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Allegany County

UNIT MANAGEMENT PLAN

DRAFT

Towns of Alfred, Allen, Almond, Amity, Angelica, Belfast, Birdsall, Burns, Caneadea, Centerville, Friendship, Granger, Grove, New Hudson, Rushford, Ward, Wellsville, West Almond, and Willing

County of Allegany

January, 2016

DIVISION OF LANDS AND FORESTS
Bureau of State Land Management, Region 9

2524 County Route 2A

Almond, NY 14804

Allegany County

Unit Management Plan

A planning unit consisting of 23 State Forests in Allegany County

January 2016

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New York State Department of Environmental Conservation

Division of Lands and Forests

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DEC’s Mission

"The quality of our environment is fundamental to our concern for the quality of life. It is hereby declared to be the policy of the State of New York to conserve, improve and protect its natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being." - Environmental Conservation Law 1-0101(1)

Vision Statement

State Forests on the Allegany Unit will be managed in a sustainable manner by promoting ecosystem health, enhancing landscape biodiversity, and protecting soil productivity and water quality. In addition, the State Forests on this unit will continue to provide the many recreational, social and economic benefits valued so highly by the people of New York State. DEC will continue the legacy which started more than 80 years ago, leaving these lands to the next generation in better condition than they are today.

This plan sets the stage for DEC to reach these ambitious goals by applying the latest research and science, with guidance from the public, whose land we have been entrusted to manage.

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Preface

State Forest Overview

The public lands comprising this unit play a unique role in the landscape. Generally, the State Forests of the unit are described as follows:

- large, publicly owned land areas;
- managed by professional Department of Environmental Conservation (DEC) foresters;
- green certified jointly by the Forest Stewardship Council (FSC) & Sustainable Forestry Initiative (SFI);
- set aside for the sustainable use of natural resources, and;
- open to recreational use.

Management will ensure the **sustainability**, **biological diversity**, and protection of **functional ecosystems** and optimize the ecological benefits that these State lands provide, including the following:

- maintenance/increase of local and regional biodiversity
- response to shifting land use trends that affect habitat availability
- mitigation of impacts from invasive species
- response to climate change through carbon sequestration and habitat, soil and water protection

Legal Considerations

Article 9, Titles 5 and 7, of the Environmental Conservation Law (ECL) authorize DEC to manage lands acquired outside the Adirondack and Catskill Parks. This management includes **watershed protection**, production of **timber** and other forest products, **recreation**, and **kindred purposes**.

For additional information on DEC's legal rights and responsibilities, please review the statewide Strategic Plan for State Forest Management (SPSFM) at http://www.dec.ny.gov/lands/64567.html. Refer specifically to pages 33 and 317.

Management Planning Overview

The Allegany Unit Management Plan (UMP) is based on a long range vision for the management of the W.A.G. Trail, Phillips Creek, Turnpike, Bully Hill, Palmer's Pond, Keeney Swamp, Klipnocky, Vandermark, Gillies Hill, Hiltonville, Gas Springs, English Hill, Lost Nation, Jersey Hill, Karr Valley Creek, Cold Creek, Crab Hollow, Coyle Hill, Rush Creek, Swift Hill, Plumbottom, Slader Creek, Bald Mountain, and Allen Lake State Forests, that balances long-term ecosystem health with current and future demands. This Plan addresses management activities on this unit for the next ten years, though some management recommendations will extend beyond the ten-year period. Factors such as budget constraints, wood product markets, weather events and forest health problems may necessitate deviations from the scheduled management activities.

Public Participation

One of the most valuable and influential aspects of UMP development is public participation. Public meetings are held to solicit input and written and verbal comments are encouraged while management plans are in draft form. Mass mailings, press releases and other methods for soliciting input are often also used to obtain input from adjoining landowners, interest groups and the general public.

Strategic Plan for State Forest Management

This unit management plan is designed to implement DEC's statewide Strategic Plan for State Forest Management (SPSFM). Management actions are designed to meet local needs while supporting statewide and eco-regional goals and objectives.

The SPSFM is the statewide master document and Generic Environmental Impact Statement (GEIS) that guides the careful management of natural and recreational resources on State Forests. The plan aligns future management with principles of landscape ecology, ecosystem management, multiple use management and the latest research and science available at this time. It provides a foundation for the development of Unit Management Plans. The SPSFM

divides the State into 80 geographic "units," composed of DEC administered State Forests that are adjacent and similar to one another. For more information on management planning, see SPSFM page 21 at http://www.dec.ny.gov/lands/64567.html.

DEC's Management Approach and Goals

Forest Certification of State Forests

In 2000, New York State DEC-Bureau of State Land Management received Forest Stewardship Council® (FSC®) certification under an independent audit conducted by the National Wildlife Federation - SmartWood Program. This certification included 720,000 acres of State Forests in DEC Regions 3 through 9 managed for water quality protection, recreation, wildlife habitat, timber and mineral resources (multiple-use). To become certified, the Department had to meet more than 75 rigorous criteria established by FSC. Meeting these criteria established a benchmark for forests managed for long-term ecological, social and economic health. The original certification and contract was for five years.

By 2005, the original audit contract with the SmartWood Program expired. Recognizing the importance and the value of dual certification, the Bureau sought bids from prospective auditing firms to reassess the Bureaus State Forest management system to the two most internationally accepted standards - FSC and the Sustainable Forestry Initiative® (SFI®) program. However, contract delays and funding shortfalls slowed the Departments ability to award a new agreement until early 2007.

Following the signed contract with NSF-International Strategic Registrations and Scientific Certification Systems, the Department was again audited for dual certification against FSC and additionally the SFI program standards on over 762,000 acres of State Forests in Regions 3 through 9. This independent audit of State Forests was conducted by these auditing firms from May until July 2007 with dual certification awarded in January 2008.

State Forests continue to maintain certification under the most current FSC and SFI standards. Forest products derived from wood harvested off State Forests from this point forward may now be labeled as "certified" through chain-of-custody certificates. Forest certified labeling on wood products may assure consumers that the raw material was harvested from well-managed forests.

The Department is part of a growing number of public, industrial and private forest land owners throughout the United States and the world whose forests are certified as sustainably managed. The Department's State Forests can also be counted as part of a growing number of working forest lands in New York. They are third-party certified, as well as managed to protect habitat, cultural resources, water, recreation, and economic values for current and future generations.

The mark of responsible forestry

FSC® C002027

Ecosystem Management Approach

State Forests on this unit will be managed using an ecosystem management approach which will holistically integrate principles of landscape ecology and multiple use management to promote habitat biodiversity, while enhancing the overall health and resiliency of the State Forests.

Ecosystem management is a process that considers the total environment - including all non-living and living components; from soil micro-organisms to large mammals, their complex interrelationships and habitat requirements and all social, cultural, and economic factors. For more information on ecosystem management, see SPSFM page 39 at http://www.dec.ny.gov/lands/64567.html.

Multiple-use Management

DEC will seek to simultaneously provide many resource values on the unit such as, fish and wildlife, wood products, recreation, aesthetics, minerals, watershed protection, and historic or scientific values.

Landscape Ecology

The guiding principle of multiple-use management on the unit will be to provide a wide diversity of habitats that naturally occur within New York, while ensuring the protection of rare, endangered and threatened species and perpetuation of highly ranked unique natural communities. The actions included in this plan have been developed following an analysis of habitat needs and overall landscape conditions within the planning unit (i.e. the geographical area surrounding and including the State Forests) the larger ecoregion and New York State.

Ecosystem Management Strategies

The following strategies are the tools at DEC's disposal, which will be carefully employed to practice landscape ecology and multiple-use management on the unit. The management strategy will affect species composition and habitat in both the short and long term. For more information on these management strategies, please see SPSFM page 81 at http://www.dec.ny.gov/lands/64567.html.

