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**THE FUTURE OF
FOREVER WILD:
The History, Politics and Economics of the
New York State's Forest Preserve**

Senior Project submitted to
The Division of Social Studies
of Bard College

by
Michael Callejo

Annandale-on-Hudson, New York
May 2019

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GLOSSARY

APA- Adirondack Park Agency

BFPM- Bureau of Forest Preserve Management

EA- Environmental Assessment

EIS- Environmental Impact Statement

EPA- Environmental Protection Agency

DEC- Department of Environmental Conservation

COP21- 2015 United Nations Climate Change Conference

IBI - Index of Biological Integrity

HIM- Human Impact Model

TIMELINE OF THE NEW YORK STATE'S FOREST PRESERVE

1779- Over three million acres of land, which cover the Catskill and Adirondack Mountains, are transferred from the British Government to the New York State Government through the “Act of the Attainder” Law.

1792- Trader Alexander Macomb purchases over 3.6 million acres of Adirondack Mountain Land for a discount price.

1820- New York State sells all Adirondack and Catskill Mountain land to countless industrialists. Deforestation begins happening at a greater pace.

1850s- Deforestation has greatly reduced tree populations in the Adirondacks and Catskills.

1855-1865- Hudson River School artists, such as Thomas Cole, promote protecting the Adirondacks and Catskills through creating magnificent paintings.

1870- Surveyor Verplanck Colvin hikes Mt. Seward, an Adirondack Mountain peak, and begins lobbying for the creation of a forest preserve

1872- New York State Legislature passes Chapter 848 of the New York State Constitution to create a State Forest Program, headed by a state-appointed Commissioner.

1883- The “Laws of 1883” are passed, which prohibits the sale of public lands to private individuals.

1885- The “Laws of 1885” are passed, which lay down the legal framework for a future forest preserve

1894- The New York State Constitutional Convention amends Article XIV to the Constitution and the New York State's Forest Preserve is born.

INTRODUCTION

Seeking Solutions to Environmental Conservation from State Initiatives

A people without children would face a hopeless future; a country without trees is almost as helpless.

-President Theodore Roosevelt in a letter to school children about Arbor Day, 1908.

During the 21st Century, the United States federal government, after the inauguration of President Donald Trump, has failed to protect its environmental resources, particularly its forests. Rationalized by desires for monetary gains, the federal government has waged war against environmental conservation. From filling the Environmental Protection Agency (EPA) with corrupt officials, such as former coal lobbyist Andrew Wheeler's promotion as acting head of the agency (West, 2018), to the United States' withdrawal from the Paris Agreement on Climate Change, the federal government has abandoned its role in mitigating environmental catastrophes. Citizens and stakeholders, desperate for action, look toward state and local governments to establish environmental policy rather than the federal government. The United States Climate Alliance includes over 16 states committed to meeting the goals of the 2015 United Nations Climate Change Conference (COP21) without federal assistance, while the Mayors National Climate Action Agenda unites over 379 cities and local municipalities in meeting the COP21's

emission goals.

Among state-led initiatives, the New York State's Forest Preserve public land program, managed by the Department of Environmental Conservation (DEC) and the Adirondack Park Agency (APA), tasked with protecting the Catskill and Adirondack Mountains, with over three million acres of pristine wilderness, from anthropogenic development. The Forest Preserve is a one hundred and twenty five year old social experiment defined by a rich history of ecology and mountaineering within the Adirondack and Catskill Parks. The Forest Preserve's success is important in a political era when the federal government has abandoned almost all conservation initiatives. It is also an important case study for how enforcement, like prosecuting timber theft, can strengthen environmental laws.

Undoubtedly times have now changed and the current New York State Legislature, led by Governor Andrew Cuomo, has attempted to open the Forest Preserve to development through weakening key regulatory agencies, such as the DEC and the APA (Nicholas, 2017). This is despite the fact that development would actually hinder New York's economy by affecting the outdoor recreation industry. Therefore, this paper, through analyzing the history of the successful Forest Preserve, poses the question, "What can New York State do to learn from their history and policies what is necessary to protect The New York State Forest Preserve from states who have been able to maintain and preserve their forests?"

The first chapter of this paper focuses on how a period of intense timber poaching led to the New York State's Forest Preserve. One of the strongest motivations for forest

preservation was when residents witnessed the consequences of deforestation in their neighborhoods. But new laws need enforcement in order to be effective and the second chapter examines the complications with enforcing preservation laws in the Forest Preserve and conflicts between residents and state officials. Enforcing laws can be just as complicated, if not more so, than creating them and it is up to the political stakeholders to decide when enforcement is necessary. The third chapter examines the relevant laws and political stakeholders that govern the Forest Preserve to this day. Current trends indicate that the preservation policy regime is weakening in recent years, which could expose some parts of the Forest Preserve to unneeded development. Businesses and some state officials argue in favor of development, but the fourth chapter analyzes the economics of land value in the Forest Preserve, illustrating how preservation can be more beneficial than human development. Finally, the future of the Forest Preserve is considered so that policy makers from New York State and from other states will be able to better protect their own natural resources.

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CHAPTER ONE

The History of the New York State's Forest Preserve

Civilization is pushing its way even towards [the Adirondacks]... When that time shall have arrived, where shall we go to find the woods, the wild things, the old forests, and hear the sound which belong to nature in its primeval state? Whither shall we flee from civilization, to take off the harness and be free, for a season, from the restraints, the conventionalities of society, and rest from the hard struggles, the cares and toils, the strifes and competitions of life? Had I my way I would mark out a circle of a hundred miles in diameter and throw around it the protecting aegis of the constitution. I would make it a forest forever.

- S.H. Hammond, author of Wild Northern Scenes, 1895.

The New York State's Forest Preserve was born from a history of prolonged struggle over how natural resources, specifically forests, are used; conservationists, timber industrialists, property owners, towns and villages, state governments, and more have fought over the fate of the Catskill and Adirondack Mountains, which are part of the ancient Appalachian Mountain Range. During the late 19th century, growing concerns from sustainability activists, such as Elliot Vesell, about the future of New York forest lands, hoping to make these lands “forever wild” (New York State Constitution, Article XIV). Out of the approximately 6.1 million acres of land, 47% of it is owned by the public and 53% by private landowners and business interests (APA, 2009). While public land is covered by Article XIV as “forever wild” private land is regulated by state-mandated laws and local zoning ordinances. What ensued was a long battle between

conservationists and industrialists, with residents caught in between the crossfire. Other issues, such as meeting timber needs of local people for shelter and warmth versus conservation considerations, manifest throughout the history of the Forest Preserve.

(1.1) Prelude to the New York State Forest Preserve



Figure 1.1: Locations of the Adirondack and Catskill Parks (DEC, 2010)

During the 1894 New York State Constitutional Convention, a new amendment, named Article XIV, begins like this:

The lands of the state, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall

not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed.

Thus the New York State's Forest Preserve, one of the most ambitious state park conservation policies ever embarked on in United States history, was born. The Forest Preserve is state-owned land that, encompassing both the Adirondack and Catskill Mountains within a boundary known as the “Blue Line,” legally restricts most construction projects, and even motorized vehicles in some parts, in order to preserve New York’s natural resources. This successful forest preservation regime had existed long before that faithful convention and its roots can be traced all the way back to the American Revolution.

After the United States won its independence from Great Britain, land within the New York colony was transferred from British loyalists to New York State through the “Act of Attainder” law (New York State Government, 1779; Chapter XXV). The loyalists, on top of being “forever banished from this State”(Section II), were required to forfeit their land to the State without any payment (Section XV). This act also removed all land titles that belonged to any crown loyalists and gave them to the State. There were also wealthy American individuals who held land titles and would later sell said titles to prospective businesses. Out of tens of millions of acres allocated, seven million of them covered the area that would be eventually known as the Adirondack and Catskill State Parks.

New York State, having acquired over three million acres from this transaction, originally did not develop the land because it was too mountainous and far away from all

important trading cities, such as New York City and Albany. The land, for almost a century, was left undeveloped by the State but was used extensively by mountain-men, the original Forest Preserve residents, and the timber industry, who would engage in rampant over-harvesting of the State owned forests over the decades by the timber and tanning industries, which decimated the land to desert-like conditions.

(1.2) The Despoiling of New York Forests

Initially, undeveloped forest land in New York was not valued for its aesthetic beauty and vital natural services but was seen as a defiant symbol of man's inability to control nature. Logging and, eventually, railroad firms were the de facto managers of the Adirondack forests because the state government sold forest land for them to develop. Many state officials thought that the wild land would be better utilized if they were owned by businesses instead. The State did not oversee its own forest lands and the industries were free to develop as they pleased, exploiting what appeared to be limitless natural resources. In fact, infamous trader Alexander Macomb purchased over 3.6 million acres of the Adirondack Forest lands in 1792 for, according to official documents, "a generous eight pence per acre" (Dill, 1990; 9). Essentially, Macomb paid \$46,000, when adjusted for inflation, to possess so much land and decided the fate of most of the Adirondack Mountains. Macomb then sold the land to the previously mentioned industrialists, who proceeded to develop the forests in the name of monetary gain. Lumbermen began to move into the mountains after accessible forests in the flatlands were clear-cutted by the

early 1800s.

The State eventually sold off all seven million acres of its forest lands to industrialists by 1820, implying that state officials did not value wilderness as much as they did development (Valkenberg, 2008; 2). Private landowners, overwhelmed with maintaining their forested properties, sold their lands to timber companies, such as Moose River Lumber Company, and more forests were in danger of being exhausted. Immense damage was caused to the Adirondack forests; Moose River Lumber Company, one of the most active logging companies, purchased over “100,000,000 feet of timber[or about 2,300 acres of land]” and had “cut 18,000,000 feet” of trees (*Watertown Reunion*, 1897). Eventually, the logging industries returned depleted lands to the State for unpaid property taxes and the public inherited land that had lost its value in both ecosystem goods and ecosystem services.

A combined effort by both environmentalists, such as John Muir and nature essayist John Burroughs, and concerned industrialists, such as the Manufacturer’s Aid Association of Watertown, pressured Albany lawmakers into ratifying Article XIV of the New York State Constitution in 1894. Better known as the “Forever Wild” law, this law barred any sort of development from occurring around the Catskill and Adirondack Mountains. New York City businessmen were, surprisingly, Forest Preserve advocates on account of protecting drinking water. Indeed, modern issues have risen between the Catskills serving as a drinking water source for both New York City and Hudson Valley residents (Valkenberg, 2008; 1).

There are other business entities that decimated New York forests. The tanning industry,

for instance, wiped out the hemlock trees that populated Catskills. Hemlock was important in the tanning industry because it was used to smoke animal hides, which dried them and prevented molding from happening. When all was said and done, the devastation was so complete, in fact, that it ended all New York tanning businesses because there were no hemlock bark left to exploit. The paper industry also reduced tree populations since they harvested spruce, scotch pine, basswood, popple, white birch, red pine, and balsam fir populations. Other factors, such as major forest fires caused by careless lumbermen, timber thieves harvesting trees right under the nose of the state, and the steadily growing New York settlements, such as Woodstock which was established in 1829, degraded acres from lush vegetations into barren land (Valkenberg, 2008; 3). Some of these harvested forest lands were eventually sold by the State to railroad companies so that the land could be used in some way. Hotels and spas, many of which are now abandoned or burned down, proliferated within the Catskills and the Adirondacks.

The fauna, which included fish and game, of the Adirondacks were also not spared by hunters, who paid little heed to practicing sustainable hunting habits. Fantastic yet true stories of abundant sport animals, such as a fisherman catching over 120 pounds of trout in two hours (*The Recorder*, 1893), a hunter shooting five deer in five days (*The Evening Gazette*, 1890), and yet another fisherman catching a 30-pound trout specimen (*Geneva Advertiser*, 1885; 18). The promise of boundless game and sport meant that the hunters felt it needless to practice restraint, which led to the temporary disappearance of the trout in 1820 and the loss of the wolf, moose, elk, panther and many more native species (Valkenberg, 2008; 3). As a result, most of New

York's wilderness was all but gone by 1850.

(1.3) New York Environmentalists in the 1850s

Public reaction to disappearing American forests began when preservation ideas were harnessed by proto-environmentalists, such as Ralph Waldo Emerson and Henry David Thoreau, who extolled the beauty of nature and criticized rampant over development. Pro-environmental organizations in New York, such as the Hudson River School of Art, portrayed the beauty of nature through masterfully rendered portraits of rolling blue mountains and gorgeous sunsets over the Hudson River. Thomas Cole, founder of the art school and nicknamed "Father of the National Park System," lamented to his patron, Luman Reed, how the "copper-hearted barbarians are cutting all the trees down in the beautiful valley on which I have looked so often with a loving eye" (Thomas Cole National Historic Site, 2008). From 1836, after completing his *Course of Empire* landscape portrait, Cole began publishing his environmental views in newspapers, such as *The New York Times*, in order to raise awareness about the disappearing forests. Other Hudson River School artists, including Frederic Edwin Church and Asher Durand, would travel to art galleries not only to promote their works depicting the majesty of the Catskill Mountains, but also to emphasize the importance of preserving New York's national treasures.

