green Book, Conservation Funding: Good for the Economy, Good for Public Health*, undated.
- 44 See note 26.
- 45 37 counties: see note 39. Three national parks: Friends of the Mountains-To-Sea Trail, *About the MST*, downloaded from [www.ncmst.org/aboutthemst.html](http://www.ncmst.org/aboutthemst.html), 5 December 2009.
- 46 Friends of the Mountains-To-Sea Trail, *About the MST*, downloaded from [www.ncmst.org/aboutthemst.html](http://www.ncmst.org/aboutthemst.html), 5 December 2009.
- 47 Friends of the Mountains-To-Sea Trail, *MST Trail Corridor*, downloaded from [www.ncmst.org/map.html](http://www.ncmst.org/map.html), 5 December 2009.
- 48 The Environmental Finance Center at the University of North Carolina, Chapel Hill, *Costs and Financing Options for North Carolina Million Acre Initiative*, 24 January 2001.
- 49 North Carolina Clean Water Management Trust Fund, *Welcome to the Clean Water Management Trust Fund*, downloaded from [www.cwmtf.net/welcome.html](http://www.cwmtf.net/welcome.html), 22 December 2009.
- 50 North Carolina Division of Parks and Recreation, *N.C. Parks and Recreation Trust Fund (PARTF) : About Us*, downloaded from [www.ncparks.gov/About/grants/partf\\_main.php](http://www.ncparks.gov/About/grants/partf_main.php), 22 December 2009.
- 51 North Carolina Clean Water Management Trust Fund, *North Carolina Conservation Trust Funds and Incentives*, downloaded from [www.cwmtf.net/fundsum.htm](http://www.cwmtf.net/fundsum.htm), 22 December 2009.
- 52 North Carolina Agricultural Development & Farmland Preservation Trust Fund, *About the Trust Fund*, downloaded from [www.ncadfp.org/aboutus.htm](http://www.ncadfp.org/aboutus.htm), 22 December 2009.
- 53 North Carolina Natural Heritage Trust Fund, *About Natural Heritage Trust Fund*, downloaded from [www.ncnhf.org/pages/aboutnhf.htm](http://www.ncnhf.org/pages/aboutnhf.htm), 22 December 2009.
- 54 In order to measure the progress of the initiative, the General Assembly mandated annual reports to track the number of acres preserved. These reports are typically published in August and provide a detailed description of the preservation activities in the previous year. The data in this section is derived from those reports.
- 55 Chimney Rock at Chimney Rock State Park, *Fact Sheet Regarding the Sale of the Park*, 29 January 2007.
- 56 Ibid.
- 57 Ibid.
- 58 Ibid.
- 59 Ibid.
- 60 See note 7.
- 61 See note 55.
- 62 Scott Pohlman, National Resource Planning and Conservation, North Carolina Department of Environment and Natural Resources, personal communication, 2 December 2009.
- 63 Before 1999, North Carolina did not accurately track the number of acres conserved. During the summer and fall of 2000, however, hundreds of surveys were distributed to determine the number of acres conserved prior to the Initiative, and the baseline rate of acquisition. From those surveys, it was determined that over 2.8 million acres of land had been conserved. In the 2001 Annual Report on the Million Acre Initiative, it was calculated that 111,750 acres were preserved in 1999 and 2000, thus 56,000 acres was accepted as the baseline rate of acquisition prior to the Million Acres Initiative. However, subsequent reports revised the number of acres preserved in 1999 and 2000 to 114,838 acres. This report, therefore, will rely on the newer data and place the baseline rate of acquisition at 57,419. See: Natural Resource Planning and

Conservation, North Carolina Department of Environment and Natural Resources, *NC Million Acre Initiative: 2001 Annual Report*, available at [www.onencnaturally.org/PDFs/2001.pdf](http://www.onencnaturally.org/PDFs/2001.pdf); and Natural Resource Planning and Conservation, North Carolina Department of Environment and Natural Resources, *NC Million Acre Initiative: 2003 Annual Report*, available at [www.onencnaturally.org/PDFs/2003\\_Million\\_Acres\\_Annual\\_Report.pdf](http://www.onencnaturally.org/PDFs/2003_Million_Acres_Annual_Report.pdf). A separate report, prepared by the Environmental Finance Center at the University of North Carolina, Chapel Hill found that the average rate of acquisition was between 43,000 and 63,000 acres per year; they established 50,000 acres per year as the midpoint baseline: see note 48.

64 Data for the amount of land acquired in 1999 and 2000 separately is not available. Surveys were distributed in the summer and fall of 2000, and it was determined that during the two years combined, 114,838 acres were preserved.

65 Scott Pohlman, Natural Resource Planning and Conservation, North Carolina Department of Environment and Natural Resources, *NC Million Acre Initiative: 2001 Annual Report*, available at [www.onencnaturally.org/PDFs/2001.pdf](http://www.onencnaturally.org/PDFs/2001.pdf).

66 North Carolina Department of Environment and Natural Resources, Division of Natural Resources Planning and Conservation, *2008 Annual Report: North*

*Carolina Million Acre Goal*, Fall 2009.

67 Ibid.

68 North Carolina Division of Parks & Recreation, North Carolina State Parks, *Hanging Rock State Park: Park Profile*.

69 Ibid.

70 Ibid.

71 Ibid.

72 9563 acres: See note 68. 6,968 acres: North Carolina Department of Commerce, Division of Tourism, "Hanging Rock State Park," [visitnc.com](http://visitnc.com).

73 Piedmont Land Conservancy, *Dan River Watershed Protection Initiative*, downloaded from [www.piedmontland.org/sites/Dan\\_River.php](http://www.piedmontland.org/sites/Dan_River.php), 5 December 2009.

74 See note 68.

75 Conservation Trust for North Carolina, *Our Current Priorities*, downloaded from [www.ctnc.org/site/PageServer?pagename=adv\\_priorities](http://www.ctnc.org/site/PageServer?pagename=adv_priorities), 4 December 2009.

76 NC Department of Environment and Natural Resources, Division of Natural Resources Planning and Conservation, *2007 Annual Report: North Carolina Million Acre Goal*, Fall 2009.

77 See note 66.

78: Photo by username boonejag75, under Creative Commons.