



signs intended to draw attention to obstacles or hazardous conditions may be red and white.

- Lettering clearly indicating the property name and classification; ex. “Witch’s Hole State Forest”, will be given in all roadside directional signs and trailhead identification signs.
- Standard boundary signs will be posted every 400 feet along all highways that pass through or adjacent to State Forest lands and at other strategic locations, such as points on trails where they pass from private onto state lands.
- Managers will use the smallest number of signs necessary to accomplish an informational or regulatory objective.
- Signs will be clustered on a single sign-post or bulletin board placed where they are most likely to be seen by visitors.
- As a general rule, informational signs will be posted on the periphery of a property rather than in the interior.
- Signs will be constructed of rustic materials and will be limited in number.
- Only signs that conform to DEC rules and regulations and policy will be placed.

TRAILS

A wide variety of trails can be found on State Forests to accommodate the needs of a wide variety of recreational activities. Over 2,400 miles of multiple use, single use and dual use trails are provided with the goal of having something for everyone. While it is impossible to accommodate every recreational use on each property, every attempt is made to locate trails in areas where the demand is greatest and to design trails to serve the needs of each recreational use. Some trails serve multiple uses while others may be



Bent Rim Trail, Rock City State Forest, Cattaraugus County

designed and limited to only one recreational use. The development of formal trails must also rely on the availability of volunteer organizations are able to assist with trail maintenance under VSAs (formerly Adopt a Natural Resource Agreements). There are over 110 active VSAs agreements between DEC and local volunteers, clubs and organizations, which are crucially needed to maintain recreational trails on State Forests. Where possible, trails are developed and maintained in partnership with local governments, organizations, and residents.

State Forest trails can be linked with nearby communities and trail systems through trail connections where feasible, appropriate, and supported by local governments, residents, and landowners. Priority is given to trail linkages that tie into existing public transportation, reduce



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the need for new structures and improvements within the unit, support local economic development plans, and foster the development of interpretive and educational programs.

Trail Infrastructure Guidelines

- Sufficient parking will be provided at the trailhead to accommodate anticipated use and in accordance with that area's resource capacity to withstand use.
- Trails will be clearly marked, and well maintained.

Foot Trail Construction:

Where it is not possible or appropriate to construct using the most current Architectural Barriers Act (ABA) Standards available at the time of construction, the following technical specifications will be used.

- Trail width: 3 ft
- Trail tread width: 2 ft
- Trail clearance: 9 ft
- Trail tread surface: Trail surface will be native soils where trail is on moderately well- to well-drained ground. Those portions of trail on poorly drained ground will have a hardened surface or improved trail drainage to prevent muddy conditions.
- If a section of a trail must cross a small area of wet or soft soil that section will be hardened, or bog bridging (puncheons) will be installed.
- Trail signs: Trail markers will be placed such that they are inter-visible
- Some trails will be laid out on existing roads, skid trails or other partially cleared areas
- Erosion control measures shall be installed on slopes where expected use has potential for significant erosion
- Erosion control measures shall consist of water bars, broad based dips and water diversion ditches

Cross-country Ski Loop Trail Construction:

- Trail width: 4 ft for ungroomed trails; 6 ft for groomed trails
- Trail tread width: 2 ft for ungroomed trails; 6 ft for groomed trails
- Trail height: 12 ft
- Trail length: 5 to 10 miles
- Slope: 3 to 25%
- Cross slope: 0 to 5% for groomed trails
- Minimum acreage needed: 500 acres of contiguous upland acreage
- Trail signs: trail markers will be placed at appropriate distances
- Trails will avoid wet areas
- Wherever possible, trails will be laid out on existing roads, skid trails or other partially cleared areas

Horseback Riding Trail Construction:

- Type of trail: loop trail



- Trail width: 6 ft
- Trail tread width: 4 ft
- Trail height: 12 ft
- Trail length: 5 to 15 miles
- Slope: 3 to 25%
- Cross slope: 0 to 5%
- Minimum acreage needed: 1,500 acres of contiguous upland acreage needed for a trail system that is contained within a given State Forest
- Trail signs: Trail signs will be placed at appropriate distances
- Refer to “Construction and Maintenance of Horse Trails in Arkansas State Parks” for guidelines on location of road crossings and signs at intersections
- Trails shall be built and maintained to standards sufficient to prevent or minimize erosion
- Water bars or broad-based dips will be installed as needed
- Trail tread on wet or soft soils will be hardened
- Streams will be crossed with culverts if possible
- Stone fords or bridges will be used as a last resort
- If it is necessary to use a bridge, it will be designed or approved by DEC operation engineers.