Many environmentalists raised alarms when many rivers, like Moose River, were poisoned in the use of transporting felled logs downstream during the 1850s. It was the pollution of drinking water by logging activities that drove people to demand sustainable policies to

regulate river use, which would eventually lead to the Forest Preserve's creation. S.H. Hammond, was one of the first authors to advocate for making the Adirondack and Catskill Mountains a "forest forever" in his book *Wild Northern Scenes* (1857; 87). Journalists as well joined the call to protect the Adirondacks, and George Dawson of *The Albany Evening Journal* asked concerned citizens to seize "the choicest of the Adirondack Mountains, before they are despoiled of their forest, make of them grand parks owned in common..." (1864; 4). It was also in 1864 that George Perkins Marsh wrote the first textbook on ecology, *Man and Nature: Or Physical Geography as Modified by Human Action*. Public demand for a public land program, like the New York State's Forest Preserve, came from the help of multiple media outlets which melded public consensus and instilled a sense of urgency within its readers.

(1.4) The Birth of the Forest Preserve

All of these external pressures on the New York State Legislature eventually led to land surveyor Verplanck Colvin to explore the Adirondacks in 1865. Enamored by the majesty of its mountains, he began to promote the concept of a forest preserve to Albany lawmakers. Colvin climbed Mt. Seward, an Adirondacks peak, on October 15th, 1870 and "was amazed at the natural park-like beauty of this wilderness" (Randorf, 1978; 2). After his trip, Colvin stated in the 24th Annual Report of the New York State Museum of Natural History that "... these forests should be preserved; and for posterity should be set aside, this Adirondack region, as a park for New York..." (Pruyn, 1871; 173). In addition to artists protesting, business groups, like the

Manufacturer's Aid Association of Watertown, endorsed the concept of a New York Forest Preserve in order to provide drinking water needs for a quickly growing New York City, whose population was already twice as large as Philadelphia's.

Increasing concerns for water protection and forest preservation eventually reached the ears of the New York State Legislature and they passed Chapter 848 of the New York State Constitution in 1872 to begin protecting the forest. A "commission of State Parks... to inquire into the expediency of providing for vesting in the State the title to the timbered regions lying within the counties of Lewis, Essex, Clinton, Franklin, St. Lawrence, Herkimer and Hamilton, and converting the same into a public park" was created for the sake of protecting the trees (Parker et al, 1874; 1). The State Legislature rationalized the creation of a forest preserve in order to protect drinking water sources that have been devastated by logging firms. The First Annual Report of the Commissioner first outlined the destructive capabilities of the logging, mining, tanning and other industries upon the once pristine Adirondack forests (Colvin, 1873). The report criticized early land sales to private individuals and railroad companies that exploited the land given to them. Public acreage in the 1870s had only been a mere 39,854 acres, compared to the estimated three million acres today, almost one-hundred years after the Revolutionary War. The report acknowledged how public forests attracted not only the hunting and fishing firms but how the forests themselves provided ecological services that kept water supplies clean.

After Colvin's report came legislative actions that slowly advanced the forest preserve agenda, starting with Assemblyman Thomas Alvord's "Adirondack Park" bill, introduced in

1874, and an anti-disposal law aimed to protect public land (Chapter 297) in 1876. At this point, powerful politicians, like Governor Alonzo Cornell, began openly criticizing the State Legislature for selling away wild land instead of converting said forests into public parks. Alonzo essentially argued that the Adirondacks should be heavily regulated in order to prevent forest degradation. Even the succeeding governor, Grover Cleveland, made a State of the State Address in 1883 that any state land acquired should be declared “to be park lands.” The State Legislature eventually succumbed to decades of pressure from grassroots advocates to wealthy citizens and prominent politicians to pass the “Laws of 1883” (Peck, 1890; Chapter 355) prohibiting the sale “of lands belonging to the State situated in the counties of Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Lewis, Saratoga, St. Lawrence and Warren.” In that same year when Chapter 355 was passed, Chapter 470 of the New York State Constitution was also ratified into law, which granted the Comptroller the authority to spend up to \$10,000 to purchase forest lands within the Adirondacks. In addition, the New York State's Forest Preserve Comptroller was allowed to spend an estimated \$5,000 “for the employment of such experts as he may deem necessary to investigate and report a system of forest preservation...” (Chapter 551 of the “Laws of 1884”).

The Comptroller then hired “Commissioners”, led by Professor Charles Sprague Sargent of Harvard University, in order to create public policy aimed at protecting the Adirondacks. The Commissioners reported to Comptroller Alfred C. Chapin on January 23, 1885, saying that they had “devoted themselves industriously to the study of the question.” The Commission saw the

damage caused to the forests by timber firms as well as how water flow was regulated by the trees themselves. The Commission saw that the Ulster and Delaware counties lacked actual forests because the majority of them had already been destroyed and that one of the only ways to restore these lands was by marketing them to tourists as “summer resorts, which are of great importance to the people of the State.” As a matter of public policy, the Commissioner’s report recommended that the State should acquire forest land through purchase instead of condemnation, the former being more well accepted by the public. The Commissioners then made an important point to recommend the New York State's Forest Preserve from the ten aforementioned counties that were in the best condition for preservation policies.

At first it appeared that the Catskills would not be included in the newly birthed New York State's Forest Preserve, but it was actually included after the legal affairs caused by Cornelius A.J. Hardenbergh and his grudge against Comptroller Chapin. Hardenbergh, part farmer, part merchant, and part politician, was always driven by an isolationist ideal, which included the glorification of the majestic Adirondacks and, above all, the rejection of government taxes in any form whatsoever. The issue of land redemption through taxes occurred because of Chapter 200 of the Laws of 1879, which reduced land redemption in most Hudson Valley counties. This enraged Hardenbergh enough to become Town Supervisor of Shawangunk in Ulster County, where people who live there call the Catskill Mountains their home, and a member of the Board of Supervisors of Ulster County in order to oppose the legislation. After much debate, Hardenbergh and his fellow politicians succeeded in passing an 1879 law that the

Comptroller would deed state lands to individuals living in eligible counties. Not only did this ease Hardenbergh's concern about taxes but it also made local counties, such as Ulster, have more incentive to be involved with the forest land that is operated by the state. To be sure, an escalating feud between Comptroller Chapin and Assemblyman Hardenbergh over what the state should do with unredeemed and unsold land would lead the way for then-Governor David B. Hill to sign Chapter 283 of the Laws of 1885, which officially established the New York State's Forest Preserve.

(1.5) Current Political Issues of the Forest Preserve

Forest Preserve problems persist into the 21st century due to concerns, by local residents, that too much preservation prevents some acres of land for small-scale town infrastructure projects. Even innocuous infrastructure projects, like new bicycle paths or electric cables, could not be constructed due to state ownership of land (Foderaro, 2017). In addition, the slowly expanding Forest Preserve has provoked some private landowners, who believe that the state is exerting too much control over how the land should be used (Delaney, 2018). Solving these issues requires a close examination of pre-existing legal regimes so that public policy can be properly applied and the needs of all stakeholders are accounted for. A major concern here begins with New York City, which gets its drinking water from the Catskill Aqueduct.

The struggle between local Upstate New York interests and New York City stakeholders over the use of the Catskill watershed is ongoing (DEC, 2018). New York City's drinking water

supply includes the Forest Preserve as an entity within its “Partnership Members” organization, ratified after the New York City Watershed Agreement was drafted in 1997 (also comprised of federal, state, and local environmental agencies), responsible for supplying a quarter of the 1.2 billion gallons of drinking water per day to residents (Carney Jr. et al, 2015; 4). There are conflicts over the use of eminent domain to remove long-time residents from their Catskill homes to quench the thirst of far-away stakeholders. For instance, one of NYC’s water reservoirs, Neversink, was constructed, in the 1940s, when over 5,500 citizens were displaced through the sinking of their hamlet named Bittersweet (*State of the Planet*, 2015). Long-sustained resentment exists from those who live in the Catskill Mountains towards NYC for displacing countless people, mostly without their consent. Today eminent domain is no longer used to displace Catskill residents, but the resentment still exists.

The New York State’s Forest Preserve has been a success up to this point because of public support for environmental protection policies. It is because of this that the Forest Preserve is renowned for the Catskill and Adirondack Mountains that it was made to protect. As part of the ancient Appalachian Mountain Range, these mountains have been around for hundreds of millions of years and has a rich geological and ecological history attached to them. In addition, many people have come to call the Forest Preserve home and have based much of their identity around the Adirondacks and the Catskills.

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CHAPTER TWO

How Enforcement Affects Residents In the New York State Forest Preserve

An attack on the brain first drove me from the haunts of men to seek mental repose and physical strength in the woods... Thus much for the reasons which first induced me to penetrate the pathless and unknown wilderness of central New York.

I publish the results of my two trips, because I wish to make that portion of our State better known; for it bears the same relation to us that the Highlands do to Scotland, and the Oberland to Switzerland, That relation will be acknowledged yet, and every summer will witness throngs of travelers on their way to those wild mountains, and surpassingly beautiful lakes. No such scenery is to be found in our picturesque country, and none, that in my opinion, will match it this side of the Alps.
- Adirondacker Joel Tyler Headley, author of *The Adirondacks: or, Life in the Woods*, (1854)

Amidst the property debate in the Forest Preserve are the residents who interact with the New York State Forest Preserve on a daily basis. From townfolk to trappers to loggers, many people rely on the Adirondack and Catskill forests for their survival. The residents are affected by the new laws regarding timber theft, whether they support or reject such measures.

Development conflicts are rarely black and white since many convicted poachers are actually subsistence farmers that rely on timber theft in order to support their families. Essentially, the struggle between Preserve residents and the State has lasted for over one hundred years, a rich

history involving mountain-men and timber gangsters and sportsmen and much more.

(2.1) Living in the Forest Preserve during the 19th Century

According to ecologist Karl Jacoby, conservationists planning the Adirondack Park at the end of the 19th Century “had envisioned nature as stable and predictable, an entry[of public policy] that followed fixed laws easily comprehensible to trained experts” (2014; 48). Early park supporters had not realized that much of the Adirondack and Catskill communities were inhabited by mountaineers and loggers, who braved the wilderness with heed to neither societal conventions nor laws. According to a respondent in *The New York Times*, “I have not found a single instance in which the State forestry laws are obeyed or even respected” (1889). The same editorial even accused state employees breaking the established forest laws for the sake of profit. Many editorials over time, starting in 1863, began to promote the Forest Preserve in order to hold both business owners and state officials accountable (Guber, 2010; 433). It has shocked most conservationists that the early inhabitants of the Adirondacks and the Catskills were unwilling to obey forestry laws, even for the benefit of said forest, because it clashed with their independent lifestyle. Even as early as 1899, many hunters and guides believed that the forest should not have owners, not even the state (State Assembly, 1899). This mindset is similar to protecting forest lands for future generations but without legal intervention. There were many Adirondack and Catskill residents believed that they should have ownership to the land because they had developed it and it served as their home for many years.

The sentiments of many Forest Preserve residents are complicated, as there are both pro-conservation and pro-development citizens living within the forests. The settlement of the American countryside was accompanied by tremendous ecological devastation, as stated in Chapter One, and many forests within the Hudson Valley suffered from constant exploitation and the lack of laws to protect them. While many environmentalists place capitalistic economic relations at the center of their analysis, they frequently treat capitalism as little more than a marketplace for the buying and selling of natural resources.

The stark dichotomy of “careful stewardship versus ruthless development” (*Forest and Stream*, 50) is challenged by the diverse population living within the Forest Preserve. During the end of the 19th century, Adirondack natives experimented with a variety of strategies designed to regulate any use of the region’s natural resources. Some strategies include increased police patrol in the forests, punishing individuals within the community who take too much wood, and teaching wilderness values to children. Problems arise when state officials, who mostly live in Albany, begin to interfere, despite their best intentions, with the Forest Preserve residents’ daily lives. Doing so would bring about some deeply-ingrained tensions between the region’s residents, outside conservationists, and even between citizens of the Forest Preserve themselves.

After the New York State’s Forest Preserve was drafted, many people reacted against the illegal timber industry. The Forest Commission was established to combat trespassing and, even, wood theft. The latter problem was so prevalent, according to the Forest Preserve, that it was considered a perfectly acceptable practice; that “what belonged to the State was public property,

and that they, the mountaineers, had a right to go in there and cut as they wanted to” (Assembly Committee on Public Lands, 1889; 284). The commission endeavored to single out the most obvious offenders to serve as a warning towards others instead of trying to punish as many as possible. To their dismay, many regulators were unable to persuade locals to testify against timber thieves, because many neighbors committed timber thefts in order to survive. The inhabitants of the Adirondacks, the Forest Commission charged, were apparently “unable to recognize their nearest neighbors while cutting State timber a few rods away; they do not know their neighbors’ horses and oxen, not the location of roads and lots...” (Myers, 2013; 380). The only way that the Forest Commission could find timber poachers would be to:

[find] a man in that section who has some ill will against him; if they are all friendly it is almost an impossibility, because the person who go there, the State officials, are strangers; the men who live in the locality expect no favors from them and if they tell what they know in regard to these trespasses to the State officials they subject themselves to the annoyance of their neighbors. (Aaron, 1992; 179)

The Forest Commission ultimately could not go after the Adirondack trespassers because said trappers feared ostracization if one was to report their neighbor for illegal timber harvesting. While conservation officials, in keeping with their program of state simplification, insisted on classifying all tree-cutting on public lands as theft, local residents considered such “crimes” to be, under certain conditions, perfectly legitimate. One Adirondack farmer, Robert Shaw, defended the timber poaching as a means to “let the people, for their own use, cut any timber they were a mind to, anywhere” (New York State Assembly, 1891; 250). In addition, Shaw did not consider tree harvesting a “crime” since “half of the people haven’t got any wood of their

own that lives around the vicinity” (250). Some Adirondackers justified such behavior by claiming a right to resources on their land (Aber, 1980; 216). Indeed, many Adirondackers rely on firewood from State lands in order to provide for their daily life.