Passive Management

DEC foresters will employ passive management strategies through the designation of natural and protection areas, and buffers around those areas, such as along streams, ponds and other wetlands, where activity is limited.

Landscape ecology seeks to improve landscape conditions, taking into account the existing habitats and land cover throughout the planning unit, including private lands

Silviculture (Active Management)

DEC foresters will practice silviculture; the art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands, in an effort to promote biodiversity and produce sustainable forest products. There are two fundamental silvicultural systems which can mimic the tree canopy openings and disturbances that occur naturally in all forests; even-aged management and uneven aged management. Each system favors a different set of tree species. In general, even-aged management includes creating wide openings for large groups of trees that require full sunlight to regenerate and grow together as a cohort, while uneven-aged management includes creating smaller patch openings for individual trees or small groups of trees that develop in the shade but need extra room to grow to their full potential.

State Forest Management Goals

Goal 1 – Provide Healthy and Biologically Diverse Ecosystems

Ecosystem health is measured in numerous ways. One is by the degree to which natural processes are able to take place. Another is by the amount of naturally occurring species that are present, and the absence of non-native species. No single measure can reveal the overall health of an ecosystem, but each is an important part of the larger picture. The Department will manage State Forests so that they demonstrate a high degree of health as measured by multiple criteria, including the biodiversity that they support.

Goal 2 – Maintain Man-made State Forest Assets

Man-made assets on State Forests include structures, boundary lines, trails, roads and any other object or infrastructure that exists because it was put there by people. Many of these items need no more than a periodic check to make sure they are still in working order. Others need regular maintenance to counteract the wear of regular use. It is the Department's intent to ensure that all man-made items on State Forests are adequately maintained to safely perform their intended function.

Goal 3 – Provide Recreational Opportunities for People of all Ages and Abilities

State Forests are suitable for a wide variety of outdoor recreational pursuits. Some of these activities are entirely compatible with one another, while others are best kept apart from each other. Equally varied are the people who undertake these activities, as well as their abilities, and their desire to challenge themselves. While not all people will be able to have the experience

they desire on the same State Forest, the Department will endeavor to provide recreational opportunities to all those who wish to experience the outdoors in a relatively undeveloped setting.

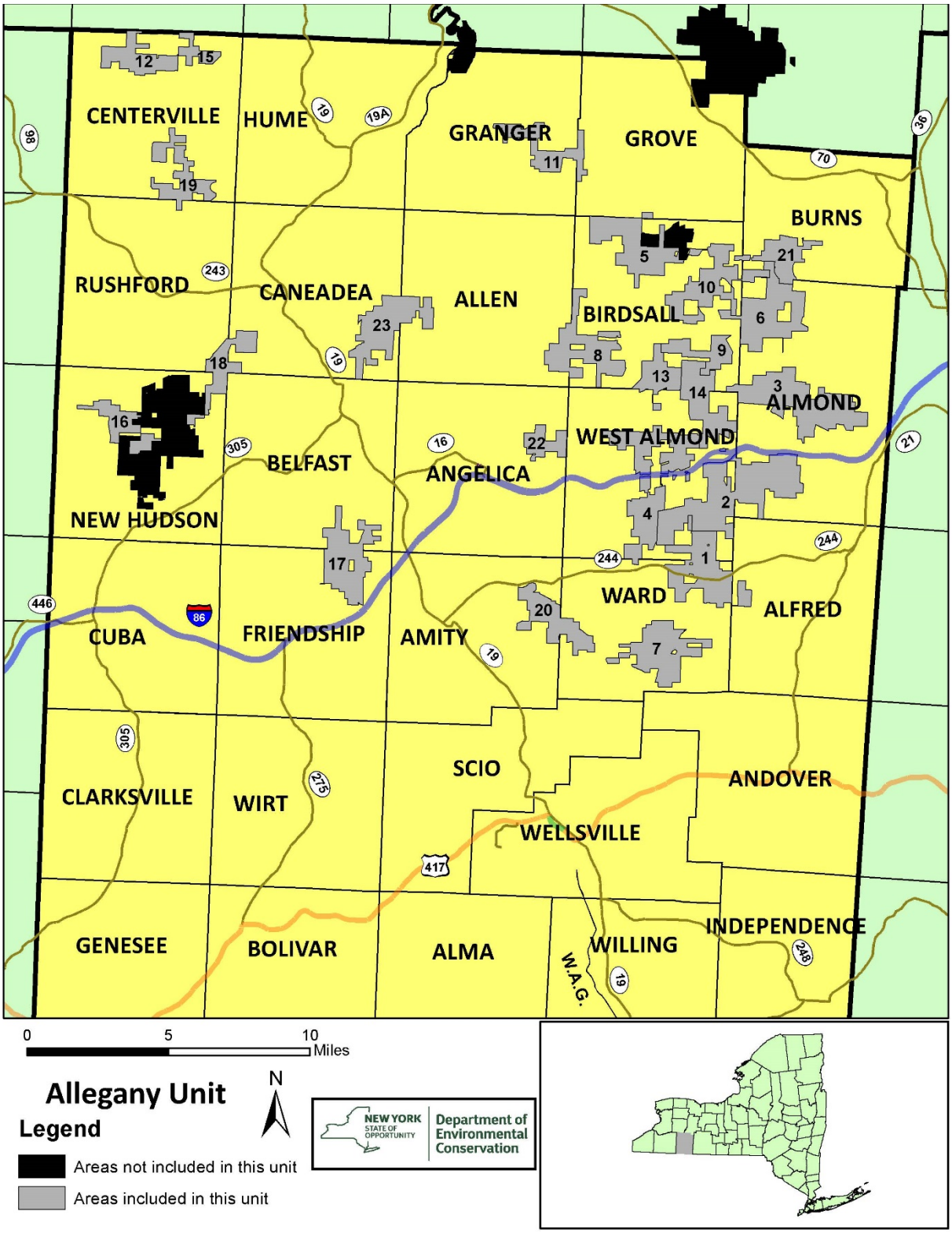
Goal 4 – Provide Economic Benefits to the People of the State

ECL §1-0101(1) provides in relevant part that "It is hereby declared to be the policy of the State of New York to conserve, improve and protect its natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall **economic** and social well-being." (Emphasis added) In considering all proposed actions, the Department will attempt to balance environmental protection with realizing potential economic benefit.

Goal 5 – Provide a Legal Framework for Forest Conservation and Sustainable Management of State Forests

Staff must have clear and sound guidance to direct their decisions and actions. Likewise, the public must have clear information regarding what they are and are not allowed to do on State Forests. Both of these are provided by well-written laws, regulations and policies. The Department will work to improve existing legal guidance that has proved to be inadequate, and create new guidance that is needed but does not yet exist.

Location Map



Information on the Allegany Unit

State Lands in the Unit

Table I.A. contains the names of the state land facilities that make up this unit. A web page has been developed for each of the State Forests. Each web page features an updated map of the State Forest with recreational information and natural features.