Mountain Bike Trail Construction*:

- Identify control points (i.e. wetlands, rock outcrops, scenic vistas)
- Avoiding sensitive areas, such as wetlands and wherever water collects, steep slopes, and unique habitats
- Use existing roadways where possible, on grades that do not exceed 10%
- Clear new single-track trail tread two to three feet wide with a maximum width of four feet, with the assumption that a narrower track will develop as the edges of the trail re-vegetate.
- Trail corridor can be cleared 5-8 feet wide based on expected vegetation re-growth, speed of users and frequency of use. Care should be taken to avoid opening the canopy to minimize fragmentation and the establishment of invasive species.
- Frequent grade reversals and drainage dips will allow for water management.
- Texture the tread by leaving natural features, such as small rocks and logs, in the trail to help control speed.
- Remove vegetation at the root level, not at ground level.
- Keep routes close to the contour & avoid fall lines where water is likely to flow downhill.
- On side slopes, follow the contour, cutting full benches to construct the tread (out-sloping at 5% to remove water from the trail), and re-vegetating back slopes.



The Golden Hill Bike Trail in Cattaraugus County



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- Design trails with an open and flowing route, with broad sweeping turns. Avoid long straight stretches and acute sharp angle turns.
- Cross streams at 90 degree angles, preferably across rock, gravel, culverts or bridges.
- Install bridges where steep banks prevent normal stream crossings.
- Plan trails for beginner/intermediate riders by maintaining overall grades of 10% or less.
- Monitor and inspect all trails annually; addressing water problems immediately.

*These standards have been adapted from both DEC and International Mountain Bicycling Association recommendations.

Snowmobile Trail Construction:

- Type of trail: Corridor or loop trails
- Trail width, trail tread width and trail clearance
- Refer to OPRHP's [NYS Snowmobile Trail Manual](#) based on the class of trail
- Trail length: Minimum of 50 miles; shorter for loop trail
- Slope: 3 to 25%
- Cross Slope: 0 to 2%
- Minimum acreage needed: 5,000 acres of contiguous upland acreage for loop trails
- Trail signs: Will be in accordance with the OPRHP's [NYS Snowmobile Trail Signing Handbook](#)
- Speed Limit: 25 mph on public forest access roads
- Other uses allowed: Sections of snowmobile trails may be part of multipurpose trail systems
- Other: Grooming of trails by snowmobile clubs will be allowed through the VSA Program or a temporary revocable permit (TRP)
- Trails will be located to minimize unnecessary cut and fill
- Trails will, when possible, avoid wet and ecologically sensitive areas
- Wherever possible, trails will be laid out on existing roads, skid trails or other partially cleared areas

Potential Impacts of Trail Establishment

Like roads, properly designed, constructed and maintained trails actually mitigate impacts by concentrating use along an appropriate corridor. The most significant impact associated with trails is the potential for erosion. This impact will be mitigated by the thorough application of BMPs for soil and water protection. Trails may create a small-scale edge effect which does not impair the ecological function of the forest. Additional trail related infrastructure, such as parking lots, staging areas, manure pits and watering stations have the potential to add to these impacts and must be properly located.

The level of trail use and number of multiple uses is very closely associated with the amount of maintenance needed and potential environmental impacts. Therefore, the discussion of impacts and mitigations related to trail use is located in the Recreation section of this plan. (refer to [page 203](#))





FACILITIES AND STRUCTURES

Various facilities and structures can be found on State Forests, however the overwhelming majority of lands are unfragmented and undeveloped. The primary consideration for DEC staff, before undertaking new facility construction or the maintenance of existing facilities is the need to minimize forest fragmentation and development. Facilities and structures are first developed in areas already fragmented. Facilities may be developed in unfragmented areas if they have a small footprint of impact (ex. campsites) or a relatively short duration of impact (ex. gas wells). Intensive use recreational facilities such as playgrounds, athletic fields and other broad areas of turf require significant resources for maintenance. These facilities can often be found at municipal parks and other areas. No new facilities of this type will be developed on State Forests.