(2.2) Enforcing Laws against Timber Theft and Consequences

While many conservation officials realize that many trespassing crimes are committed for the sake of necessity, they still clamor that said people be “arrested, convicted and fine. These parties, all of whom were very poor, pled in their defense that the State owned all the land in their vicinity...” (New York Fisheries Commission, 1885; 115). This has not occurred without protest as several Forest Preserve residents sent letters pleading to the Forest Commission to reverse their policy decisions on punishing illegal timber poaching. According to one author, William Dunham of Hamilton County, state officials are unaware how “a good many of the people here have no woodland of their own and cannot buy any of their neighbors, it becomes quite necessary for them to cut what wood they want to burn... on the State” (*The New York Times*, 1903). This raises up the debate of whether natural resources are a public good to be enjoyed by all or whether timber use should be limited so that the resource may not be exhausted. What may be necessary is a middle ground of allowing the public to have access to certain natural resources but to be managed. The residents of the Forest Preserve either have to travel long distances to private land that allowing timbering or to poach on state-owned land and risk legal ramifications. The Forest Commission ultimately remained unwilling to amend its

definition of timber theft, despite protests and pleas from Adirondack and Catskill residents.

Commissioners have even acknowledged that “a feeling of bitter resentment among the settlers in some localities” have been aroused thanks to the stringent regulations (New York Fisheries Commission, 1896; 340).

As the Adirondacks native Henry Bradley explained in 1895, residents considered it perfectly legal to take firewood or building supplies from state lands if the materials were used for one’s immediate household subsistence. From the local perspective, such activities only achieved the status of crimes if, according to the law, trees are cut “for the purpose of marketing and selling the logs again” (*The New York Times*, 1904). The market is an important key as to whether timber harvesting becomes a crime but, according to what many Forest Preserve residences go through, it is usually to provide fuel for themselves and their families. Many residents are also aware of which species of trees to fell and to moderate certain species, such as spruce, pine and others. Most firewood, according to resident William Dunham, are “hardwoods, no evergreen timber being used” (New York Forest Commission, 1885; 15). Residents, in addition, define themselves with agrarian notions of simplicity and self-sufficiency conditioned by subsistence practices.

As a result, many residents found it difficult to arrive at a consensus as to what constituted an appropriate middle ground between subsistence and the local timber market. In the case of timber theft, some Adirondack residents reasoned that if the taking of firewood and building supplies for subsistence was a reasonable practice, then it should also be justifiable to

sell stolen timber for the purpose of buying essential supplies. Such logic held a particular appeal for residents with few other means of generating income, and throughout the 1880s and 1890s one could find a poor class of residents who took logs from the Forest Preserve so that they may live. In 1895, for example, a convicted thief responded that he was “a poor man and was obliged to take the timber to get something to live on” (*Forest and Stream*, 1911; 658). Another timber thief, Charles Barney, was found, upon background investigation, to have “no means of support except cutting and selling wood and timber from state lands on which he resides” (658). Local juries, the Forest Commission soon learned, displayed frequent sympathy to such an extent that the timber thief “has the sympathy of his friends and neighbors, and the very men who are on the jury are men possibly who have been engaged in some such operations themselves” (, 1911; 536). Residents may have also tolerated tree thefts for shingles because they recognized that the activity did not seriously threaten the local forests. Only a few trees were suitable for either product, forcing trespassers to selectively cut. Furthermore, after felling these trees, the thieves still had to invest a considerable amount of time and labor to transform the raw timber into a marketable commodity, which put them at even greater risk for getting caught (54).

Although the Forest Commission devoted much of its resources to stopping such practices, the stealing of trees for shingles did not constitute the Forest Preserve’s most common form of timber theft in the 1880s and the 1890s. In fact, crews working for lumber companies accounted for the largest amount of trees stolen. Such trespasses were plotted months in advance and hidden underneath several layers of oral contracts. Usually, “a contract to cut timber usually

passes through many hands before it comes to the man who actually does the work”, according to state investigators. This is done so that the timber thieves would be able to hide their actions by using other lumberers and property owners as proxies for their timber thefts. These arrangements enabled lumber companies to shield their involvement while leaving the woodsmen who did the actual trespasses on state lands to face the risk of arrest on their own. This process, recognized as “letting-jobs” during the 1880s, allowed a boss lumberman to direct other lumbermen to cut a specified tract and served, essentially, as gig jobs. The lumbermen, who are almost all working class, accept these risks for lucrative pay in order to alleviate their economic hardships.

(2.3) The Rise of Timber Demand and Thefts

Essentially, the rise of widespread timber theft occurred during the late 1890s when the timber industry was providing wood for businesses all across the country. This increased demand for timber meant that the timber companies were more willing to use unsavory tactics at the expense of working class citizens. While earlier timber operations were focused on cutting large softwoods located within a few miles of waterways, the rise of the railroad and the pulp mill in the closing decades of the nineteenth century altered this trend. Pulp mills, which manufactured paper using finely ground softwoods of any size, eventually abandoned these in order to target evergreens. Even after the Forest Preserve was created, the production of lumber in the Adirondacks and Catskills almost doubled between 1885 and 1910 as timber concerns expanded

their legal, and illegal, cutting operations.

Many Forest Preserve residents began to insist to protect their own wood supplies from these lumbermen gangs. In addition, local chief fish and game protector J. Warren Pond wrote that “there is no prejudice existing in Franklin county in favor of lumbermen... On the contrary they are regarded with some suspicion on account of the desire of people to preserve the forests and [waters] and the game therein” (Commission of Fisheries; 1897; 126). This local suspicion against lumber companies caused *The Adirondack News* to call for stricter supervision of the region’s lumber industry through state appointed wardens to prevent “the consumption of timber by the pulp mills [that] has increased so rapidly as to endanger, instead of promote, the welfare of our forests” (1893, 245). Thanks to this sustained local resistance against the timber companies, timber gangs were harassed by the Forest Preserve residents and kept from rampant tree harvesting. By the end of the 19th century, both state officials and locals assumed that it was not the poverty-stricken timber thieves who threatened the Forest Preserve but rather timber companies operating through proxy work crews. For instance, local surveyor Nathan Davis contended that it was these companies, not the poor residents needing the firewood for survival, that were the true criminals. The illegal timber crews, in response, formed violent gangs, some sporting names such as the “State Troopers” and the “Grenadiers” in order to mock the Forest Commission, so that they might continue their criminal activities (56). Some of these timber gangs, like the ones in Herkimer County, posted a warning that “anybody that comes here to watch, their bones will be left in these woods, so help us, Jesus!” (Committee on Public Lands

and Forestry, 1891; 282). These intense criminal actions placed the Adirondacks community in the cross-hairs of state conservation officials desperate to halt timber thefts.

By 1899, the Forest Commission has reported that only one out of forty-six trespassing cases was related to a lumber company, which was the Bench Lumber Company (Weed, 1899; 297). In addition, these theft charges revealed corruption within the Forest Commission and the state officials investigated two fraud charges in the Forest Commission during 1894 and 1910; several leading conservation officials, such as Campbell, were fired (1898; 2879). Many commission members in 1900 noted that “petty trespassing” was a widespread problem through the Preserve, especially by residents seeking firewood for subsistence (*New York Tribune*, 1900). Even the Forest Commission struggled with working class residents, who “robbed” for subsistence, constituting the vast majority of the trespass cases the commission investigated. Because of their detailed knowledge of local conditions, many thieves were able to evade capture by law officials. According to Warden Samuel Gorman, “A man will go with his boy or his neighbor and cut two or three trees in take them away in the middle of the night” (New York Fisheries Commission, 1886, 359). In spite of its foresters and its attempts at simplification and surveillance, the commission still found itself incapable of completely controlling natural resources within the Forest Preserve.

(2.4) Forest Game Laws in the Cross-hairs

The residents also clashed with authorities, such as the Adirondack Park Agency, on the issue of hunting. Many residents complain that the Forest Commission, and eventually the APA and DEC, was starting to have more control over the natural resources of the Adirondacks and Catskills than the citizens themselves. The classic issue of liberty versus regulation with a society trying to distance itself from typical societal norms and enforcement was brought up again. The questions of who was hunting, with what tools and for what purpose had made game laws a point of great concern among citizens and state officials.

One of the leading causes of wildlife loss in the Forest Preserve was sports hunting, where game are killed not for necessity but rather for the thrill of the catch. Much game would be chased by dog packs or by groups of hunters seeking to bag as much game as possible. The majority of these sport killers were not residents but rather from more urban environments, such as New York City. According to the sportsmen magazine *Forest and Stream*, “We believe that more deer are killed by the few score guides [in the Adirondacks] ... than by all the sportsmen put together” (1874). This led to sportsmen indicting the residents as the reason why prime game were vanishing at a dramatic rate. New York City sportsman J. H. Woodward even called for the end of restrictions to sportsmen (*Forest and Stream*, 1898 406). Many Forest Preserve residents defend vigorously against these accusations by pointing out how wealthy sport hunters did not need the game they killed since sports hunting is inherently an elite leisure. Conservationist Christopher Goodsell called for “game laws for the poor as well as the rich.” (1896, 27). The

contrast between punishments for local subsistence and the consumerist sport-hunting activity showed the level of inequality present in justice.

There were also reports of residents and hunters outside of the county fighting over how many creatures should be hunted for sport. For instance, a fight broke out between Charles Hoffman, a visiting sports hunter, and John Cheney, his guide, because Hoffman wanted to kill a covey of partridges even after killing some birds and a deer. Cheney responded to Hoffman by saying “it’s wrong, it’s wrong, sir, to use up life in that way!” (Hoffman, 1928; 69). Adirondack local David Merrill noted how sportsmen, who were not convicted for fishing with a hook and line, preferred “to torture the fish for the fun they get out of it. A fish as well as a man has a sense of feeling and suffers[sic] after being hooked, and the longer this period of torture can be extended, the more fun the so-called ‘sportsman’ can get out of it” (30). Countless stories from residents about the cruelty of the unpunished sportsmen in the Forest Preserve undermined confidence in state officials attempting to protect the wildlife.

(2.5) The Modern Day Struggle to Save the Forest Preserve

Those who think that deforestation is a thing of the past in the Forest Preserve are gravely mistaken; the economy-oriented Cuomo Administration has pushed the APA to allow for clear-cut logging throughout sections of the Forest Preserve (*Times Union*, 2013). Residents, environmental coalitions, state officials, and others have formed an environmental coalition (comprised of the Natural Resources Defense Council, the National Wildlife Federation, the

Sierra Club and others) to urge Governor Cuomo to prevent clear-cutting, a tactic that ran rampant in the Adirondacks and Catskills during their pre-Forest Preserve days. The environmental destruction caused by clear-cutting instead of selective cutting are tremendous and it is absurd that it is being seriously considered for land that is protected by Article XIV of the New York State Constitution.

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CHAPTER THREE

The Current Politics of the Forest Preserve

Given its constitutional and statutory protection and global reputation, it comes as no surprise that most New Yorkers and visitors assume that:

- The natural resources of the Adirondack Park are well protected;
- Existing and potential new threats to the Park's resources are studied, monitored and incorporated into decision making;
- New development proposals are carefully scrutinized and, if found to have inappropriate adverse impacts on Park resources, denied permission to move forward;
- DEC and APA are guided by the mandate that protect of the Park be the paramount consideration, and that the DEC and APA ensure that protective laws are enforced.

We report that none of these assumptions are justified today.

- David Gibson and Dan Plumley, authors of *The Adirondack Park at a Crossroad: A Road Map for Action*.

To be sure it is important to analyze the most important stakeholders who operate the New York State's Forest Preserve. The Forest Preserve is governed by numerous public (DEC, APA, BFPM, ect.) and nonpublic (associations, councils) entities, which makes the political process of preservation complicated. Different needs, from protecting natural resources, and the need for clean water to allocating “protected” land for public municipality projects, has been expressed from New York City constituents to Essex homeowners and elected officials (Joan, 2005; 3). The Forest Preserve has recently been updated in 2016 through the Adirondack Park

State Land Master Plan in order to deal with contemporary land use issues. The following categories of land use are from least intrusive to most: Wilderness Area, Wild Forest Area, Primitive Area, and Intensive Use Area. The purpose of each of these sections is to accommodate land use for specific occasions. This has created uncertain legal jurisdictions as public and private stakeholders argue over how Forest Preserve land should be properly used.