Table I.A. – State Lands in the Unit

Facility Name and Webpage	Acreage
Phillips Creek State Forest – http://www.dec.ny.gov/lands/49572.html	2706.70
Turnpike State Forest – http://www.dec.ny.gov/lands/51321.html	4748.65
Bully Hill State Forest – http://www.dec.ny.gov/lands/ 52281.html	3505.95
Palmer's Pond State Forest – http://www.dec.ny.gov/lands/49574.html	3504.31
Keeney Swamp State Forest – http://www.dec.ny.gov/lands/53634.html	2407.97
Klipnocky State Forest – http://www.dec.ny.gov/lands/53954.html	2634.06
Vandermark State Forest – http://www.dec.ny.gov/lands/45293.html	2383.73
Gillies Hill State Forest – http://www.dec.ny.gov/lands/53584.html	2332.26
Hiltonville State Forest – http://www.dec.ny.gov/lands/49573.html	1008.7
Gas Springs State Forest – http://www.dec.ny.gov/lands/54021.html	2273.38
English Hill State Forest – http://www.dec.ny.gov/lands/53403.html	1396.87
Lost Nation State Forest – http://www.dec.ny.gov/lands/53423.html	1343.55
Jersey Hill State Forest – http://www.dec.ny.gov/lands/49540.html	1088.15
Karr Valley Creek State Forest – http://www.dec.ny.gov/lands/49576.html	1917.43
Cold Creek State Forest – http://www.dec.ny.gov/lands/55466.html	502.51
Crab Hollow State Forest – http://www.dec.ny.gov/lands/60739.html	1153.48

Coyle Hill State Forest – http://www.dec.ny.gov/lands/49443.html	2351.32
Rush Creek State Forest – http://www.dec.ny.gov/lands/60746.html	1402.51
Swift Hill State Forest – http://www.dec.ny.gov/lands/60753.html	1564.83
Plumbottom State Forest – http://www.dec.ny.gov/lands/51314.html	1667.24
Slader Creek State Forest – http://www.dec.ny.gov/lands/63432.html	1229.67
Bald Mountain State Forest – http://www.dec.ny.gov/lands/63306.html	760.48
Allen Lake State Forest – http://www.dec.ny.gov/lands/63250.html	2421.37
W.A.G. Trail – http://www.dec.ny.gov/lands/88566.html	77.1
Total Acreage	**46,382.22**

Facilities Not Included in this UMP

Hanging Bog WMA, Keeney Swamp WMA, Rattlesnake Hill WMA, Genesee Valley WMA

High Conservation Value Forests

High Conservation Value Forests (HCVF) are those portions of State Forests which have known high conservation values that the Department feels should take precedent over all other land use and management decisions. HCVFs may not be identified on every Unit and State Forests that have an HCVF designated will not necessarily have multiple classifications. Areas that are identified as having exceptional values may be managed for timber, wildlife and/or recreation. However, management activities must maintain or enhance the high conservation values present. Currently, HCVFs are assigned to one or more of five land classifications, four of which may be found on State Forests:

1. Rare Community - Forest areas that are in or contain rare, threatened or endangered ecosystems.

2. Special Treatment - Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species and refugia).

3. Cultural Heritage – Forest areas fundamental to meeting basic needs of local communities (e.g. subsistence, health) and are critical to their traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).

4. Watershed - Forest areas that provide safe drinking water to local municipalities.

5. Forest Preserve* - Forest areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.

   **Forest Preserve lands inside both the Adirondack and Catskill Park Blue lines. Although Forest Preserve is not considered State Forest, they offer a significant high conservation value for lands managed by the Department.*

Portions of the Allegany Unit have been identified as having high conservation value. Acreage totals for designated HCVFs located within the unit can be found in Table I.E. below. For more information on HCVFs please go to http://www.dec.ny.gov/lands/42947.html.

Geology

Allegany County is well known for its breathtaking rolling hills, cut with streams, patched with fields and forests and dappled with lakes and ponds. From its humble beginnings in Pennsylvania, the Genesee River flows north through the center of the county into the spectacular gorges and waterfalls in Letchworth State Park before it finally drains into Lake Ontario north of Rochester.

Yet, resting underneath all of this is bedrock that was once the floor of a warm, shallow sea in the Devonian Epoch. The Acadian Mountains far to the east gradually eroded and washed sediments into what is now New York State, forming the Catskill Delta. The heavy rocks and coarse particles settled out first. Then, as the waters grew deeper to the west, the clay, silt and sand gradually settled into layers on the sea floor. As the layers compacted over time, the clay became shale, the silt became siltstone, and the sand became sandstone. The ancient fossil remains of primitive forests, fish, and brachiopods trapped in these layers can be found throughout the county. The northern half of the county's bedrock is part of the Canadaway Group and the Machias Formation, which is composed mostly of interbedded gray shales, siltstones and thin sandstones. Most of the southern half is part of the Conneaut Group and the Ellicott Formation—mostly shale and siltstone with minor amounts of sandstone. The southwestern part of Allegany County is part of the Conewango Group and the Oswayo Formation—also comprised mainly of shale and siltstone with minor amounts of sandstone. (Isachen, 2000).

The sea floor uplifted over time and streams and rivers eroded much of the landscape to form valleys and rolling hills. The earth cooled during the Pleistocene Epoch and sheets of ice, one to two miles thick, covered most of the State. The last major glacial advance was the Wisconsinan Stage, and an enormous mass of ice completely covered Allegany County.

As the glacier advanced to the south and retreated to the north, it scoured the landscape and gouged out deep, broad valleys; all while trapping vast amounts of sediment in the ice. As the earth warmed, the ice melted and the glacier retreated northward. The sediment previously locked up in the ice was then deposited over the entire county. Valleys, such as the Genesee Valley, were filled up with clay, silt, sand and rock—in some places up to three hundred feet

thick. Kames, drumlins, eskers, and moraines formed as glacial streams, rivers and lakes deposited sediments. Throughout the State, boulders were set down as the ice melted. Several of these glacial erratics can be found in the Allegany Unit. The terminal moraine marked the southern limit of the Wisconsinan Glaciation. The Valley Heads Moraine created a continental divide which runs west to east south of the Finger Lakes. Watersheds north of the Valley Heads Moraine began draining north to Lake Ontario and the St. Lawrence Seaway, while lands south of the moraine drained east, south and west. There is one exception to this: the Genesee River Watershed. The Genesee is the only river which crosses the Valley Heads Moraine and drains much of Allegany County into Lake Ontario (Isachen, 2000).

On the hills and plains, the glacier left a different sort of mark. Unsorted glacial till in the form of rocks, sand, silt, and clay, covers the county like a blanket. On some steep slopes, exposed bedrock still shows the north-south scratches from the glacier's passing.

The rich geological story of Allegany County provides a fascinating backdrop for the Unit, and provides unique insights into its more recent history.

Soils

Soils provide the foundation, both figuratively and literally, of forested ecosystems. They support an immense number of microorganisms, fungi, mosses, insects, herpetofauna and small mammals which form the base of the food chain. They filter and store water and also provide and recycle nutrients essential for all plant life. For information on DEC's policies for the protection of forest soils, as well as water resources please see SPSFM page 108 at http://www.dec.ny.gov/lands/64567.html.

There are 63 types of soil found on State Forests in the Allegany Unit. The top 8 soil types, in descending order, are: Napoli silt loam, Almond silt loam, Ontusia channery silt loam, Ischua channery silt loam, Gretor channery silt loam, Volusia channery silt loam, Wiscoy-Volusia complex and Hornellsville silt loam. These 8 soils types account for over 79% of Allegany County state forest soils, and cover 36,909 acres in the Unit. These soils are typically moderately deep to very deep, somewhat poorly drained, contain a dense fragipan, and were formed in glaciated upland sites from shale, siltstone, and sandstone (Web Soil Survey, USDA).

Much of Allegany County was cleared for agriculture in the 19th and 20th centuries, and, fearing disease, it was common for settlers to gravitate to the uplands for farming. However, many of the ridge top farms failed and were abandoned over time. The soils deserve their fair share of blame. Compared to the rich fertile soils found in the river bottoms, most of the soils in the Allegany Unit were less than desirable for agriculture and could not sustain the families who farmed them. Table I.B. contains a summary of predominant soil types on the unit. Soil Maps for the Allegany Unit can be found in Figure 1.