Recreational Facility Construction Guidelines

Campsite, Privy & Lean-to Construction and Maintenance:

- Any technical specifications will be in compliance with the Americans with Disabilities Act (ADA) and/or ABA Standards
- Located away from streams, wetlands and unstable slopes whenever possible
- Located on flat, stable, well drained sites
- Constructed during periods of limited rainfall whenever possible

Fishing Pier Construction:

- Any technical specifications will be in compliance with ADA Standards, including edge protection, accessible railings, clear floor space and access route from parking lot
- Bureau of Fisheries shall be consulted to ensure that the pier is placed in a location that is likely to provide a positive fishing experience
- If applicable, vertical slots should be placed at regular intervals in the pier railing to provide easy access to caught fish, particularly for seated anglers
- Location of fishing piers will comply with [Article 15](#) and [Article 24](#)
- Approach will be on dry ground, where possible
- Unnecessary cut and fill will be minimized
- Location of pilings will be done to minimize disturbance to aquatic vegetation
- Access points will be located and stabilized to minimize shore erosion and sedimentation

Towers and Wind Turbines

The placement of new communications towers (for purposes other than DEC administrative use), wind turbines or other utilities should be avoided and for ecological purposes would be more appropriately placed on private lands which have already been fragmented. For example, there are vast areas of agricultural lands throughout the state whose owners would surely appreciate the income provided by leasing for windmills, and where agricultural use could carry on unimpeded by the presence of windmills. State Forests are not an appropriate setting for



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industrial-scale wind farms that would require permanent clearing of land. State Forests are more appropriately used for providing unfragmented habitat blocks along with smaller-scale openings created for forest management activity.

Wind turbines established on adjacent properties have the potential to impact their neighbors' lands. For this reason, many towns have established property boundary line setbacks to buffer neighbors. These same ordinances often provide options for the neighbor to waive this setback. It shall be DEC's policy not to grant waivers from setback provisions where these local ordinances apply, in recognition of the recreational and ecological importance of State Forests.

Utility Corridors

Much of the legislation authorizing acquisition of State Forest lands has specifically prohibited DEC from entering into any long-term leases or selling any real property rights, including utility rights of ways. This demonstrates the intent to minimize development or fragmentation of these lands. There are currently some power lines in use across State Forest lands established prior to state acquisition or, in a limited number of cases, established without DEC approval or proper authority while the land was in state ownership. It is not reasonable to require the immediate removal of utilities previously established without proper authority, especially when the majority were established decades ago. However, it is DEC's intent to address these utilities on a case-by-case basis to secure proper compensation for the state and/or establish a legal basis for their continued use. Generally speaking, DEC will resist the establishment of new utility ROWs to limit future fragmentation of the forest. An exception may be made for future oil and gas exploration and development which has been specifically authorized by the NYS Legislature.

"INF" OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Infrastructure (INF) Objective I –Basic infrastructure will be provided and maintained, including public forest access roads, access trails, haul roads, and parking areas, and associated appurtenances.

INF Action 1 - Update *Unpaved Forest Road Handbook* to include the application of new technology.

INF Action 2 – Develop a standard process for assessing State Forest infrastructure to assign maintenance schedule priorities and budgets.

INF Objective II – Opportunities for infrastructure upgrades, replacement or relocation out of riparian areas will be identified at the Unit level.

INF Objective III – Issues of uncertain legal status or jurisdiction along roads will be resolved via UMP development to decrease the number of future encroachments and lawsuits.



INF Action 4 - Complete surveys of all roads and create maps showing the legal status of all access roads as issues are raised during UMP development.

INF Action 5 – Enlist the aid of Real Property and/or Legal Affairs to resolve uncertain status of existing encroachments, rights of way, etc.

INF Objective IV – Prevent over-development of State Forests at a Unit level by ensuring the sustainability of road, trail and utility corridor systems and avoiding the installation of facilities with running water.

INF Action 6 – Develop guidance for road, trail and utility corridor development, with the express intent of limiting forest fragmentation.