(3.1) Laws Governing the Forest Preserve

One of the foremost environmental federal laws, the *National Environmental Policy Act of 1969*, required that all executive federal and state agencies prepare Environmental Assessments (EAs) and Environmental Impact Statements (EIS), which reported that state the potential environmental effects of proposed agency actions (US Council, 2007; 2). The Act allows the Adirondack Park Agency to “sue and be sued”, to maintain businesses and instruments for “the exercise of its power and functions” and to summon witnesses to determine any violation of Article XIV (Section 804, 1971). Other relevant laws include the Freshwater Wetlands Act (Environmental Conservation Law, Article XXI) and the Wild, Scenic and Recreational Rivers System Act (Environmental Conservation Law, Article XV, title 27). The plan broke the Forest Preserve holdings into seven categories based primarily on the extent to which man had affected the landscape. The seven classifications are Wilderness; Primitive; Canoe; Wild Forest; Intensive Use; Wild, Scenic and Recreational Rivers; and Travel Corridors. The Master Plan defined a “wilderness area” as land that forbids any human development on it.

(3.2) State Agencies: The Managers of the Forest Preserve

The New York State's Forest Preserve, while owned by the state, is managed by the following bureaus: the Department of Environmental Conservation, the Adirondack Park Agency, as well as the New York State's Parks and Recreation Department (Catskill) and the New York State Bureau of Forest Preserve Management (BFPM). These organizations assume different responsibilities in order to manage almost three million acres of “forever wild” land in the Catskill and Adirondacks Mountains. The first bureau responsible for the Forest Preserve is the DEC, which has its powers vested through Article XIV, and Article XXIV of the New York State Constitution, also known as The Freshwater Wetlands Act. After the DEC comes the Adirondack Park Agency, which manages the daily operations of the Forest Preserve. Essentially, each agency adds to the political ecology, which governs, and controls the fate, of the Forest Preserve.

(3.3) The Mechanisms of the Department of Environmental Conservation

The DEC, responsible for overseeing the New York State's Forest Preserve, is currently led by Commissioner Basil Seggos, whose role is appointed by the New York State governor to lead the agency. Basil was also involved with expanding the Forest Preserve and was involved with multiple purchases of public land, including those acquired from Finch, Pruyn & Company who owned and wanted to sell the land.. In addition, Basil's tenure coincided with several important Adirondack Park Agency classification decisions, including the High Peaks Wilderness and Boreas Ponds and Essex Chain Tracts (*Adirondack Almanack*, 2018). Interestingly, Seggos

was criticized by multiple environmental advocacy groups, such as “Protect the Adirondack”, who criticize the Commissioner for weakening key present-day environmental laws, like the “Adirondack Park State Master Land Plan”, which originally forbid motor vehicles from operating in Primitive Areas of the Adirondack Park. It is necessary to note Seggos’ involvement with multiple organizations both private and public, which question his integrity regarding the New York State's Forest Preserve..

(3.4) The Mechanisms of the Adirondack Park Agency

The Adirondack Park Agency, responsible for directly managing the Forest Preserve covering the Adirondack Mountains, has its powers defined by the Adirondack Park Agency Act, created in 1971 amidst controversial environmental disasters in the likes of Love Canal and the success of Rachel Carson’s *Silent Spring*. The Act allows the APA to “sue and be sued,” to maintain businesses and instruments for “the exercise of its power and functions” and to summon witnesses to determine any violation of Article XIV (Section 804, 1971). Some violations, for instance, involves the APA being sued by Adirondack advocate groups for proposing to allow motorized vehicles and construction projects into the Essex Chain Lakes tract (Waldman, 2016). Other relevant laws include the Freshwater Wetlands Act (Environmental Conservation Law, Article XXI) and the Wild, Scenic and Recreational Rivers System Act (Environmental Conservation Law, Article XV, Title 27). These powers, while making the Agency beholden to the State Legislature, allowed park advocates to enforce conservation laws with the threat of

monetary loss against any offenders. This has created a new dynamic in the Adirondack Mountains, as both DEC and APA have to work side by side to protect the Forest Preserve.

(3.5) Mechanisms of the Bureau of Forest Preserve Management

If the DEC and APA are the enforcers of the Forest Preserve, then the Bureau of Forest Preserve Management (BFPM) oversees daily operations for the “care, custody, and management” of said Forest Preserve (DEC, 2018). The BFPM runs many Forest Preserve programs, such as the unit management planning process, the Forest Action Plan, Forest Preserve Stewardship Actions and the entire DEC conservation easement program. Each of these programs, supported by federal laws, have been modified to limit park development as much as possible. The BFPM coordinates activities between the DEC, the APA and local park officials to protect the Forest Preserve. This organization differs from the Bureau of State Land Management, which focuses on over 800,000 acres of land managed for more recreational purposes across New York State, by operating sustainability programs for the Forest Preserve.

The Forest Action Plan is a 10-year strategic plan for the forest community overseen by the BFPM. The purpose of the plan is to provide long-term and comprehensive strategies to help the forestry community on how to invest public and private resources for protecting the Forest Preserve. The Forest Action Plan was born from the United States Farm Bill, a federal law that requires each state to submit a Forest Action Plan every ten years to the US Forest Service. Because of the plan, forest cover has been steadily increasing throughout New York State since

the plan was first introduced in 1968 (Davies, 2010; 5).

(3.6) Private Land and Development Issues Within the Forest Preserve

One thing was becoming painfully obvious by the middle of the 1970s: that despite the strict Constitutional controls over the use of Adirondack Forest Preserve lands, there were no regulations whatsoever regarding the use of private lands within the Blue Line, the boundaries that define both the Adirondack and Catskill Parks. The Conservation Department had virtually no authority over private development, and development was on its way. The construction of the Adirondack Northway, or Interstate 87, greatly eased access to the Adirondacks, and cheap motels, taverns, and other architectural commercialization quickly began to change the wilderness character of the region. The subdivisions, housing developments, and second-home construction that had harmed Vermont's natural resources were all on their way to the New York State's Forest Preserve. Governor Nelson Rockefeller was aware of all of this, and in 1968, after the effort for the Adirondack National Park had failed, appointed the Temporary Study Commission on the Future of the Adirondacks. Harold Hochschild, who founded the Adirondack Museum, became chairman. Two years later, near the end of 1970, the Commission submitted its report to Rockefeller. Numerous recommendations were made, and many of them were to be expected. For example, the Commission encouraged the State to leave Article XIV alone, and to leave the National Park Service out. The most important of the Commission's recommendations, however, was its first:

An independent, bipartisan Adirondack Park Agency should be created by statute with general power over the use of private and public land in the Park...” (Smith, 2000; 1)

Privately held lands located near the Forest Preserve raised issues about how to balance preservation and development. Lands owned by paper companies or sportsmen’s clubs, such as the Adirondack League Club, which is south of Old Forge, typically fell into the category of resource management. The plan also divided all proposed development projects into two categories: large-scale projects, known as Class A, and small-scale ones, termed Class B. Class A projects required the direct approval of the APA while Class B projects would be approved by the municipal government.

The Land Use Plan was eventually passed by the legislature after a number of compromises, one of which guaranteed that the state would continue paying the towns property taxes on its lands along shorelines. As Governor Rockefeller signed the Adirondack Park Land Use and Development Plan on May 23rd, 1973, he exclaimed “The Adirondacks are preserved forever” (Farber, 1973). Controversy immediately appeared after the Land Use plan was ratified as Adirondackers said the APA was effectively stealing their property and that they were being denied basic rights to do as they wished with their own possessions. A nation-wide economic slump right after the Agency’s newborn regulations did not improve public relations either. Paul Schneider, in *The Adirondacks: A History of America’s First Wilderness*, writes, “It didn’t seem to matter that the region had failed as an agricultural center, failed as a mining center, and failed as a manufacturing center all by itself long before the advent of the APA” (173). The fledgling

Agency also had problems with processing permits in a timely manner, which appeared bureaucratic for no one's benefit. Some people became so agitated with the APA's decision that they wanted to destroy the agency, such as one man who attempted to burn down the Agency's headquarters in 1972 (Schneider, 1997: 300).

(3.7) Land Use Trends of the Adirondacks and Catskill Mountains Tracked by History, Data and Maps

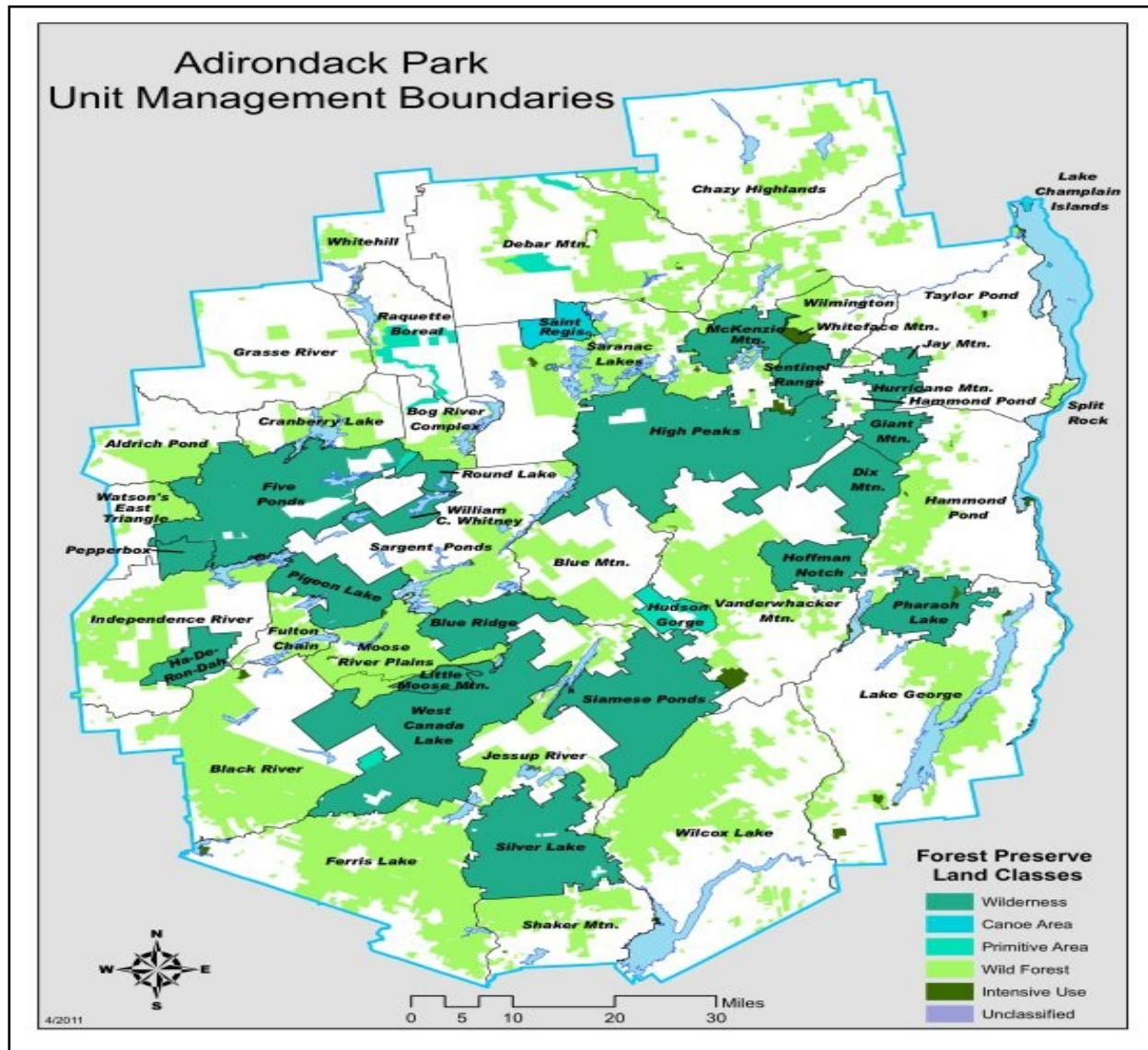


Figure 3.2: Expansion of the Adirondack Park Forest Preserve Lands (GIS, 2002).