Table I.B. - Soils			
Facility Name	**Predominant Soil Type(s)**	**Acres**	**Percentage of State Forest Area**
Phillips Creek State Forest	Almond Silt Loam	977	36.0%
Turnpike State Forest	Napoli Silt Loam	1932	40.5%
Bully Hill State Forest	Napoli Silt Loam	714	20.2%
Palmer's Pond State Forest	Napoli Silt Loam	1186	33.6%
Keeney Swamp State Forest	Ontusia Channery Silt Loam	381	16.0%
Klipnocky State Forest	Almond Silt Loam	680	26.0%
Vandermark State Forest	Ontusia Channery Silt Loam	776	33.1%
Gillies Hill State Forest	Ontusia Channery Silt Loam	1339	56.8%
Hiltonville State Forest	Ontusia Channery Silt Loam	302	30.0%
Gas Springs State Forest	Ontusia Channery Silt Loam	852	36.9%
English Hill State Forest	Ontusia Channery Silt Loam	619	44.5%
Lost Nation State Forest	Napoli Silt Loam	452	33.6%
Jersey Hill State Forest	Napoli Silt Loam	629	58.4%
Karr Valley State Forest	Napoli Silt Loam	773	40.5%
Cold Creek State Forest	Napoli Silt Loam	270	54.5%
Crab Hollow State Forest	Wiscoy-Volusia Complex	230	20.1%
Coyle Hill State Forest	Napoli Silt Loam	695	30.6%
Rush Creek State Forest	Ischua Channery Silt Loam	318	22.7%
Swift Hill State Forest	Wiscoy-Volusia Complex	349	22.3%
Plumbottom State Forest	Napoli Silt Loam	415	24.5%
Slader Creek State Forest	Ontusia Channery Silt Loam	225	18.4%
Bald Mountain State Forest	Ischua Channery Silt Loam	262	34.5%
Allen Lake State Forest	Almond Silt Loam	742	30.4%
W.A.G. Trail	Holderton Silt Loam	35.3	47.9%

Water Resources

DEC's Geographic Information System (GIS) data contains an inventory of wetlands, vernal pools, spring seeps, intermittent streams, perennial streams, rivers and water bodies on the unit. This data is used to establish special management zones and plan appropriate stream crossings for the protection of water resources. Table I.C. contains a summary of water resources data on the unit.

Table I.C. – Water Resources		
Watersheds		
Hydrologic units		**State Forest Acreages/Miles**
Genesee River Basin (HUC 0413000208)		31,165 ac.
Chemung River Basin (HUC 020501404)		12,660 ac.
Genesee River Basin via Canaseraga Creek (HUC 0413000209)		2,457 ac.
Allegheny River Basin (HUC 0501000104)		37 ac.
Watershed HCVF Lake Erie-Niagara River Basin (HUC 0412010201)		63 ac.
Wetlands *		
Freshwater Ponds		118 ac.
Freshwater Emergent Wetlands		346 ac.
Freshwater Forested/Shrub Wetland		510 ac.
Lakes		89 ac.
Riverine		258 ac.
All Wetlands		1323 ac.
Streams/Rivers **		
Perennial streams/rivers	AA or A	0 mi.
	B	0 mi.
	C	84.8 mi.
	D	0 mi.
Trout streams/rivers	C (T)	1.5 mi.
	C(TS)	10.2 mi.
Water Bodies *		
Water bodies (open-water ponds and lakes)		158 ac.

*In some cases freshwater ponds and lakes were classified as both wetlands and water bodies

**For information regarding stream classifications please refer to http://www.dec.ny.gov/permits/6042.html

Maps of watersheds in the Unit can be found in Figure 4.

Major Streams, Rivers and Water Bodies

The Genesee River

The Genesee River begins in Potter County, Pennsylvania and flows north before eventually draining into Lake Ontario. Approximately 40 miles of the river are within Allegany County, and the WAG Trail (formerly the Wellsville-Addison-Galeton Railroad) follows this scenic river for 9 miles from the Pennsylvania border northward. The Genesee provides excellent opportunities for canoeing and kayaking, wildlife viewing and fishing.

The Genesee River facing south from Belfast, NY

For information about the Genesee River, please refer to http://www.dec.ny.gov/outdoor/26987.html

Allen Lake

This beautiful 58 acre man-made lake is located on Allen Lake State Forest. Surrounded by forests and home to several species of game fish, Allen Lake provides exciting opportunities for fishing, water recreation, rest, and relaxation.

For information about Allen Lake, please refer to http://www.dec.ny.gov/outdoor/26977.html

Hanging Bog

Crab Hollow State Forest in the Town of New Hudson shares the Hanging Bog with its namesake, Hanging Bog Wildlife Management Area. Hanging Bog is actually a lake because it has an outlet into Crawford Creek. The bog is named for a floating mat of vegetation and provides exceptional wildlife and birding opportunities.

For information about Crab Hollow State Forest and the Hanging Bog, please refer to http://www.dec.ny.gov/lands/60739.html

Keeney Swamp

Keeney Swamp, located in the Town of Birsdall on Keeney Swamp State Forest and Keeney Swamp Wildlife Management Area, is a large swamp which forms the headwaters of Black Creek. While most of the water feature is on the WMA, the State Forest contains 34 acres of open water as well as ample wetland acreage.

Keeney Swamp offers fishing and water recreation opportunities as well as a unique setting to view birds. Keeney Swamp has also been selected as an Important Bird Area by the National Audubon Society.

For information about Keeney Swamp, please refer to http://www.dec.ny.gov/lands/53634.html

Biodiversity

Information regarding biodiversity has been gathered to support the following goals:

- "Keep Common Species Common" by maintaining landscape-level habitat diversity and a wide variety of naturally occurring forest-based habitat, as well as managing plantations according to DEC natural resources policy.
- Protect and, in some cases, manage known occurrences and areas with potential to harbor endangered plants, wildlife and natural communities.
- Consider other "at-risk species" whose population levels may presently be adequate but are at risk of becoming imperiled due to new incidences of disease or other stressors.

Common Species

The following information sources indicate which common species (among other species) are present over time:

- NYS Breeding Bird Atlas

Block Numbers: 2268B, 2269C, 2269D, 2270B, 2270D, 2271C, 2271D, 2367B, 2368B, 2368D, 2369A, 2369B, 2369C, 2369D, 2370A, 2370C, 2371C, 2467B, 2468B, 2468C,

2468D, 2469A, 2469C, 2469D, 2470B, 2470D, 2565A, 2565B, 2565D, 2566C, 2567A, 2567B, 2568A, 2568B, 2568C, 2568D, 2569A, 2569B, 2569C, 2569D, 2570A, 2570C, 2570D, 2667A, 2668A, 2668B, 2668C, 2669A, 2669B, 2669C, 2669D, 2670C, 2670D

Breeding Bird Atlas blocks can be searched at http://www.dec.ny.gov/cfmx/extapps/bba/

For a list of recorded bird species see Appendix D

- Herp Atlas
  Block Numbers: 1265, 2077, 2176, 2177, 2180, 2276, 2277, 2280, 2281, 2282, 2376, 2377, 2381, 2481, 2482

  Herp Atlas information on amphibians, toads, frogs, turtles, lizards and snakes can be found at http://www.dec.ny.gov/animals/7140.html

  For a list of recorded Herp species see Appendix E

Game Species Harvest Levels

WMU Numbers: 9N, 9P, 9W, 9Y

Deer Harvest 2014	7,954 County Total Take
Bear Harvest 2014	58 County Total Take
Spring Turkey Harvest 2014	531 County Total Take
Fall Turkey Harvest 2014	98 County Total Take

Harvest Information for deer and bear can be found at http://www.dec.ny.gov/outdoor/7857.html

Harvest Information for turkey can be found at http://www.dec.ny.gov/outdoor/8366.html

For a list of common fish species found on the Unit, see Appendix F.

For a list of common mammal species found on the Unit, see Appendix G.

Habitat

The following information represents habitat types found on the unit. See Figure 2 for Forest Cover maps.