INF SEQR Alternatives Analysis and Thresholds

The **no-action alternative**, or in other words, continuing with current management approaches, has been selected as the **preferred alternative**. State Forests will continue to be managed to provide rustic recreational opportunities with a limited amount of supporting infrastructure. In most cases, new infrastructure development will be undertaken to concentrate use and mitigate impacts that would otherwise occur on an undeveloped surface. Most projects involving development of new infrastructure will be addressed in a UMP, or a similar formal public process.

The alternative of not developing new infrastructure has not been chosen, considering public demands, increased public use and the need to mitigate related impacts.

The alternative of building highly developed recreational areas for intensive use has not been selected. This would create a long-term change in the nature of land use on State Forests and displace traditional recreational and forest-resource related uses.

SEQR Analysis Threshold: Compliance with the guidelines and strategies of this section will avoid and minimize potential impacts resulting from infrastructure development. Any development of facilities with potable water supplies, septic system supported restrooms, camping areas with more than 10 sites or development in excess of other limits established in this plan will require additional site-specific environmental review under SEQRA.



CHAPTER 5

PUBLIC/PERMITTED USE



ACCESSIBILITY

BACKGROUND

Forest-based outdoor activities in both active and passive forms are widely enjoyed by people of all ages and abilities. Time in the woods is increasingly important as much of society has turned indoors for entertainment. Nature provides opportunities for exercise and physical well-being, meeting unique challenges, learning new skills and gaining healthy perspectives on modern life. A day on the water or an evening around the campfire brings family and friends together to make personal discoveries and connections with each other. Disability awareness and consideration of diverse needs will lead to greater inclusion in these valuable recreational opportunities. DEC plays an essential role in improving accessibility to recreational activities that are often rustic and challenging by nature, and ensuring that facilities are not only safe, attractive and sustainable but also compatible with natural and historic resources.

One in four American adults have some type of disability. People living with a disability comprise 26% of American adults. 14% of American adults experience a mobility disability with serious difficulty walking and engaging in outdoor recreation. 5% of American adults experience blindness or difficulty seeing, challenging their navigation in the outdoor environment.

Source: U.S. Centers for Disease Control and Prevention (2021)

The U.S Centers for Disease Control and Prevention (CDC) reports that in 2021, one in four American adults (26%) live with a disability with 14% experiencing a mobility disability and 5% visually impaired. Along with other disabilities, mobility and vision disabilities make participation in outdoor recreation challenging. These demographics demonstrate the importance for DEC to plan, design, construct, and maintain facilities to accommodate people with disabilities so that all New Yorkers can benefit from the unparalleled opportunities for outdoor recreation available in our State.

MANAGEMENT REQUIREMENTS

Application of the Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA), along with the Architectural Barriers Act of 1968 (ABA) and the Rehabilitation Act of 1973, Title V, Section 504, has a profound effect on the manner by which people with disabilities are afforded equality in their recreational pursuits. The ADA is a comprehensive law prohibiting discrimination against people with disabilities in employment practices, use of public transportation, use of telecommunication facilities, and use of public accommodations. Consistent with ADA requirements, DEC incorporates accessibility for people with disabilities into siting, planning, construction, and alteration of recreational facilities and assets supporting them.



Planning for improvements to the accessibility of facilities and programs in DEC State Forests occurs via the Unit Management Plan (UMP) development process. Each UMP includes an inventory of all the recreational facilities and assets on the Unit or area, and an assessment of the programs, services, and facilities provided to determine the level of accessibility. In conducting this assessment, DEC employs guidelines which ensure that programs are accessible, including buildings, facilities, and vehicles, in terms of architecture and design, and the transportation of and communication with individuals with disabilities. Any new facilities, assets, and/or accessibility improvements to existing facilities or assets, proposed in this plan, and/or in any UMPs, will be identified in the proposed management actions of the respective plan. A record of accessibility determination is kept with the work planning record.

ADA Title II Regulations

US Department of Justice's ADA Title II regulations requires, in part, that services, programs, and activities of DEC, when viewed in their entirety, are readily accessible to and usable by people with disabilities, i.e. making "reasonable modifications" for people with disabilities. However, DEC is not required to take any action which would result in a fundamental alteration to the nature of the service, program, or activity, or would present an undue financial or administrative burden. When accommodating access to a program, DEC is not necessarily required to make each existing facility and asset accessible, as long as the program is accessible by other means or at a different facility.