Catskill Park

Unit Management Boundaries

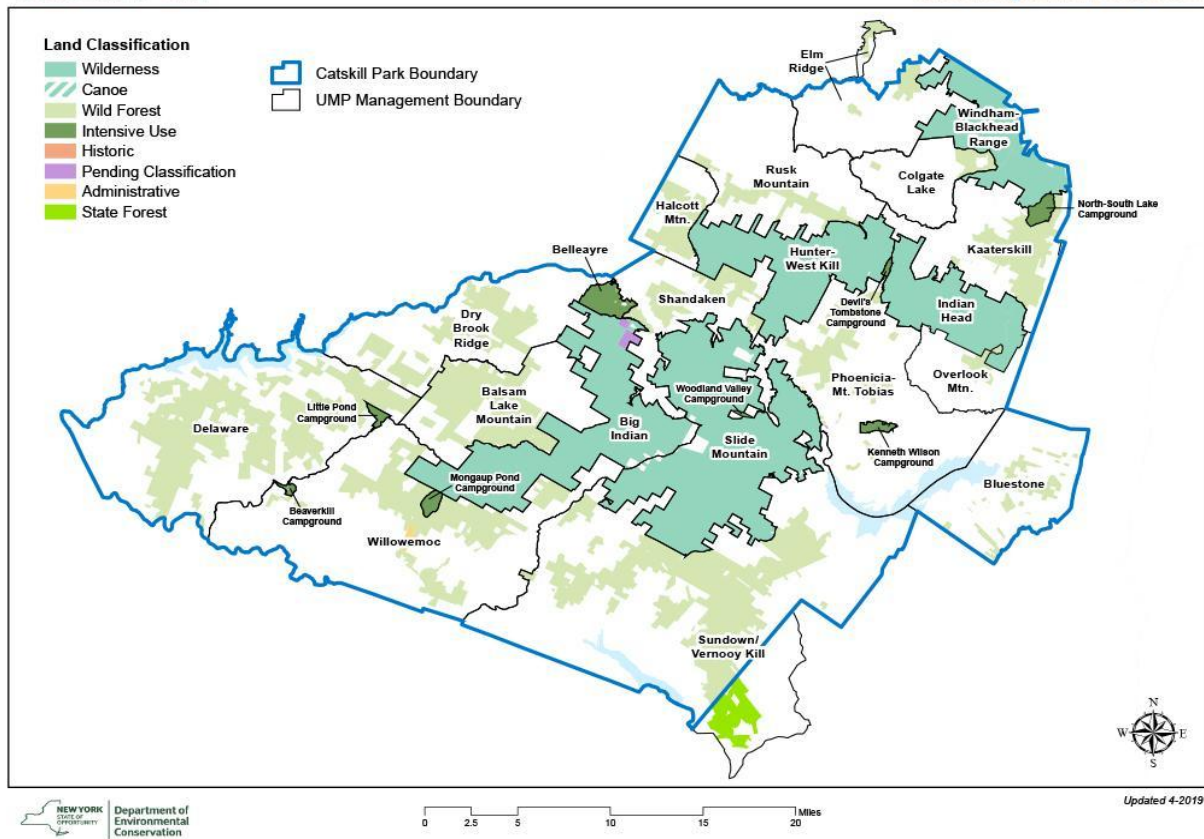


Figure 3.3: Catskill Park Boundaries and Land Classification (DEC, 2009).

FOREST PRESERVE MANAGEMENT UNITS

Classification (# of Units)	Acres
Wilderness (5)	143,000 (51%)
Wild Forest (14)	130,000 (47%)
Intensive Use (11)	5,580 (2%)
Administrative (6)	824 (0.3%)
Primitive Bicycle Corridor (4)	156
Conservation Easements (3)	514

Figure 3.4: Classification of Forest Preserve Lands by Percentages (DEC, 2009).

Land Use Classification	Total Park Acres 2009	Total Park Percent 2009	Total Park Percent 2000	No. Transacted Parcels in Data Set 2009	Principle Buildings Allowed per Linear Mile and Square Mile	Min. Lot Width in Feet	Average Lot Size in Acres
Hamlet	53,640	0.92	0.92	6,745	LM: 106 SM: No Limit	50	No minimum
Moderate Intensity	99,569	1.71	1.75	4,166	LM: 53 SM: 500	100	1.3
Low intensity	269,021	4.62	4.64	3,003	LM: 42 SM: 200	125	3.2
Rural use	1,009,385	17.34	17.47	2,706	LM: 36 SM: 75	150	8.5
Resource Management	1,518,735	26.09	26.73	769	LM: 26 SM: 15	200	42.7
Industrial use	12,430	0.21	0.21	6	LM: - SM: No Limit	No Limit	No Minimum
Wilderness	1,095,185	18.81	18.41	-	-	-	-
Primitive	66,224	1.14	0.78	-	-	-	-
Canoe area	17,647	0.30	0.30	-	-	-	-
Wild forest	1,287,296	22.11	22.17	-	-	-	-
Intensive use	19,757	0.34	0.33	-	-	-	-
Historic	530	0.01	0.01	-	-	-	-
State administrative	1,665	0.03	0.03	-	-	-	-
Pending classification	35,785	0.61	0.51	-	-	-	-
Water	334,415	5.74	5.75	-	-	-	-
Total acreage	5,821,283	99.98	100.01%	-	-	-	-

Source: Adirondack Park Agency GIS statistics provided for March 3, 2009.

Figure 3.5: Land use in the Forest Preserve by land types. (APA, 2009)

(3.8) Issues with the APA Act

The greatest threat to the Preserve's natural resources has been the cumulative, incremental development sited in ecologically sensitive areas that erode the Preserve's diverse ecology of fauna and flora. The APA has the authority to review each application for future

development projects and categorizes them as either prior, pending or anticipated land use development. The purpose of this “cumulative impact analysis” is to determine the overall effect of multiple developments on the same resource, such as the impact of additional house lots on lake water quality impaired by pre-existing development.

During 1989 the APA reported to the Commission on the Adirondacks in the 21st Century that 21,000 single family homes and 6,500 vacant lots had been carved out of undeveloped private lands within the Park since its founding. What this means is that there has been a 42% increase over 20 years in private housing developments since the APA had been created. It has also been discovered that the number of subdivided lots had more than tripled, and that only half of the approved residential subdivisions had been reviewed by the APA (Commission, 1990). Many policy recommendations were made to address these trends, but faced political blowback and, thus, were never enacted. This trend has also been confirmed by an Adirondack not-for-profit, the Residents’ Committee to Protect the Adirondacks, which observed that over 8,589 new residential and commercial structures had been built on the Preserve since the 1990s (The Residents’ Committee, 2001). Since then, around 900 new structures have been built per year in the Adirondacks and Catskills and are not slowing down to this day.

Despite calls from within the APA to monitor construction trends, there has still not been a strong analysis effort since 1999. In the APA Trends Analysis, the agency has identified 18 natural and cultural resource areas as priorities for trends monitoring, with 59 suggested data indicators for the health of these resources (Craig, 2017; 9). Efforts have halted since then as

succeeding APA administrators failed to make the analysis an ongoing priority. Now, 18 years after the report, the official APA website still uses the same recommendations with no policy modifications for a contemporary New York State. In addition, changing climate conditions are forcing the region's planning agency to respond to altered key resource indicators and, hopefully, begin to forecast natural resource and construction trends.

The implementation and enforcement of the APA Act relies on the motivation, drive and power of the APA's eleven-member Board of Directors and the fifty-four staff members that maintain daily operations ("Adirondack Park Agency Members and Designees", Last updated June 30th, 2018). All board members and three State agency designees are either nominated or appointed by the Governor, who is currently Andrew Cuomo in this case. For much of the APA's history, a majority of its members were mindful of their statewide responsibilities and were committed to executing the APA Act to the fullest extent. Many of these past members had interests and backgrounds that were particularly well suited to the protection of the Park. For example, former member Elizabeth Thorndike was a leader in promoting public awareness and understanding of acid rain impact on the Adirondacks forests and how to solve it (Adirondack Mountain Club, 1985). Former board members, like Anne LaBastille and Herman "Woody" Cole, increased the APA's awareness of the consequences of the global loss of biological diversity (McMartin, 2002; 6). Yet another board alumnus, Peter Paine, brought heightened concern for wilderness protection and a personal history of protecting Lake Champlain by protesting against the State Government (Mann, 2015). The list goes on, from co-chair of the

Adirondack Nature Conservancy Arthur Savage to Richard Lefebvre, the father of New York State visitor centers, of previous members that grew the APA's clout with their passion for protecting New York's largest natural resource.

Unfortunately, the concern for succession of members was so great during the 1970s that then-member wrote to Governor Hugh Carey upon her retirement from the APA, urging him to appoint new members on "the basis of their qualifications" and avoid "questionable competence and dubious commitment" (Prime, 1977). Today, Prime's warning has become reality at the APA, according to advocacy groups, as new members are accused of conforming to Cuomo's centrist policy regime instead of fighting for the environment. While all current members are hardworking policy makers, they mostly value economic development throughout the Forest Preserve instead of preserving it. There is little news concerning the contemporary Forest Preserve to this day. For example, all but one APA board members voted in favor of large estate homes and sprawling development in "Resource Management" land (APA Project Permit 2005-100).

(3.9) The Adirondack Park Agency: "Open for Business"

During 2011, shortly after the 2008-09 Recession, the APA placed a banner on its wall, "The Adirondack Park: 103 Communities *Open*[originally in italics] for Business." This occurred because Governor Cuomo made an order that all state agencies, including the APA, be "open for business" and promote economic incentives within their policy agendas (Cuomo, 2011). To further salt wounds, Cuomo ordered the APA and all other state agencies to change their agency

logos to the slogan “State of Opportunity” (Cuomo, 2015). The message sent by the Governor is clear; development, not conservation, is valued in New York. The language used to shape APA policies began to change as well as buzzwords like “balanced” economic development along with the agency’s duty to protect the Forest Preserve. In the APA’s closing statement on the Adirondack Club and Resort, for instance, the state agents described the APA Act as requiring “a balance of the adverse resource impacts of the project with *its potential benefits* [emphasis added]” (Hearing Staff, 2011). The fact that preservation and economic development are two policies that must be balanced in the Forest Preserve specifically made to keep out development is troubling and problematic. Furthermore, the economics of a healthy ecosystem (explained further in Chapter 3) strengthens local communities more than rampant development in the name of “efficiency”.

The gap between the APA Act’s lofty legislative goals and more ordinary methods to carry out the state objectives have not stopped APA alumni from protecting the Forest Preserve. While conservation subdivision design never has been the standard required of new Adirondack Park developments, there has still been an effort to protect large swaths of the Preserve’s open space through the land use classifications, “Resource Management” and “Rural Use”. Activists and professionals relied on natural resource surveys and directing new construction projects to be built near pre-existing infrastructure. This prevents the fragmentation of forest land and open spaces while allowing outdoor recreational activities to continue normally. There are a couple of cases where the APA Act has been complied with for the benefit of the Forest Preserve.

For example, the Patten Corporation application, based in the Town of Greig, was for a 2,750 acre subdivision of land classified as Rural Use into 19 lots ranging from 100 to 250 acres each. After a public hearing, the APA denied the project because it was inconsistent with the law's purposes and the objectives for the Rural Use classification in that the homes were not clustered, and because the cumulative impacts of this and other similar projects could be significant. The applicant substantially downsized the project and a second public hearing was held. The final permit avoided impacts to trout streams, wetlands, deer wintering areas, and forests. APA ultimately approved 11 hunting and fishing cabins of 800 sq. ft. or less, and prohibited new roads and further subdivision. A forest management plan was required for this project, which was completed in in 1988 (APA Project Permit 87-340a).

Another application, based in the Town of Ohio, gridded out the Butler Lake shoreline with a 96-lot subdivision on 532 acres of land classified as Low Intensity Use. APA disapproved the project because of its extensive resource impacts. The owner sold the land, and the next owner proposed 60 lots with many of the same impacts. After holding an adjudicatory public hearing, the APA board rejected the project because the entire shoreline would be subdivided, but ultimately allowed 23 building lots clustered off the lake to preserve 85% of the lakeshore and water quality. Three open space lots comprising the most sensitive off-lake resources were permanently protected. In explaining its permit conditions, APA noted that Butler Lake was an important regional resource in the Adirondack Park due to the diverse composite of special features (APA Project Permit 89-312).

Recent APA permits issued in 2012, 2014 and 2015, in contrast with these previous permits, have abandoned prior APA best practice and precedent. If this trend continues, the accumulating impacts of dispersed homes and human activities in the Park's most protected and sensitive zones will severely damage wildlife habitats and significantly raise the public costs of private development. The 2012 example, which is the Adirondack Club and Resort, is a sprawling 650 residential unit branded as a "green" Resource Management zone and also as a Residential Zone. APA justified this large amount of residential development by limiting the size of building envelopes beyond which construction is not allowed, while imposing deed restrictions that prevent further subdivision of each lot. The lands in each private lot not impacted by new construction or visible alteration of the landscape were viewed by the applicant and by the APA as green "open space." When accumulated across the 39 lots, this means over 4500 acres, thus allowing the APA to claim that over 85% of the entire tract was kept as "open space" (APA Project Permit 2005-100).

This fragmented development allows the APA to approve construction projects without being denied from operating. This habitat fragmentation destroys native vegetation and places many animals at risk of being hit by a car or other man-made hazards. In addition, increased development poses the risk of soil erosion, which could pollute nearby bodies of water. As the landscape fragments, there is neither true resource management nor protection of biotic or ecological integrity. Subdivided green space parceled up into separate lots and fragmented by houses and driveways undermines the original mission of the APA (Terrie, 1988; 14). One expert

land use analyst, Joel Russell, testified that many “environmental experts goes to[sic] the fact that just because you don’t have development on it doesn’t mean that it is being managed as a resource” (Russell, 2011). What is explained here is that many lots in separate ownerships, with each owner making distinct decisions about their property, do not always adhere to sustainable forestry practices. Ecologist Michael Klemens describes the wildlife impacts of the ACR subdivision as a “sprawl” that “gives people the illusion of greenery and ecological integrity” (Klemens, 2011). The impact from habitat fragmentation comes from the “edge effect,” a phenomenon where changes in community structures affect two or more habitats at once. (Levin, 2009; 780) The type of negative edging effect, known as narrow zones, split up habitats while reducing biodiversity. The edging effect is a direct consequence of the APA’s decision to encourage scattered development across the Forest Preserve.