Vegetative Types and Stages

Table I.D. - Vegetative Types and Stages within the Unit

Vegetative Type	Acres by Size Class				% of Total
	0 -5 in	6 - 11 in	12+ in	Other	
Natural Forest Hardwood	2,117	5,783	12,799		44.7%
Natural Forest Hardwood/Conifer	123	753	1515		5.2%
Natural Forest Conifer	0	27	93		0.3%
Plantation Softwoods	699	7,660	11,243		42.3%
Plantation Hardwoods	0	31	82		0.2%
Plantation Mixed Natural Forest	147	548	788		3.2%
Wetland**				546	1.2%
Ponds**				179	0.4%
Open/Brush				420	0.9%
Other (Roads, Parking lots, etc.)				752*	1.6%
Total (46,305 Acres)	3,086	14,802	26,520	1,897	100%

***Digitized acreages differed from the Real Property acreage by 0.024% or 10.8 acres. This distance was adjusted in the "Other" category. As part of the management actions described by this plan, acreage discrepancies will be examined and reconciled as additional surveys are completed. It is agreed by the authors of this plan that the current accuracy is adequate for the scope of this plan.

**Wetland and pond acreages differ from the Water Resources Section. For inventory and management purposes, the data from Vegetative Types and Stages was determined by field inventory and the Water Resources was sourced from NYS Regulated Wetlands and Nation Wetlands Inventory. Note the above table also excludes the W.A.G. Trail.

Representative Sample Areas

Representative Sample Areas (RSAs) are stands which represent common ecological communities (i.e. forest types) of high or exceptional quality in their natural state. RSAs are setup to serve one or more of the following purposes:

1. To establish and/or maintain an ecological reference condition; or
2. To create or maintain an under-represented ecological condition (i.e. includes samples of successional phases, forest types, ecosystems, and/or ecological communities); or

3. To serve as a set of protected areas or refugia for species, communities and community types not captured in other protection standards such as an endangered species or a High Conservation Value Forest (HCVF).

RSAs can simply be viewed as an effort to keep high quality examples of common ecosystems or assemblages from becoming rare in the landscape. An RSA designation does not prevent future management and in certain cases might require silvicultural treatment to achieve site conditions that will perpetuate the representative community. In addition, treatment of an RSA to mitigate unfavorable conditions that threaten the continuation of the target community will be allowed (ex. fire, natural pests or pathogens). Although allowed, silvicultural treatment or infrastructure development should not impact the RSA in a way that will degrade or eliminate the viability of the specific assemblage or community. For more information on RSAs please go to http://www.dec.ny.gov/lands/42947.html.

Table I.E. – RSAs and Rare Community HCFVs within the Unit

Community Name	Vegetative Type	Facility Name / Stand Numbers	NYNHP Rank	Acreage
Representative Sample Areas of Commonly Occurring Natural Communities				
None Designated	NA	NA	NA	NA
Rare Community High Conservation Value Forest				
Watershed	Natural Forest	Lost Nation Stands 12, 28, 29, 30, 31, 58		64
Special Treatment	Natural Forest/Non Forest	Crab Hollow Stands 49, 50		7

Resource Protection Areas

In the course of practicing active forest management, it is important to identify areas on the landscape that are either reserved from management activity or where activity is conducted in such a manner as to provide direct protection and enhancement of habitat and ecosystem functions. Over 10% of the Allegany Unit acreage has been designated as Natural Areas with non-management. It is important to remain adaptable, and also to recognize that interventions may be necessary to protect the resources. See Table III. I. and Figure 2 for stands designated as Natural Areas. For more information on these protective measures, see SPSFM page 85 at http://www.dec.ny.gov/lands/64567.html.

Special Management Zones (SMZs) describe areas providing continuous over-story shading of riparian areas and adjacent waters. Retaining sufficient tree cover is necessary to maintain acceptable aquatic habitat and protect riparian areas from soil compaction and erosion, and

other impacts. Additionally, DEC's buffer guidelines help to maintain corridors for movement and migration of wildlife species, both terrestrial and aquatic. Buffers are required within SMZs extending from wetland boundaries, high-water marks on perennial and intermittent streams, vernal pool depressions, spring seeps, ponds and lakes, recreational trails, campsites and other unique land features requiring special consideration. See Figure 2 for a map of the SMZs as applied on the unit. For more information regarding Special Management Zones please see www.dec.ny.gov/sfsmzbuffers.pdf

The identification of large, unfragmented forested areas, also called matrix forest blocks; is an important component of biodiversity conservation and forest ecosystem protection. Securing connections between major forested landscapes and their imbedded matrix forest blocks is important for the maintenance of viable populations of species. This is especially important for wide-ranging and highly mobile species, and for ecological processes such as dispersal and pollination over time. Forest Matrix blocks are broken into three categories: Tier 1, Tier 2 and Linkage Zones. Tier 1 blocks represent the best examples of viable forest matrix blocks that will meet the needs of associated interior forest species. Tier 2 blocks represent alternative forest matrix occurrences that also meets the standards of connectivity, but are not necessary so long as Tier 1 blocks remain intact. Linkage Zones are areas which provide connectivity between matrix blocks. (The Nature Conservancy, Eastern Conservation Science, 2007).

Maintaining or enhancing matrix forest blocks and connectivity corridors must be balanced against the entire array of goals, objectives and demands that are placed on a particular State Forest. Where matrix forest block maintenance and enhancement is chosen as a priority for a given property, management actions and decisions should emphasize closed canopy and interior forest conditions. The following areas have been identified to meet demands at the landscape level:

- Matrix Forest Block 27,222 acres
- Forest Landscape Connectivity Corridor 8138 acres
- Important Bird Area 1535 acres

More information regarding Matrix Forest blocks, connectivity corridors and associated management considerations can be found in the SPSFM page 85 at http://www.dec.ny.gov/lands/64567.html

See Figure 4 for maps showing Matrix Forest Blocks and Linkages.

At-Risk Species

The presence of at-risk species and communities on the Allegany Unit and in the surrounding landscape has been investigated to inform appropriate management actions and protections. This investigation was conducted in development of this UMP and the associated inventory of State Forest resources. A more focused assessment will be conducted before undertaking specific management activities in sensitive sites. Appropriate protections may include reserving areas from management activity, or appropriately mitigating impacts. For more information on

protection of at-risk species, please see SPSFM page 115 at http://www.dec.ny.gov/lands/64567.html.

Investigation included the following:

- A formal plant survey was conducted on this Unit in the spring of 2005 by the New York Natural Heritage Program (NHP).
- Element Occurrence Records for the New York Natural Heritage Program's Biological and Conservation Data System were consulted for information.
- Consultation of NHP species guides.
- Consultation of the NYS Comprehensive Wildlife Conservation Strategy

Table I.F. lists the species confirmed or predicted on the State Forests that comprise this Unit and in the larger landscape, as well as their required habitats.

For information on the Natural Heritage Program Ranking System, please visit http://www.dec.ny.gov/animals/29386.html

Table I.F. - At-Risk Species*

Species Name	NYNHP Rank	Habitat	Record Source	NYS Status
Confirmed or Predicted within the Unit				
Least Bittern (Bird) *Ixobrychus exilis*	S3B S1N	Shallow or deep emergent marshes, freshwater tidal marshes, brackish tidal marshes	RA-CONF	T
Northern Long-eared Bat (Mammal) *Myotis septentrionalis*	S3S4	Mature interior forest, dense forest, possibly near streams or vernal pools	RA-CONF	T
Pied-billed Grebe (Bird) *Podilymbus podiceps*	S3B,S1N	Quiet marshes, marshy shorelines of ponds, shallow lakes, or marshy bays and slow moving streams with sedge banks	RA-CONF	T
Red-headed woodpecker (Bird) *Melanerpes erythrocephalus*	S2B	Open woodlands, edges and clearings	RA-CONF	PSC
Spatterdock Darner (Dragonfly)	S2	Fishless ponds, usually with water lilies or vegetated	RA-CONF	U