Existing Facilities. CFR § 35.150 for existing facilities, states that, "A public entity shall operate each service, program, or activity so that the service, program, or activity, when viewed in its entirety, is readily accessible to and usable by individuals with disabilities. This paragraph does not-- (1) Necessarily require a public entity to make each of its existing facilities accessible to and usable by individuals with disabilities; (2) Require a public entity to take any action that would threaten or destroy the historic significance of an historic property; or (3) Require a public entity to take any action that it can demonstrate would result in a fundamental alteration in the nature of a service, program, or activity or in undue financial and administrative burdens.

The decision that compliance would result in such alteration or burdens must be made by the head of a public entity or his or her designee after considering all resources available for use in the funding and operation of the service, program, or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion."

All new DEC facilities, or parts of facilities, that are constructed for public use are to be accessible to people with disabilities. Full compliance is not required where DEC can demonstrate that it is structurally impracticable to meet the requirements [[28 CFR § 35.151 \(a\)](#)]. Compliance is still required for parts of the facility that can be made accessible to the



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extent that it is not structurally impracticable, and for people with various types of disabilities. In addition, all alterations to facilities, or part of facilities, that affect or could affect the usability of the facility will be made in a manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities [[28 CFR § 35.151 \(b:1-4\)](#)].

Structural Impracticability. [CFR 35.151 \(a\) \(2\)](#) states, “Full compliance... is not required where a public entity can demonstrate that it is structurally impracticable to meet the requirements.” The structurally impracticably exception is allowed by this section, “only in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features.” In this case, this section requires that, “any portion of the facility that can be made accessible shall be made accessible to the extent that it is not structurally impractical.” Furthermore, the section states that where “providing accessibility...to individuals with certain disabilities (e.g. those who use wheelchairs) would be structurally impracticable, accessibility shall nonetheless be ensured to persons with other types of disabilities (e.g., those who use crutches or who have sight, hearing, or mental impairments” as provided for in the standards.

ACCESSIBILITY STANDARDS

DEC uses the Department of Justice’s 2010 Standards for Accessible Design in designing, constructing, and altering buildings and sites. For outdoor recreational facilities not covered under the current ADA standards, DEC uses the standards provided under the ABA to lend credibility to the assessment results and to offer protection to the natural resource (ABA Standards for Outdoor Developed Areas; Sections [F201.4](#), [F216.3](#), [F244](#) to [F248](#), and [1011](#) to [1019](#)).

Specifically, DEC uses the [ADA Standards](#) for buildings, parking, and recreational facilities, including boating boarding piers/docks ([Section 1003](#)), fishing piers and platforms ([Section 1005](#)), and play areas ([Section 1008](#)). The [ABA Standards](#) (Sections 1011-1019) are followed for outdoor developed areas including: camping units, viewing and picnic areas, outdoor recreation access routes (ORAR), trails, and beach access routes (BAR) (See [Guidance for ABA Outdoor Developed Areas](#)). The [DEC Standard Accessible Designs Manual](#) (available upon request from the Accessibility Coordinator) provides designs and specifications in compliance with these standards.

For further information, please contact Leah Akins, DEC Statewide ADA Accessibility Coordinator, at accessibility@dec.ny.gov



MOTORIZED ACCESS PROGRAM FOR PEOPLE WITH DISABILITIES

The Department's Motorized Access Program for People with Disabilities (MAPPWD) permits qualifying people with disabilities to use motor vehicles along specific routes for access to programs, such as hunting and fishing, on state lands. These routes are provided to facilitate access to these traditional programs and not for the support of ORV or ATV riding activities. This program provides access to significant recreational opportunities throughout the state and is one more way that New York is opening the outdoors to people with disabilities. This permit program is maintained pursuant to [DEC Commissioner's Policy 3 \(CP-3\)](#).