The green illusion was also demonstrated through the 2015 New York Lands and Lakes Project. Over 1,110 acres and two lakes were classified as Resource Management, which were subdivided by an APA permit (APA Project Permit 2014-48) into twenty four separate building lots each allowing a principal home and a guest house. None of the building lots were clustered or concentrated on one part of the site. Instead, the project’s impacts will spread out across and alter neighboring Forest Preserve land. Since ecology is largely interconnected and animals, like whitetail deer, travel hundreds of miles to interact with other habitats, fragmented development can trigger a chain reaction that changes the environment. What is also significant with the New York Lands and Lakes project is that a wildlife survey was never conducted. The absence of

surveys make it impossible to identify and avoid adverse ecology impacts, as required by the . Many more examples appear where there is not enough development oversight, from the Thrill Ride Down a Mountain (APA Project Permit 2012-185) to other projects which threaten pre-existing habitats within the Forest Preserve.

Once approved, the project permit would be reviewed by the State Environmental Quality Review Act (SEQR), which requires any state or local agency to evaluate the actual and potential environmental impacts of the project prior to executing it, but is not required to be reviewed by the APA. The law states that “agencies shall use all practicable means to realize the policies...to the maximum extent practicable, minimize or avoid adverse environmental effects” (Environmental Conservation Law, ECL 8-0109). The APA, however, is exempt from the need to prepare an EIS because, according to former APA executive director Robert Glennon, “... the Legislature believed they [APA] were performing a comparable environmental review” (Glennon, 2003). Essentially, the New York State Legislature assumed that review under the APA Act would be satisfactory enough to fulfill the SEQR requirements and, therefore, did not need to create an EIS for proposed projects.

The APA Act, in comparison to the SEQR, offers a far less comprehensive and rigorous review than what the later law demands. For instance, impacts that are deemed significant do not require an EIS, which would not only list the positive and negative environmental impacts but also offer alternatives that could replace the proposed project (42 USC Sec. 4321). In addition, the scopes of impacts are not evaluated in public but rather by the APA staff. The lack of

transparency with the environmental projects does not allow the public to perceive how much damage is being done to natural resources in the Preserve. Public hearings only happen once a month, which also does not allow New York residents and activists to monitor environmental impacts. Finally, project alternatives with smaller impacts are not explored and lead to more natural resources being degraded.

The APA's failure to require applicants to conduct a rigorous analysis of alternative development options for a project is harming the Forest Preserve. Alternatives analysis is essential for the SEQRA's environmental review process but it is not necessary for the APA. An agency cannot claim to have rationally chosen a preferred alternative if other alternative approaches to achieve the same project with fewer environmental impacts have not been evaluated with any degree of rigor and detail. The APA's regulations authorize it to require alternatives analysis but it does not need to be required or performed. (APA Regulations, Part 572.3(b)(2) and Part 573.4(c)(1,7). For instance, no alternatives were mandated during the review of the Adirondack Club and Resort Project (ACR), a sprawling project of over 719 residential units, 332 buildings, and 15 miles of roads, sewer, water and electrical lines spread all over 6,235 acres of Forest Preserve land (*Adirondack Almanack*, 2011). Even a senior APA staff scientist, Dr. Spadia, bashed the process of identifying alternatives to the ACR was "short-circuited" and that "there has not been an organized and rational discussion of reasonable, potential alternatives" (Spada, 2011). A landscape architect, Harry Dodson, provided several project design alternatives that would have minimized land disturbance for road and utility

construction while avoiding extensive land fragmentation, thereby demonstrating his idea of a “walkable and dynamic village-style development surrounded by large areas of preserved natural landscapes and wilderness lands...” (Dodson, 2011). The APA never recognized or produced evidence about why the alternative could not be used, which was not in accordance to APA Regulations, Part 572.4(d)(7), a “reasonable alternative means of achieving project goals.”

Another example of the APA ignoring its objectives was granting the permit for APA Project Permit 2012-185. The Zip-Flyer project on French Mountain, for example, was a project approved without any efforts for alternatives analysis (APA staff memo, 2014). Instead, the APA staff accepted the applicant’s assertion that such a redesign would not meet their market, sales and revenue goals. In the project permit issued earlier this year (APA Project 2014-148), there is no discussion of project alternatives. Ultimately, the examples demonstrated here reveal how the APA has not been performing their duties in monitoring project permits for the sake of reducing environmental impact.

(3.10) Analyzing the DEC’s Role in the New York State’s Forest Preserve Political Regime

It is necessary to note the DEC is complacent in the troubling land use trends of the Forest Preserve as it does not actively limit access of heavily overused public acres. The DEC is the result of re-organization in 1970s that placed natural resource protection and stewardship of the Forest Preserve within the same organization charged with creating and enforcing air and water quality and hazardous waste standards. For more than forty years, natural resource planning, as well as public land management, has suffered in the competition for resources

within DEC. The Adirondack Park itself has been fragmented into two DEC regions with two regional directors. There is also a history of internal resistance to embracing and expanding upon the DEC's wilderness protection mandate. Former DEC General Counsel and Deputy Commissioner Nicholas A. Robinson criticizes the DEC for having "barely tapped most of its further statutory authority under New York's environmental laws in order to enhance the Forest Preserve" (Robinson, 2007). There has been successful proper management of the Forest Preserve by the DEC over the years, but these efforts are usually episodic as the agency has been pressured by Governor Cuomo and business interests to cash in on the outdoor industry of the Forest Preserve. As mentioned before, the DEC is legally vested by Article 14 of the New York State's Forest Preserve Constitution to protect the Forest Preserve as "forever wild" and have the land "not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed" (Article XIV: Section 1).

The Forest Preserve is public property which cannot be "weakened or diminished" according to the State Constitution (Leisch, 2010). The public trust is managed by a governing body that acts as the public's trustee for commonly held resources, which includes our air, water, wildlife and public lands. The public trust is supposed to function as a check on government's power and to prevent the abuse of the commons, the Forest Preserve, that would deprive future generations of their full use and enjoyment. By granting the publicly-owned Forest Preserve constitutional protection, New Yorkers have legally placed the lands beyond the state government's ability to exploit the resource. There has currently been twenty four amendments

made to Article XIV since 1894 by New York voters, which allows limited development for the properties. One of these amendments allow three percent of the Forest to be used for municipal water supply. (Article XIV: Section 2: “Reservoirs,” Amended 1894). Another authorizes the use of 300 acres of Forest Preserve for the construction of Interstate Highway I-87, also known as the Adirondack Northway (Article XIV: Exception 1: “Adirondack Northway.” Amended 1959). Another amendment specifies a certain number of miles of ski trail to be constructed on the Forest Preserve for Whiteface, Gore and Belleayre Ski Centers. (Article XIV: Exception 2: “State-owned Ski Resorts Belleayre and Gore Mountain.” Amended 1947)

A troubling land exchange development within the Forest Preserve occurred around 2012 when NYCO Minerals, an international mining company with a large open pit mining operation in Essex County, approached the DEC to expand the mines into the nearby Jay Mountain Wilderness Area. This block of state land, known as “Lot 8”, had been protected for years prior by bipartisan efforts to deny NYCO. Then, under the direction of the Cuomo Administration’s demand for energy, the DEC began to support NYCO’s plan to expand its mine into a Forest Preserve Wilderness area. First, the constitutional amendment approved by the State Legislature provided multiple benefits towards NYCO (New York State's Forest Preserve Senate bill 4688, 2013). First, NYCO would be authorized to explore for minerals on Lot 8 in order to determine if enough mineral concentrations would justify a full mining operation. Second, NYCO would have to share the data and information derived from the exploratory drilling within the DEC should the plans be approved. Appraisal of Lot 8 would need to be converted and, in return, the NYCO

would convert the similar number of acres into the Forest Preserve.

Next, Governor Cuomo and the DEC pressured members of the New York State's Forest Preserve Legislature to approve the NYCO amendment, claiming that the jobs generated would outweigh the environmental damages. The DEC, to highlight this, called the NYCO operations a “good” land swap (DEC Position Paper, 2013). The DEC claimed that for the 200 acres of Wilderness, NYCO would reportedly be willing to give the State 1,500 acres of land that borders the Adirondack Mountains. In addition, the DEC viewed the exchange as more land being preserved in return for sacrificing some Preserve (DEC, 2013). Then NYCO Minerals spent \$600,000 to secure the amendment’s passage (Morrison, 2015). On November 5th, 2013, the voters approved Exception 12 (“NYCO Minerals Land Exchange”) to Article XIV by 53% to 47%.

Apparently, NYCO had more than 25 years of mineral reserves on its own lands at Oak Hill (APA Permit, Project 96-76). This asset, added to its significant investment in plant and equipment, made it extremely unlikely the company had any intention of leaving the Adirondacks. Furthermore, field evidence revealed that Lot 8 possessed considerable ecological diversity and value, according to the advocate group Adirondack Wild. (2013) No independent comparison of the lands to be exchanged had been done, so no public measure of value was created for voters to consider. The State Legislature authorized exploratory drilling, after the amendment vote, while the land remained public Wilderness (Temporary Revocable Permit, 2014). For the first time in New York State history, the constitution’s “Forever Wild” provision

had been amended to benefit a private corporation at the expense of public interest. This amendment has created a slippery slope which may allow more amendments to Article 14, which could bring the Forest Preserve back to the 1800s where destructive logging was the norm.

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CHAPTER FOUR

The Economics of Conservation in the Forest Preserve

The Adirondack and Catskill parks continue to be models for open space conservation... The Adirondack Park is distinct in that it is one of the few regions in New York where an overlay of State land use regulations govern certain categories of development projects.

- Comptroller Thomas DiNapoli, author of “Economic Benefits of Open Space Preservation”.

The Forest Preserve is vital to New York State’s tourist economy considering it comprises almost half of the entire industry. The entire outdoor industry of New York has attracted a total of 2,496,753 visitors while generating over \$114,768,000 in total revenue in 2017 (Tourism Economics, 2012; 1). The estimated impact of the Forest Preserve itself is around \$46,207,000 and it has created over 980 jobs. The impact of the New York State's Forest Preserve DEC and NYC, both of which manage the Forest Preserve in some capacity, contributes over \$62,403,156 and has supported over 1,570 outdoor industry and public policy jobs (Zweig, 2012; 1). The economic impact of the Forest Preserve is tremendous; it is these unique creatures, along with the natural beauty of the Catskills and the Adirondacks, that attract visitors from around the world while supporting the economies of local counties that are located near the Adirondack Park, Catskill Mountains, and Hudson River.

The main supply of commodities from the Forest Preserve is, unsurprisingly, its forests.

Comprising over 300,000 acres, the forests are valued mainly for their services rather than the monetary gain of turning trees into timber. Neoclassicists value forests more for their transformation into timber rather than for the tremendous benefits of clean water and air that they provide (which are very difficult to translate into estimated GDP). This has led to disaster through environmental degradation throughout the country, with some notorious examples including Virginia, where mountaintops are obliterated along with its forests in pursuit of short-term gain. While New York is nowhere near a disturbing future such as that, it does illustrate how natural landscapes are typically more valued for the ecosystem goods that they produce.

One important feature of the Forest Preserve is its natural resources, forests, that provided for much needed ecosystem services to benefit humans. For instance, CO₂ regulation performed by the trees prevents catastrophic climate change. Some ecosystem services provided by abundant tree cover includes: greenhouse gas regulation, evapotranspiration and cloud formation. In addition, tree roots prevent flooding and hypertrophication, and purifies floodwater. The forests also provide an important service of managing local water supply from mountain to river to ocean and back again. Tree roots also break apart rocks to create fertile soil and the forests provide habitats for many species, some of which are economically valuable, such as wild bumblebee populations. In addition, there are cultural reasons for protecting the Forest Preserve, as it has inspired the Hudson Valley School of Art and many environmental activists, such as John Muir, to illustrate the beauty of the Catskills and the Adirondacks to people from all around the world. Recreation involves ecotourism, hiking, biking, hunting, camping, and more.

(4.1) Economics of the Forest Preserve

This case of public and private land ownership within a publicly protected state park often leads to conflicts between development and conservation interests. However, according to many economists, the Forest Preserve provides many ecological and economic benefits for New York residents. Residents benefit from recreational activities, such as camping and fishing, that come from having access to so much preserved wilderness. Indeed, the Forest Preserve outdoors industry has accrued a magnitude of economic benefits from protecting most lands and allowing tourists to explore New York's natural resources (Zweig, 2012; 3).

Multiple economic models have been constructed to represent value within the Forest Preserve. One of these models, developed by ecological economists Carrie Tuttle and Martin Heintzelman, reflect how property sales across the Forest Preserve correspond with development restrictions, and the presence of ecological amenities (120). The ongoing debate over land use restrictions in the Adirondacks have been raised by many residents of the 103 municipalities located within the Preserve's borders, nicknamed "the blue line." One argument raised by pro-development residents is that land use restrictions stifle economic development and limit employment opportunities. Pro-conservation residents argue that the Adirondack and Catskill Parks should be protected because the wilderness and biodiversity are much more valuable than development would be.