Rhionaeschna mutata		ponds and pools, open marshes and bogs, often with spatterdock		
West Virginia White (Butterfly) *Pieris virginiensis*	S3	Moist, rich deciduous or mixed woods with toothwort	RA-CONF	U
Appalachian Tiger Beetle (Insect) *Cicindela ancocisconensis*	S2	Riparian areas of hilly and low mountainous regions	PRO-PRED	U
Bald Eagle (Bird) *Haliaeetus leucocephalus*	S2S3B,S2N	Near large bodies of water, such as bays, rivers, and lakes, that support a healthy population of fish and waterfowl, their primary food source. Generally, Bald Eagles tend to avoid areas with human activities	PRO-PRED	T
Arrowhead Spiketail (Dragonfly) *Cordulegaster obliqua*	S3	Forested spring-fed springs and seeps with soft bottoms and sometimes rocks.	PRO-PRED	U
Brook Snaketail (Dragonfly) *Ophiogomphus aspersus*	S3	Clear, rapid-flowing streams that are shallow with a sandy and rocky substrate	PRO-PRED	U
Coal Skink (Reptile) *Plestiodon anthracinus*	S2S3	Humid wooded areas with abundant leaf litter and loose rocks	PRO-PRED	U
Comet Darner (Dragonfly) *Anax longipes*	S2S3	(Semi) permanent small lakes, coastal plain ponds, abandoned shallow quarry ponds, natural rocky ponds, and sometimes constructed farm ponds, commonly with an abundance of floating and submerged vegetation	PRO-PRED	U
Longtail Salamander (Salamander) *Eurycea longicauda*	S2S3	Moist or wet terrestrial situations, usually along the borders of streams, swamps, seeps, marshes, etc.	PRO-PRED	PSC
Spiny Softshell (Turtle) *Apalone spinifera*	S2S3	Open freshwater habitats with small amounts of	PRO-PRED	PSC

		vegetation and a sandy or muddy bottom and a raised sandy area close to water.		
Cobblestone Tiger Beetle (Insect) *Cicindela marginpennis*	S1	Pebble and Cobblestone with sand on sparsely vegetated islands and edges of small, medium streams and larger rivers	PRO-PRED	CI
Green Gentian (Plant) *Frasera caroliniensis*	S2	Forested slopes, bluffs, and ridges on calcareous soils that are often a dry, clay-loam or shale	PRO-PRED	T
Hill's Pondweed (Plant) *Potamogeton hillii*	S2	Alkaline waterways including ponds, streams, lakes, ditches, and other impoundments	PRO-PRED	T
Woodland Agrimony (Plant) *Agrimonia rostellata*	S2	Rich mesic forests, forested gorge slopes cutting through calcareous bedrock, stream banks in rich forests, forested slopes adjacent to streams, forested limestone benches, dry oak woods, wooded pastures on rich soil, shrub thickets, and other mesic sites that are typically wooded and on calcareous soils	PRO-PRED	T
Confirmed or Predicted in the Landscape and May Be Affected by State Forest Management				
Bird Dropping Moth (Moth) *Cerma cora*	S1S2	Pine barrens, sandy, probably acid, shale, ridge top woods, dependent on fire cherry	EO-CONF	U
Blunt-lobe Grape Fern (Vascular Plant) *Botrychium oneidense*	S2S3	Highly organic moist soils and sandy soils of mixed deciduous hardwood forests including the lower slopes of maple forests, secondary forests, wet woods along stream corridors, creek	EO-CONF	T

		gorges, and other rich, moist forests		
Hellbender (Amphibian) *Cryptobranchus allaganiensis*	S2	Swift running, well oxygenated, unpolluted streams and rivers with riffle areas and abundant large flat rocks, logs or boards	EO-CONF	SC
Henslow's Sparrow (Bird) *Ammodramus henslowii*	S3B	Tall, dense, grassy fields without woody vegetation, wet grasslands	EO-CONF	T
Northern Harrier (Bird) *Circus cyaneus*	S3B,S3N	Open grasslands, shrub land, and salt and freshwater marshes	EO-CONF	T
Pod Grass (Vascular Plant) *Scheuchzeria palustris*	S3	Sphagnum bogs and nutrient poor to medium fens	EO-CONF	R
Short-eared Owl (Bird) *Asio flammeus*	S2	Open areas such as grasslands, fresh and saltwater marshes, prefer habitat with some water	EO-CONF	E
Silver Shiner (Fish) *Notropis photogenis*	S2	Moderate to large streams with swift currents that are free of weeds and have clean gravel or boulder bottoms	EO-CONF	U
Spreading Globeflower (Vascular Plant) *Trollius laxus*	S3	Open areas of calcareous wetlands, including casually grazed pastures, openings in cedar, tamarack, or hemlock swamps, rich sloping fens, rich graminoid fens, power line right-of-ways through rich shrub swamps, seepage areas, and other such sites	EO-CONF	R
Timber Rattlesnake (Reptile) *Crotalus horridus*	S3	Mountainous or hilly deciduous or mixed deciduous-coniferous	EO-CONF	T

		forests, often with rocky outcroppings, steep ledges, and rock slides		
Twin-leaf (Vascular Plant) *Jeffersonia diphylla*	S2	Moist woods usually calcareous soils, often semi rocky slopes or exposed bedrock	EO-CONF	T
Upland Sandpiper (Bird) *Bartramia longicauda*	S3B	Grasslands with level topography and a variety of short grasses interspersed with taller varieties	EO-CONF	T
Arctic Rush (Vascular Plant) *Juncus trifidus*	S2	Open alpine meadows, rock outcrops, cliffs, and ledges, often in thin soil over granitic or anorthosite bedrock. Vertical cliffs and ledges of conglomerate bedrock, and rarely sandy lake shores	PRO-PRED	T
Drummond's Rockcress (Vascular Plant) *Boechera stricta*	S2	Rocky ledges, cliffs ravines, sometimes disturbed trails, mowed areas, sandy roadsides	PRO-PRED	T
Rock-cress (Vascular Plant) *Draba arabisans*	S2	Dry cliffs, rocky ledges, talus slopes and open woodlands, often at calcareous sites	PRO-PRED	T
Smooth Cliff Brake (Fern) *Pellaea glabella ssp. glabella*	S2	Calcareous cliffs, often with eroding or crumbly white limestone, often shaded. River/stream gorges. Found rarely on sandstone cliffs	PRO-PRED	T
Shrubby St. John's-wort (Vascular Plant) *Hypericum prolificum*	S2	Early-successional, human-influenced habitats such as power lines and roadsides, associated often with oaks as well as with a diversity of other tree and shrub species	PRO-PRED	T

Key to Codes
BBA - Breeding Bird Atlas
PRED - Predicted Species
CONF - Confirmed Species

RA- Rare Animals
EO-Element Occurrence
PRO- Predicted Richness Overlay

Status
E - Endangered Species (New York)

T - Threatened Species (New York)
PSC - Protected, Special Concern Species (New York)
SGCN - Species of Greatest Conservation Need
U-Unlisted
CI-Critically Imperiled

Visual Resources

The aesthetic quality of State Forests is considered in management activity across the unit. However, some areas have greater potential to preserve or create unique viewing opportunities for public enjoyment. These especially scenic areas are inventoried below. For information on the protection of visual resources, please see SPSFM page 81 at http://www.dec.ny.gov/lands/64567.html.

Waterfall

A 20-foot natural shale waterfall flows through the ravine on the south- western border of Allen Lake State Forest. The waterfall can be found by hiking the 1.5 mile Hidden Falls Trail, starting at the trailhead on Saunders Road.

Allen Lake's "Hidden Falls." Photo courtesy of Jon Cleveland.

For more information on the Hidden Falls Trail, visit http://www.dec.ny.gov/lands/63250.html#Hiking

Allen Lake

Allen Lake can be found at the end of Lake Forest Road on Allen Lake State Forest. The 58-acre lake is surrounded by natural and planted forest, boasting year-round access, great fishing, and an accessible floating pier. It should be noted that while the pier is universally accessible, the path from the parking area to the pier can be difficult for some people to negotiate. Renovations to this path are proposed in the Allegany 23 State Forest Actions of this plan.