MAPPWD permits may be obtained from Regional DEC Foresters through regional DEC offices. The permit provides access for those who seek solitude, connection to nature, undisturbed wildlife habitat, and inclusion with fellow sportspeople. Permit holders can use specified vehicles to travel beyond the reach of public roads, to areas where others must hike or bike. A listing of MAPPWD routes is at www.dec.ny.gov/docs/lands_forests_pdf/mappwdroutes.pdf and is distributed to permit holders. MAPPWD routes and the types of vehicles allowed on the routes are carefully selected to protect natural areas and recreational activities. Access is restricted to designated routes only. All routes are subject to closure due to seasonal conditions or maintenance.



ACCESSIBILITY

In the development of UMPs, existing and potential MAPPWD routes will be assessed along with other recreational facilities and assets. Routes will be evaluated for the degree to which they provide inclusion and access to DEC programs and recreational opportunities. Motorized access will be considered only where non-motorized access such as a foot trail that is improved to meet proposed accessibility guidelines is not feasible due to terrain or other considerations. MAPPWD routes are carefully located in areas which are able to support this use. It has been DEC's experience that these designated routes receive low levels of use and a low impact nature of use. As a result, the use has been sustainable and has not created unacceptable adverse impacts with the exception of trails which have also experienced illegal All-Terrain Vehicle (ATV) and Off-Highway Vehicle (OHV) use. DEC will continue to monitor MAPPWD routes to prevent overuse or abuse and unacceptable impacts.

“ACCESSIBILITY” OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Accessibility Objective I – Apply a minimum tool approach.

Action 1 – Consider opportunities to enhance accessibility to State Forest recreational programs and facilities in all UMPs.

Accessibility Objective II – Develop network of accessible long distance and loop trails on Bureau of Forest Resource Management (BFRM) lands.

Accessibility Action II – Consider opportunities to enhance trails that lead to destinations or can provide a unique interaction with nature.

Accessibility Objective III – Increase frequency of trainings for staff

Accessibility Action III – Program access, Application of Standards, Accessible trail design will be the focal point of trainings

Accessibility Objective IV – During the UMP process, audit and identify possible pedestrian features that can be made accessible.

Accessibility Action IV – Look at existing features like fishing access sites/piers, vistas, camping facilities and other opportunities for accessible updates

UA SEQR Alternatives Analysis and Thresholds

The **no-action alternative**, or in other words, continuing with current management approaches, has been selected as the **preferred alternative**. State Forests will continue to be managed to provide accessible recreational opportunities, following the most current available guidelines, considering inclusive access to all programs, and application of a universal design approach to new construction, as described above.

No other alternatives have been considered as DEC is dedicated to providing access for recreationists of all abilities.



SEQR Analysis Threshold: Compliance with the guidelines and strategies of this section will avoid and minimize potential impacts associated with the need to provide universal access and no further SEQR analysis is required.

FORMAL and INFORMAL PARTNERSHIPS and AGREEMENTS



FORMAL AND INFORMAL PARTNERSHIPS AND AGREEMENTS

Conservation and stewardship partnerships are increasingly important, especially for public land management agencies. Considering the fact that resources will always be limited, collaboration across political, social, organizational and professional boundaries is necessary for long-term success and sustainability. Encouraging the development of cooperative and collaborative relationships is and can be done primarily through DEC's Volunteer Stewardship Agreements, and in special circumstances the Adopt-A- Natural Resource Program, and the development and planning process for UMPs. Successful collaborative efforts build on common ground established by a sense of place or community; mutual goals or fears or a shared vision. Collaborative efforts recognize that partnerships are made up of people and not institutions and mobilize support and resources from numerous sources. In their book *Making Collaboration Work - Lessons from Innovation in Natural Resource Management*, authors Julia Wondolleck and Steven Yaffee address the question of "why collaborate?" (Wondolleck and Yaffee 2000). Their answer: "collaboration can lead to better decisions that are more likely to be implemented and, at the same time, better prepare agencies and communities for future challenges."

State Forests are owned by the people of the state and entrusted to DEC for sustainable management. DEC will in turn, encourage public involvement and citizen participation in management of the land. Public comment is encouraged throughout the management planning process. In addition, user groups, such as equestrian or mountain bike clubs, can support DEC regulations, help plan for appropriate use, and assist in maintenance of trails and other facilities. This ensures that, with Department oversight, State Forests will meet the needs of people most actively engaged in use of the land. Shared benefits are also realized by cooperating with academic researchers and Native American Nations.