Increased development within the park would definitely change the Adirondacks, as ecological services would be lost. As land use debates continue, stakeholders on both sides are

trying to understand how existing land use restrictions have affected the park both economically and environmentally. Tuttle and Heintzelman have observed that park lots designated for moderate-intensity development generate a much smaller price premium than lots with minimal impact (such as lack of invasive species and preservation of ecological integrity). In addition, properties that border the Preserve's boundaries are much more valuable than properties located only 25 miles away from the park. In addition, real estate customers are much less willing to pay a premium for higher levels of ecological integrity than residents who live in or near to the Preserve (120).

Also, closer proximity to lakes and suburban open spaces have positively influenced property value (White and Leefers, 2007; 665). This area of Michigan is similar to the Adirondacks in terms of the abundance of lakes and the population density. Other studies have identified a positive influence on property values from proximity to a national wildlife refuge in Massachusetts (Neumann, Boyle and Bell, 2009; 101), a national forest in Vermont (Philips, 2004), remote agricultural lands with wildlife habitat in Wyoming (Bastian et al., 2002), and recreational ranches with increased greenness in Arizona (Sengupta and Osgood, 2003). These researchers also found that proximity to roads, cities and neighbors increased sale prices, revealing that the tradeback for environmental protection is isolation, which lowers the value of a land.

State official Thomas DiNapoli argues that "open space can provide a variety of public benefits, including drainage and water management, recreational opportunities and a supply of

natural resources necessary for certain industries” (2010; 3). There are also “a considerable body of work on the impacts of zoning and preservation policies” (Tuttle and Heintzelman; 121). However, results for urban and suburban areas are difficult to translate to the Adirondacks given the significant differences in socio-economic, spatial and property characteristics. For example, the population density of the Adirondack Park is fourteen people per square mile, which is as large as South Dakota’s population density (Adirondack Park Regional Assessment Steering Committee, 2009). Also, some studies demonstrate how people value the amenities of biodiversity and wilderness provided by land use regulations and the existence of protected land (121). Glennon and Porter (2005) have used a variety of statistical techniques to determine how biological integrity related to major kinds of land use and to quantify the degree to which land management regulation in the Adirondacks had been effective in maintaining biological integrity, which relates to “the capability to support and maintain a balanced, integrated adaptive assemblage of organisms having species composition, diversity and functional organization comparable to that of natural habitat of the region” (Karr and Dudley, 1981, 56). The authors concluded that the greatest number of intact bird communities in the Adirondacks were in forests that have, unsurprisingly, not been developed.

For example, Anderson and Dower (1980) used 470 in-park sales and 45 out-of-park sales transactions from 1950 through 1976 to estimate yearly rates of price appreciation for each of the five land use classifications for private property. They concluded that the Adirondack Land Use and Development Plan, enacted in 1973 by the Adirondack Park Agency, had affected

relative prices for private lands. Properties with less restrictive classifications fetched higher prices than properties with tighter restrictions. Another hedonic study of the Adirondack Park used 284 sales transactions for vacant, forested, non-waterfront property that sold between 1971 and 1973 (Vrooman, 1978; 168). Vrooman concluded that the value of privately owned property increased \$20 per acre when the properties were adjacent to state land and that nonlocal buyers were willing to pay \$19.45 more per acre in transaction costs than buyers who lived within the same county as the parcel. Banzhaf and others(2006) performed a contingent valuation survey, a tool used for determining how much to charge for a good or service (Mitchell and Carson, 1989), to assess mean willingness to pay for ecological improvements gained from additional Clean Air Act legislation and determined that, on average, New York State households would pay between \$48 and \$107 per year to receive ecological benefits in the Adirondack Park from reductions in acid rain (Banzhaf, Spencer; et al. 2004; 6).

(4.2) Methodology of Pricing the New York State's Forest Preserve

Markets pricing land for the New York State's Forest Preserve was based entirely on Tuttle's and Heintzelman's model as it is the only one that exists for the Forest Preserve, the module uses a "local-area fixed-effects hedonic pricing model to assess the impacts of land use regulation and ecological amenities on private property values in the Adirondack Park"(122). A number of empirical issues are common in hedonic modeling, including "omitted variable bias, simultaneity and spatial dependence and autocorrelation" that can prevent accurate data from being generated (Gujarati and Porter, 2010; 222). This is solved through "local-area fixed-effects

approach”, a model whose parameters are tied to non-changing qualities as indicated by Gujarati and Porter (2010). Since the environmental amenities and the value of each lot is unlikely to change, save for an adverse disaster, it makes sense to remove randomness from the variables. Numerous variables affect the value of a property, and the availability of data is a limiting factor in hedonic modeling. Researchers are restricted to variables for which they have information. Gujarati and Porter know that many of the characteristics that co-determine the price of a property must be omitted from the model. This is to prevent a model from becoming too complicated, which would make the researcher waste valuable time trying to account for small variables that are not likely to dramatically alter value. Cropper et al. (1988) have based their model on “linear specifications”, which means non-chaotic, fixed values. An important basis for this model is “simultaneity”, an event where two or more variables influence each other at the same time (Coleman, 2006).

(4.3) Correlation Between Public Policy and Forest Preserve Land Prices

Here, Coleman indicated the simultaneity tested in the model are the independent variables that are co-determined with the price of the property. The presence of simultaneity results in a biased estimate of the impact of a given issue if higher-value properties were more likely to receive a preferred land use designation, which means that it is less likely to be developed. For instance, if wealthy landowners were better able to navigate the regulatory system and ease property regulation, then it would mean that high-value properties are not regulated as intensely, ultimately harming this model’s forecasts. This does not seem to be a

major factor for this case as the Adirondacks received its private land classifications in 1973 by the APA's Land Use and Development, which is able to designate certain lands for private use. Designations have remained mostly the same since 1973. Consequently, historic factors determine how the present-day parcels are designated, which prevents simultaneity from occurring frequently in this model.

Spatial dependence and spatial correlation in home prices also affect the final land value. It is common for land value to change because people want to have access to places with high-quality services and/or amenities. This factor must be controlled otherwise the model's data will be biased. Multiple error observations are correlated because of omitted variables inherent to a spatial process that could violate the principal assumption of independence of residuals in econometric modeling (Gujarati and Porter, 2010; pp 234). The main formula used for this paper is a Box-Cox specification model, used by Kuminoff, Parameter and Pope (2010), is represented by:

$$\ln p_{ijt} = \lambda_t + \alpha_j + z_{it} \beta + \chi_{ij} \delta_j + \eta_{jt} + \xi_{it}$$

Figure 4.1: Forest Preserve Property Price Econometric Model by Tuttle and Heintzelmann (123).

The formula proceeds like this: P_{ijt} represents the price of property "i" in fixed-effects group "j" at time "t," λ_t represents a set of time-series dummy variables for the month and year of sale, α_j represents the census-block fixed effects, z_{it} represents land use variables, χ_{ij} represents

standard property characteristics such as the size of the home and lot and number of bathrooms, and “ n_{jt} ” and XXX_{it} represent the fixed-effects group error and individual error terms, respectively. This model will show how Forest Preserve land use regulations affect the price of a typical home located in the Adirondack and Catskill Parks.

The data set used for this model consists of real estate transactions for seven years, from 2001 to 2007, provided by the New York State Office of Real Property Services. Borrowing from Tuttle and Heintzelman are Figures 1 and 2, which shows the location of transactions within the Forest Preserve. This data set was then combined with detailed parcel and property characteristics, also provided by New York State's Forest Preserve, allowing for a baseline data set to be created. Table 1 provides a listing of each data set used in the study and its source. Summary statistics for both the Adirondack Park data set and the blue-line (park boundary) proximity data sets are presented in Tables 2 and 3, respectively.

The APA classifies land into 14 categories while public lands are separated using nine categories that are based on detailed definitions in the New York State Land Master Plan (1973). Private land use is divided as follows: 26% for resource management, 17% for rural, 5% for low-intensity development, 2% for moderate-intensity development, 1% for hamlet and 0.21% for industrial. The hamlet designation, the least intensive land use category, restricts development to a 3.2 acre average lot size, while the rural use designation mandates average lots of 8.5 acres. The first category, resource management, covers private forest land that is still periodically harvested and mandates an average lot of 42.7 acres. The next page sources data from the

Adirondack Park Agency from 2009 into order to illustrate land use.

(4.4) Results of the Tuttle and Heintzelman Study

Dependent Variable: ln(Sale Price)	Coefficient R1	Coefficient R2	Coefficient R3	Variable	Coefficient R1	Coefficient R2	Coefficient R3
Adirondack Human Impact Model	0.022***		0.022***	Number of full baths	0.121***	0.120***	0.121***
Index of Biotic Integrity		0.009	0.003	Number of half baths	0.089***	0.091***	0.089***
Distance to lake (miles)	-0.031**	-0.014	-0.030**	Number of fireplaces	0.198***	0.199***	0.198***
Distance to lake (square miles)	0.001	0.000	0.001	Seasonal	-0.148***	-0.145***	-0.149***
Waterfront	0.825***	0.832***	0.825***	Estate	0.608***	0.629***	0.607***
Size of nearest lake (acres)	0.000***	0.000***	0.000***	All agricultural uses	0.680***	0.705***	0.682***
APA land class hamlet	-0.011	-0.040	-0.011	Multi-family year round	-0.253***	-0.258***	-0.253***
APA land class moderate intensity	0.071**	0.053*	0.071**	Mobile home	-0.295*	-0.319**	-0.297*
Other than north country buyer	0.152***	0.149***	0.152***	Other property class	0.336***	0.332***	0.336***
Distance to nearest NY state forest (miles)	-0.004	-0.004	-0.004	Land cover open water	0.235***	0.229***	0.233***
Distance to blue line (miles)	0.008***	0.008***	0.008***	Land cover low intensity development	-0.035	-0.030	-0.034
Distance to nearest road (feet)	-0.000	-0.000	-0.000	Land cover medium intensity development	-0.209***	-0.204***	-0.208***
Road distance to nearest recreation site (miles)	-0.022***	-0.023***	-0.022***	Land cover high intensity development	-0.322**	-0.321**	-0.320**
Distance to population center 1	-0.010***	-0.009***	-0.010***	Land cover forest	-0.003	-0.011	-0.004
Distance to population center 2	-0.010***	-0.010***	-0.010***	Land cover field	0.070	0.091*	0.070
Distance to population center 3	0.004**	0.003**	0.004**	Land cover wetland	0.070	0.076	0.069
Distance to population center 4	0.004	0.004	0.004	Constant	8.658***	8.762***	8.646***
Distance to population center 5	-0.003	-0.004	-0.003	Observations	13,554	13,554	13,554
Condition fair	0.161***	0.161***	0.161***	R ² within	0.3913	0.3897	0.3913
Condition average	0.431***	0.431***	0.431***	R ² between	0.5618	0.5618	0.5624
Condition good	0.368***	0.366***	0.368***	R ² overall	0.4332	0.4322	0.4332
Condition excellent	0.636***	0.638***	0.636***	Sigma_u	0.4537	0.4538	0.4535
Personal property	0.044***	0.045***	0.044***	Sigma_e	0.7036	0.7046	0.7037
ln Square feet of structure	0.280***	0.286***	0.280***	rho	0.2936	0.2932	0.2943
ln Acres	0.026***	0.026**	0.026***	Year dummies	Yes	Yes	Yes
Building age	0.012***	0.012***	0.012***	Month dummies	Yes	Yes	Yes
Building age squared	-0.000***	-0.000***	-0.000***	Fixed effects level	Cens. block	Cens. block	Cens. block
Number of bedrooms	0.020*	0.021**	0.020*				

Notes: *** denotes values significant at the 99 percent level, ** significant at the 95 percent level, and * significant at the 90 percent level. The condition dummy variables "poor" and "unknown" are omitted from regressions.

Figure 4.2: Catskill Land Use of Public Land (DEC, 2008; i)

To be sure when considering the value of the land of the New York State's Forest Preserve it is also important to consider how landowners value "wilderness" through the monetary value they assign to amenities provided by the environment. Included is the Human Impact Model (HIM), a unique static classification developed by SUNY College of Environmental Science and Forestry to display the spatial distribution of anthropogenic impacts on land. It was designed to allow the New York State Department of Environmental Conservation in order to make better-informed land management decisions (Woods, 2008). The HIM rates properties for factors that include the following: distance to lakes with aquatic

invasive-plant infestations, distance to property parcel centroids that have structures, road density, an Index of Biotic Integrity (IBI) score developed from New York State's *Breeding Bird Atlas* and an acid rain deposition model (Ito, Mitchell and Driscoll, 2002; 1059). The HIM model has been modified so that the most developed areas have a low score and the least impacted areas had a high score on a scale from 1, which is the worst, to 10, which is the best.