Allen Lake as seen from the impoundment.

For more information on Allen Lake, visit http://www.dec.ny.gov/outdoor/26977.html

Hanging Bog

Hanging Bog can be found on Crab Hollow State Forest and Hanging Bog Wildlife Management Area in the Town of New Hudson. The bog is named for a floating mat of vegetation and provides exceptional wildlife and birding opportunities, as well as a stunning view.

The floating vegetation of Hanging Bog.

For information about Crab Hollow State Forest and the Hanging Bog, please refer to http://www.dec.ny.gov/lands/60739.html

Keeney Swamp

Keeney Swamp, located in the Town of Birsdall on Keeney Swamp State Forest and Keeney Swamp Wildlife Management Area, is a large swamp which forms the headwaters of Black Creek. A man-made impoundment connects County Route 15A and Gordon Forest Road and provides a panoramic view of this stunning natural setting. The swamp stretches to the east and Black Creek trickles west from the overflow. On the swamp's southern edge, a trained eye can pick out the steep conical crowns of native balsam fir—a species usually only found much further to the north.

Keeney Swamp offers fishing and water recreation opportunities as well as a unique setting to view birds. The area has been selected as an Important Bird Area by the National Audubon Society.

Keeney Swamp on a still evening. Photo courtesy of Beth Tucker.

For information about Keeney Swamp, please refer to http://www.dec.ny.gov/lands/53634

Historic and Cultural Resources

History of the Unit

The history of the Allegany Unit is rich and diverse. Following the Wisconsinan Glaciation, which altered the route of the Genesee River, the first peoples thought to colonize the land in what is now Allegany County were the Clovis. They are believed to have been succeeded by the Lamokas, who hunted, fished, and foraged the land. The Hopewell tribes followed, cultivating the rich, fertile soil of the Genesee Valley until approximately 300 A.D., when they were replaced by the ancestors of the Iroquois. These tribes flourished in the land for the next 1,000 years, thriving on the abundance of fish and game and cultivated food. As conflicts developed among the various tribes, the Senecas came to dominate the land until the Great Law of Peace was established, eventually binding the Mohawk, Onondaga, Oneida, Cayuga, Seneca and Tuscarora peoples into the Iroquois Confederacy.

Present-day Allegany County was the territory of the Senecas, who were named as the “Keepers of the Western Door.” Prior to European settlement and the American Revolutionary War, Native American villages existed along the Genesee River, most notably at Caneadea, which means “Where the heavens rest upon the earth.” Though most of the Native American villages were in the Genesee River floodplain, major trails existed throughout the Unit, and the uplands were used for foraging and hunting.

With the exception of cultivated river-bottom land along the Genesee, early settlers noted that the land was densely forested with a “prodigious growth of timber of various kinds.” White pine, which was the Iroquois symbol for the “Tree of Peace,” grew in great abundance with hemlock, oaks, sugar maple and chestnut. Along the river, butternuts, elms, cottonwoods, sycamores, and willows thrived. The land along the river valley that was cultivated was covered with “grass tall enough to conceal horse and rider.” The Indian women would periodically burn the grass off and grow corn, beans, squash and gourds. (Minard, 1896).

The American Revolutionary War and the Treaty of Big Tree led to the ceding of land from the Seneca Nation to the Commonwealth of Massachusetts in 1825. Enormous tracts of land were purchased by a syndicate known as Phelps and Gorham. The purchase included 600,000 acres of land in Western New York. Phelps and Gorham agreed to pay $1,000,000 in three annual installments, as well as secure a clear title from the Iroquois Nation.

Phelps and Gorham acquired title to the lands east of the Genesee River and in turn sold the property to settlers and speculators. However, the syndicate encountered financial tribulations and was unable to make the second payment for land west of the Genesee River. Robert Morris of Philadelphia purchased much of the land that Phelps and Gorham had acquired but not sold, as well as the defaulted property. Morris later sold large tracts of land west of the Genesee River to the Holland Land Company—a group of men in Batavia who held the land in trust for foreign investors. Half of the Allegany Unit was included in the Holland Land Purchase. The land was sold by the

Holland Land Company to settlers and speculators until the final sale occurred around 1840. Shortly thereafter, the company assets were liquidated and the business dissolved.

The settlers worked exhaustively to clear the land for farming and the "prodigious growths of timber" disappeared over time, all while yielding vast quantities of forest products. One story is told of "The Giant Pine of Alma" which described a white pine that measured 123 feet to the first branch, and 191 feet to the second and having a diameter on the stump of 7 feet, 1 inch, which was "perfectly round and straight as a candle." Seven 16 foot logs and one 8 foot log were sawn from the tree, which yielded more than 6,800 board feet of clear lumber (Shear, 1959).

Unlike the Senecas before them, the European settlers would often clear the uplands and ridge tops for farming to avoid the threat of malaria in the wetter valleys. The thin, relatively unproductive soils proved a challenge for subsistence farmers. By the late 19th century, farms began to be abandoned as workers gravitated towards urban centers which were powered by the Industrial Revolution.

The major industries in early Allegany County were agriculture, timber, and oil (mostly in the southern part of the county). Numerous sawmills operated on waterways. Pine and hemlock were felled first for lumber and for the tanning industry which necessitated vast quantities of hemlock bark. Later, the hardwoods were harvested. Water-powered "up and down" sawmills gave way to steam powered engines, while the arrival of the New York and Erie Railroad in 1851 provided means to import and export goods. The construction of the Genesee Valley Canal began in 1836, reaching Allegany County during the 1850s. Connecting the Erie Canal at Rochester with the Allegheny River near Olean, the canal was envisioned as a water route between the Great Lakes and the Mississippi River. By the time it was completed in 1862, the canal was largely obsolete due to the availability of faster and cheaper transportation via the railroads. The canal was largely unprofitable and was closed in 1877.

When the Great Depression struck in 1929, it was common for the landowners to default on their property obligations. Industries such as timber and mining saw sharp declines in demand, and laborers had no other alternatives for work. With the passage of the State Reforestation Law in 1929 and the Hewitt Amendment in 1931, the State began acquiring properties for reforestation. Records show that most of the properties were purchased from individual landowners; however, a number of properties were acquired from banks which had foreclosed on mortgages, and still others were acquired from Allegany County, which had taken title to the properties due to non-payment of taxes. By the time the State began acquiring the properties, over 75% of New York had been deforested.

Concerns about soil erosion, decreased water quality, timber scarcity, and thousands of unemployed young men led to the creation of the Civilian Conservation Corps (CCC) in 1933 as part of President Franklin D. Roosevelt's "New Deal." One of the many functions of the CCC was to replant abandoned fields with trees to expedite their return to a forested condition. In Allegany County, three CCC camps were established: S-126, in Centerville on what is now Lost Nation State Forest; S-92, in West Almond on the site currently occupied by the West Almond Operations Facility and the West Almond State Land Management Sub-Office, and S-117 in Birdsall on what is now Keeney Swamp

State Forest. Tree nurseries were established at all three camps and account for many of the unusual species found on the Allegany Unit.

A CCC water hole then and now. The photo on the left was taken in 1937 showing the landscape facing east across what is now County Route 16 in Birdsall. The photo on the right shows the same site in 2016.

Management of the State Reforestation Areas was assigned to the New York State Conservation Department; which in 1970 became part of the Department of Environmental Conservation. Much of Allegany County is densely forested now, and many of the stands that were once completely stripped of trees have reached maturity.

Many of the lands the State inherited had been previously exploited—which is understandable, considering the hardship of life in early America. The State Forests are now sustainably managed by professional foresters with the understanding that forests will stay forests and trees will follow trees. Globalization has dramatically increased both the forest products market and the introduction of exotic species. Combined with the uncertainties inherent in natural resources management, a constantly changing market, and a diverse stakeholder group, management for the greatest good is both challenging and rewarding.