VOLUNTEER STEWARDSHIP AGREEMENTS

Historically, State Forests have provided open space for outdoor recreational activities that require minimal facilities. The intensity of recreational use was once low, with few environmental impacts or user conflicts. During the 1990s, demand for recreational trails increased substantially (NYS DEC 2001).

To help meet the increasing demand for recreation, DEC increasingly depends on partnerships with recreation groups to help maintain, enhance, and construct recreational assets. Partnerships between



FORMAL and INFORMAL PARTNERSHIPS and AGREEMENTS



issued for lean-to construction, cross country races, forest insect research, wildlife research, town road maintenance and utility line right-of-way work among many other purposes.

TRPs allow foresters to carefully review and oversee the variety of special events and proposed activities that sometimes occur on State Forests. Through the TRP review process, DEC avoids conflicting uses of state land and situations that could threaten health, public safety or integrity of natural resources. The permits also enable corrective actions by neighboring parties, which would otherwise be prohibited by regulation, such as the cutting of hazard trees that pose a threat to adjoining properties.

In general, TRPs are required for any activity that exceeds normal permissible levels of usage or access. TRP authorization does not provide exemption to any existing state laws and regulations. There is a \$25 administrative fee for this permit. To hold any event, a sponsoring organization must request permission in writing at least 30 days in advance of the date of the proposed activity. The TRP applicant or sponsoring organization must provide proof of liability insurance. TRPs are authorized by DEC policy.

ADDITIONAL RESOURCES

DEC's TRP Policy –

www.dec.ny.gov/regulations/51387.html

TRP without 48-hour notice requirement -

<https://nysemail.sharepoint.com/sites/DECInSite-DLF/DLFDocs/Forms/AllItems.aspx?id=%2Fsites%2FDECInSite%2DDLF%2FDLFDocs%2FTRP%20Form%5FNo%5FPrior%20Notification%5FRequired%20%2848%20hours%29%2Epdf&parent=%2Fsites%2FDECInSite%2DDLF%2FDLFDocs>

PARTNERSHIPS WITH LOCAL PUBLIC ENTITIES

Work with local governments and municipalities to maintain facilities like roads, dry hydrants and other shared infrastructure. This will provide a stronger network and prevent duplication of precious resources, while allowing maintenance to be more efficient.

EDUCATION AND RESEARCH

Educational activity on State Forests falls into three categories.

- Static interpretive materials (kiosks, signs, walking tours, etc.) (*Refer to Visual Resources, [page 182](#) and Infrastructure, [page 177](#)*)
- Public outreach to the community (*Refer to Supporting Local Communities, [page 259](#)*)
- Scientific research conducted on State Forest lands

Research activity will be supported on State Forest lands by accommodating researchers and educators where possible and appropriate. Research activity will be conducted via a DEC-issued Temporary Revocable Permit. Often, the resources that draw researchers have unique



FORMAL and INFORMAL PARTNERSHIPS and AGREEMENTS

ecological value or rare historic value. Foresters must ensure that rare and unique resources are not impacted by repeated research activity.

“PRT” OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Partnership (PRT) Objective I – DEC will collaborate with local organizations and governments to accomplish mutual goals.

PRT Objective II – Consider the full range of impacts from VSAs, and recurring TRPs, including long-term maintenance and the balancing of multiple uses in all UMPs.

PRT SEQR Alternatives Analysis and Thresholds

The **no-action alternative**, or in other words, continuing with current management approaches, has been selected as the **preferred alternative**. State Forests will continue to be managed utilizing VSA agreements and TRPs to formally partner with stakeholder groups and accommodate certain uses of State Forests, as described above.

SEQR Analysis Threshold: Compliance with the guidelines and strategies of this section related to the use of partnerships will avoid and minimize potential impacts resulting from organized events, use by partnership groups and other uses of State Forests, requiring no additional SEQR analysis. SEQR thresholds for specific projects by volunteers have been established in the recreation and infrastructure sections of this plan.



RECREATION

The demand for recreational use of State Forests has greatly increased in recent years. Recreational planning is now a major component of State Forest UMPs and includes diverse pursuits such as snowmobiling, horseback riding, hunting, trapping, fishing, picnicking, cross-country skiing, snowshoeing, bird watching, geocaching, mountain biking and hiking. The archer, dog sledder, rock climber and orienteering enthusiast also enjoy their sport on State Forests. Outdoor recreation opportunities are an important factor in quality of life. We often learn to appreciate and understand nature by participating in these activities. However, repeated use of the land for recreational purposes can have significant impacts.