The IBI is a component of the HIM but also functions as a standalone variable. The IBI measures species richness using the DEC's *Breeding Bird Atlas*, created from multiple field surveys performed from two timelines: 1980 to 1985 (Brown, 1985) and 2000 to 2005 (December 2008). The surveys measured changes in ecosystem components driven by anthropogenic disturbances. In the data set, the IBI is a continuous measurement that ranges from 0 to 9.407. High IBIs indicate greater species richness and less disturbances while low IBIs indicate less diversity and greater human impacts. Unsurprisingly, areas with high IBI values are concentrated toward the interior of the Adirondack Park, where there is greater protection from human disturbances. HIM and IBI measures are included only for properties located within the Adirondack Park. An IBI and HIM data would need to be constructed for the Catskills in order to attain a complete picture of the Forest Preserve economics.

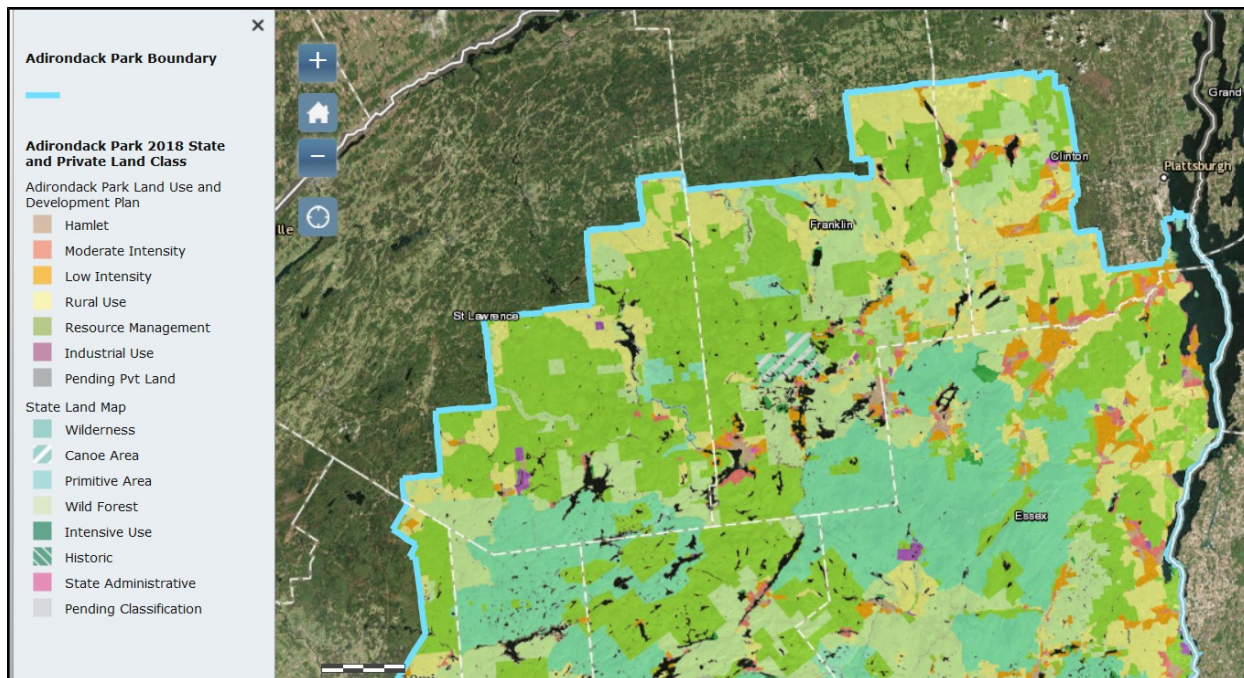


Figure 4.3: Forest Preserve Land Use Classifications in the Adirondack Park Part 1: St. Lawrence, Franklin, Clinton and Essex (APA. "Adirondack Park Land Use and Development Plan Map and State Land Map 2018." New York State Government. Published 2018. Online).

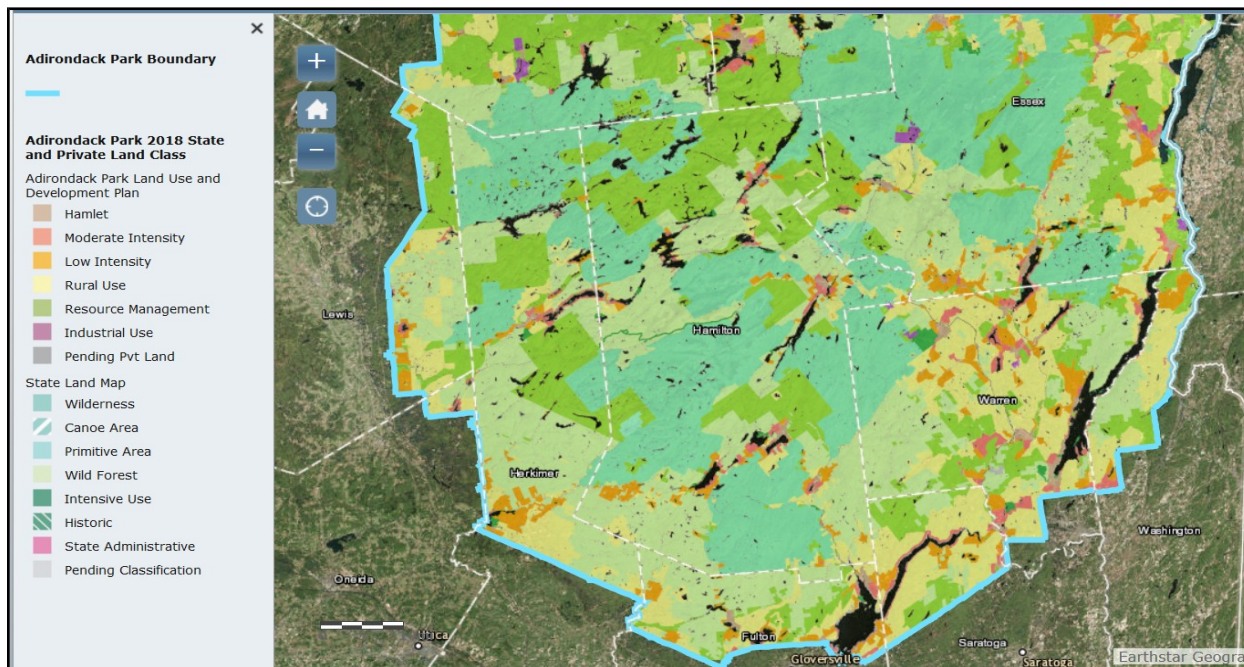


Figure 4.4: Forest Preserve Land Use Classifications in the Adirondack Park Part 2: Lewis, Oneida, Herkimer, Fulton, Saratoga, Washington, Warren, Essex and Hamilton.

(4.5) Analysis of Tuttle and Heintzeman Results

According to the results, landowners prefer properties classified as moderate-intensity to properties designated as hamlet or low-intensity development. In particular, lots designated as moderate-intensity were sold for between 5 percent and 7 percent more, on average, than homes with other designations such as a hamlet or low density designation. Being a hamlet had a negative but not statistically significant effect relative to the other land use categories (Tuttle and Heintzeman, 130). What this means was that properties located near forests and natural landscape were more valuable.

Lower levels of human impact, as modeled by the HIM, had a positive and significant impact on property values while the IBI did not have a significant effect. Since the HIM and IBI measures are indices, which represent the group of premium property prices, it is difficult to interpret the magnitude of these effects beyond noting that one-unit increase in the HIM results in a 2.2 percent increase in sales prices. Obviously, this suggests that the extent of local human impact affects property values and that less impacted regions are preferred by buyers. Interestingly, buyers from outside of the north country region paid a premium of 15 percent more for properties when all other variables were equal (Tuttle and Heintzeman, 132). Such unobserved characteristics could command a premium from the nonlocal market segment. The premium also could be related to whether purchases represent primary residences or second homes. In that case, it may prove a previously mentioned point that multiple real estate markets may exist. Some of the coefficients from analysis were significant, suggesting that there are

separate markets for local and non-local buyers. So the possibility of absentee landowners are real since tourists value Forest Preserve land more than the actual residents.

(4.6) Implications of Preservation Economics

The results protected by Tuttle and Heintzelman indicate that land types, ecological integrity and ecosystem services play significant roles in determining property values. What this demonstrates is that environmental land-use regulations raise land value of proper. Many factors, such as the lack of restrictions associated with a hamlet designation and the most stringent restrictions that come with a low-intensity. The results from Tuttle and Heintzelman indicate that buyers prefer a balance of proximity to the amenities found in small population centers and being close to forests and lakes. Since the HIM has a stronger impact on property values than the IBI, it is likely that other components of the HIM, mostly ecological integrity, is important in property pricing. These findings also correlate with another study done by Tuttle and Heintzelman that demonstrate that acid rain in the Adirondack Park can decrease property values by as much as 9 percent (Tuttle and Heintzelman, 2013; 135).

The value of forever-wild wilderness will continued to be debated as park stakeholders try to balance their short-term goals with conservation visions. By developing a broader understanding of natural amenities and the effect of land use restrictions on property values, the debate can be weighted in favor of conservation in the Forest Preserve and in other preserves across the United States. A paradigm shift is necessary to value natural resources not for development potential but for the benefits of leaving forests alone. Excessive habitat

fragmentation and urban sprawl is threatening forests, which will eventually harm residents who rely on its services.

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CONCLUSION

The Future of Environmental Conservation in the United States

A nation that destroys its soil destroys itself. Forests are the lungs of our land, purifying the air and giving strength to our people.

- President Franklin Delano Roosevelt

Environmental education is essential as it becomes a more prominent subject in New York State's Forest Preserve public school curriculum. Public school systems are now being mandated to teach about sustainability issues. In each state, forest and wetland preservation initiatives are not only being discussed but are also being pursued by more politicians and scientists. Today's generation is more informed of environmental problems because they are not only being informed by advancing technology but are, in fact, suffering the consequences caused by previous generations. Many chronic illnesses, from asthma to gastrointestinal issues, have never been so prevalent in any other time in human history until today. These illnesses are most likely linked to environmental factors, such as deforestation and industrialization. Previous generations are known for rampant destruction of forests for monetary gains. The new millennials and Generation X'ers recognize that power comes from aligning their needs with the Earth and serving as stewards, not slavers, of the environment. Students in New York State have learned and are continuing to learn about the devastating effects of deforestation and unbridled development that cause habitat fragmentation and endanger water tables that are ecological keystones. Most students today identify a developer as committing crimes against nature than as serving the economy; generations ago, wealthy developers were often envied for sacrificing forests for short-term goals like shopping malls which are recently becoming a skeletal cement

structure of a bygone era of baby boomer shoppers.

In order for a state-led sustainability program to succeed, it must establish reasonable climate policy that takes into consideration the needs of residents who already live there. Natural resources not only enhance property value but also is a defining aspect of American identity and should be protected as much as possible. The rights of residents should not be sacrificed in the name of eminent domain because this would hinder sustainability policy if it causes a negative public reaction. While New York State benefits from a robust conservation policy, it still suffers from imperfections caused by amendments to Article XIV due to pressures from its own appointed agents. If the Forest Preserve policy should be mimicked in other states then it should emphasize regulatory oversight in order to prevent regulatory capture. This corruption from within will always destroy any environmental policy, no matter how well thought-out it may well be.

Environmental public policy needs to adapt to a future with dwindling natural resources. Technological innovations will not allow us to transcend the limits of the natural world but rather we must reduce our long-term consumption of resources. Some policy recommendations include leaving the Forest Preserve “forever wild”, while others are making the permitting process as stringent as possible. This means modifying the Adirondack Park Agency Act to grant them more enforcement power against developers and potential timber poachers. The policies were established to keep the Forest Preserve intact, so it is necessary to encourage citizens to vote for environmentally conscious Governors, who are responsible for appointing most leadership roles within the DEC, the APA and the BFPM. Policymakers and politicians should be stewards of the forests and need to continue to stay loyal to Article XIV of the New York State Constitution.

The New York State's Forest Preserve is important not only for preserving the natural

characteristics of the Adirondacks and the Catskills but also for educating people about the future of environmental conservation. Our time will not be marked by apathy but by young, passionate citizens who have witnessed the impacts of climate change first hand. Many people, frustrated with the current rat race of making money and decimating the Earth, want a way to escape from this destructive cycle and live more fulfilling lives. This means less time with technology and more hiking, fishing, camping, and many more activities that allow people to reconnect with nature. Most policy decisions, driven by ulterior motives, do not reflect people's wants to live a more fulfilling life but this will change soon.

The future of Forever Wild is up to our current and future generations. Sustainability education is imperative, and New Yorkers must realize that our forests are worth far more than the want by residents to have pleasure and entertainment. From a recreational perspective, New Yorkers will want to preserve the Adirondack and Catskill Parks for many residents, especially urban residents, are able to rejuvenate their souls that connecting with the wilderness, which will hopefully remain "forever wild." Not only are the mountains used for hiking, camping, fishing, hunting, swimming, skiing, bird-watching and much more, but the forests are necessary for clean air and water. Many people value their leisure time and satisfaction from being in the Forest Preserve. It is especially important now for us and our future generations that we protect our trees and our land. The human race, ultimately, cannot survive without our forests.