Inventory of Resources

The term cultural resources encompass a number of categories of human created resources including structures, archaeological sites and related resources. The Department is required by the New York State Historic Preservation Act (SHPA) (PRHPL Article 14) and SEQRA (ECL Article 8) as well as Article 9 of Environmental Conservation Law, 6NYCRR Section 190.8 (g) and Section 233 of Education Law to include such resources in the range of environmental

values that are managed on public lands. For more information on protection of historic and cultural resources, please see SPSFM page 139 at http://www.dec.ny.gov/lands/64567.html.

As a part of the inventory effort associated with the development of this plan the Department arranged for the archaeological site inventories maintained by the New York State Museum and the Office of Parks, Recreation and Historic Preservation to be searched in order to identify known archaeological resources that might be located within or near the unit. The two inventories overlap to an extent but do not entirely duplicate one another. The purpose of this effort was to identify any known sites that might be affected by actions proposed within the unit and to assist in understanding and characterizing past human use and occupation of the unit.

The search revealed an abundance of archeological and cultural sites found within Allegany County, however, none of these were on State Land. There are two prominent theories why this may have been the case.

First, many of the known cultural and archeological sites are found along major streams and river valleys. Since much of the Allegany Unit state land is found on ridge tops, it is not surprising that the sites were not located on State Land. However, there is evidence that people made use of the upland sites in general.

Secondly, there has been very little survey of the State Land. Artifact collectors tend to stay away from sites where it is illegal to take anything, and as this is the case on State Land, little work has been done up to the present.

Historic and Archaeological Site Protection

Any unrecorded historic and archaeological sites that may exist on the property are protected by the provisions of the New York State Historic Preservation Act (SHPA - Article 14 PRHPL), Article 9 of Environmental Conservation Law, 6NYCRR Section 190.8 (g) and Section 233 of Education Law. No actions that would impact known resources are proposed in this Unit Management Plan. Should any such actions be proposed in the future they will be reviewed in accordance with the requirements of SHPA. Unauthorized excavation and removal of materials from any of these sites is prohibited by Article 9 of Environmental Conservation Law and Section 233 of Education Law. In some cases additional protection may be afforded these resources by the federal Archaeological Resources Protection Act (ARPA).

Archaeological Research

The archaeological sites that may exist on the property may be made available for appropriate research. Any future archaeological research to be conducted on the property will be accomplished under the auspices of all appropriate permits. Research permits will be issued only after consultation with the New York State Museum and the Office of Parks, Recreation and Historic Preservation. Extensive excavations are not contemplated as part of any research

program in order to assure that the sites are available to future researchers who are likely to have more advanced tools and techniques as well as more fully developed research questions.

Real Property

DEC's Bureau of Real Property GIS system contains maps and some deeds for State Forest properties. Original deeds were also consulted to complete the information below.

Boundary Lines

Table I.G. – Status of Boundary Lines

Facility Name	Length of Boundary (mi.)	Length Requiring Maintenance*	Length Requiring Survey
Phillips Creek State Forest	20.00	17.87	14.61
Turnpike State Forest	26.4	22.95	16.15
Bully Hill State Forest	17.41	17.41	13.9
Palmer's Pond State Forest	31.3	29.53	28.09
Keeney Swamp State Forest	16.34	16.34	9.81
Klipnocky State Forest	16.72	14.61	8.79
Vandermark State Forest	16	16	13.64
Gillies Hill State Forest	19.8	19.8	15.98
Hiltonville State Forest	9.7	8.12	4.47
Gas Springs State Forest	22.5	21.99	8.17
English Hill State Forest	14.8	14.8	0
Lost Nation State Forest	10.9	10.89	0
Jersey Hill State Forest	8.8	7.58	0
Karr Valley Creek State Forest	12.6	10.7	0
Cold Creek State Forest	6.5	6.49	0
Crab Hollow State Forest	11.8	11.8	9.1
Coyle Hill State Forest	16.2	16.2	6.23
Rush Creek State Forest	13.4	13.4	10.21
Swift Hill State Forest	17.3	17.3	0
Plumbottom State Forest	12.5	12.5	9.8
Slader Creek State Forest	10.7	9.1	5.1
Bald Mountain State Forest	7.1	7.1	7.1

Table I.G. – Status of Boundary Lines			
Facility Name	**Length of Boundary (mi.)**	**Length Requiring Maintenance***	**Length Requiring Survey**
Allen Lake State Forest	16.4	16.4	0
W.A.G. Trail	17.5	17.5	0
Totals	**372.7**	**356.4**	**181.2**

* The length requiring maintenance takes into account factors such as internal boundaries where adjacent state forest properties come together. Internal state forest boundary lines do not require routine boundary line maintenance.

For more information on boundary line maintenance, please see SPSFM page 153 at http://www.dec.ny.gov/lands/64567.html.

Exceptions and Deeded Restrictions

While every State Forest in the Unit would benefit from consolidated holdings, the list of private parcels, called exceptions, in Table I.H. is limited to those private lands where State Ownership occurs on at least three sides of a private parcel, or where previous contentions with private landowners has negatively impacted public access. The Bureau of Real Property maintains the records for exceptions, inholdings, deed descriptions, surveys, etc. for State-owned properties.

Table I.H. – Exceptions and Deeded Restrictions			
Facility Name	**RA #**	**Description** E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	**Proposal ID (Surveyor's Reference)**
Phillips Creek State Forest	1	Landlocked exception north of State Route 244 with road access	Proposal S
Keeney Swamp State Forest	5	Landlocked exception west of County Route 15B	Proposal P, Clancy
Klipnocky State Forest	6	Exception north and south of Klipnocky Road	Lots 26, 31
Vandermark State Forest	7	Landlocked exception south of Allen FR	Lot 27
Vandermark State Forest	7	Exception east and west of County Route 10	Lots 20, 21

Table I.H. – Exceptions and Deeded Restrictions

Facility Name	RA #	Description E.g., deeded ROW, easement, access lane, water rights, cemetery, etc.	Proposal ID (Surveyor's Reference)
Gillies Hill State Forest	8	Exceptions west of County Route 16	Lot 11
Gillies Hill State Forest	8	Exceptions west of Number One Road	Proposal M, Lot 1
Gas Springs State Forest	10	Exception east of Dinder Road	Lot 29
Gas Springs State Forest	10	Exception north and south of Hiltonville Road	Lot 17
Gas Springs State Forest	10	Exception south of Klipnocky Road	Lot 19
Karr Valley Creek State Forest	14	Exception west of Dobson Road	Lot 31
Crab Hollow State Forest	16	Exceptions east and west of New Hudson Road	Lots 46, 53
Coyle Hill State Forest	17	Landlocked exception south of Warner FR	Lot 16
Rush Creek State Forest	18	Exception west of Bennet Hill Road	Lots 5, 7, 9, 11
Swift Hill State Forest	19	Exceptions east of Handcock Road	Lot 19
Swift Hill State Forest	19	Exceptions east of Podonque Road	Lot 17
Plumbottom State Forest	20	Exception north of abandoned section Plumbottom Road	Lot 24
Plumbottom State Forest	20	Deeded R.O.W. from Reddy FR to Private Property	Proposals G and F
Slader Creek State Forest	21	Exception south of County Route 13C	Lot 56
Slader Creek State Forest	21	Exception east of Prince Road	Lot 68
Slader Creek State Forest	21	Exceptions east of Gas Springs Road	Lots 71,72
Bald Mountain State Forest	22	Deeded R.O.W from County Route 16 to State Forest Boundary	Proposal H
Bald Mountain State Forest	22	Exception east of Buehrings Road	Lot 24
Bald Mountain State Forest	22	Exception south-west of Howe FR	Lot 26
Allen Lake State Forest	23	Exception north of Muckle Road	Lot 33, Proposal J
Allen Lake State Forest	23	Exceptions surrounding Saunders Road	Lots 5,7,9