[Environmental Conservation Law \(ECL\), Article 3](#) requires DEC, first and foremost, to protect New York's environmental resources. This requires planning, monitoring and management of recreational use to prevent and mitigate impacts to the environment. Responsible management also reduces the potential for conflicts between multiple uses. Even the lowest impact uses, such as hiking or canoeing, can leave an impression on the land. But with proper management, tomorrow's users will have the same quality experience as today's users and the environmental quality of State Forests will be undiminished for future generations of New Yorkers.



Sandy Pond Beach Unique Area, on the eastern shore of Lake Ontario in Oswego County can only be reached by boat. It provides a great spot for recreation and, importantly, rare dune grass habitat

ADDITIONAL RESOURCES

Outdoor Recreation – DEC's website contains pages for some of the more popular outdoor activities and recreational information. These pages are linked at www.dec.ny.gov/62.html.

HISTORICAL BACKGROUND

The recreational use of state forests has gradually evolved as society's interest in outdoor recreation has grown. In the early years of the state forests, from the 1930's through the 1960's, there was little interest in outdoor recreation on state forests other than the traditional activities of hunting, fishing, and trapping. During the late 1960's and into the 1970's, the interest in outdoor recreation bloomed in America. It was during this period of time that the



RECREATION

first recreational trails became established on State Forests. Trails were often located on historic access routes such as abandoned roads, old farm lanes and cow paths without full awareness or proper planning used to determine the best locations.



Rafting in the Zoar Valley Multiple Use Area, Erie County

As interest in outdoor recreation continued to grow through the 1980's and 1990's, DEC sought to accommodate new recreational demands, compatible with state forests, by improving or developing recreational trails or facilities. Many trails and facilities were developed by authorized volunteer groups without oversight and planning or were developed to meet short term goals, accommodating light use or a single use only. Such facilities have not held up under the stress of increased, multiple use. Now, as demand continues to grow, and with limited staff and financial resources to

address recreation concerns, DEC needs to make coordinated management decisions across the landscape to ensure that adequate recreational opportunities, compatible with State Forests, are available while also protecting the environment from recreational impacts and minimizing conflicts between competing recreational user groups.

MITIGATION OF ENVIRONMENTAL IMPACTS FROM RECREATIONAL USE

In order to minimize impacts related to recreational use, DEC relies on a combination of management planning, along with public education, enforcement of regulations and permit issuance. If public education and enforcement of general regulations are not sufficient to protect resources in a particular area, property-specific regulations may be developed.

Management Planning

The public aspect of UMP planning is critical to minimizing recreational impacts. This process provides the opportunity for DEC to hear the needs and desires of the people who use the land and to balance these needs in an appropriate manner in a public forum. At the same time, user groups are provided the opportunity to discuss the conflicts and suggest solutions between the different user groups. Also, greater public awareness of the many demands on the land can lead to more responsible use. Finally, interaction through the management planning process helps to support and involve partner groups that value the State Forest resource. DEC also looks to engage the public by using Volunteer Stewardship Agreements, Temporary Revocable Permit (TRP), and when appropriate the Adopt a Natural Resource (AANR) program.



Trails may need to be closed entirely or restricted to specific uses when environmental impacts or user conflicts reach unacceptable levels. Management planning must involve the assessment of trail conditions and user compatibility, while setting site-specific parameters under which trails will be closed.

Public Education

DEC's preferred method of mitigating recreational impacts is through a comprehensive public education process. This process includes use of DEC's public website along with on-site signage, brochures and seasonal stewardship employees who can serve to educate the public in the use of State Forests with a minimal impact, and the rules for the use of State Forests.

Enforcement of Regulations

The New York State Environmental Conservation Law establishes broad provisions for protection of the environment. To provide further clarity, DEC has worked with the people of the state to develop rules and regulations that apply specifically to State Forests ([6 NYCRR Section 190.0 -190.10](#)). The development and enforcement of rules and regulations enhance public safety and protect environmental resources. DEC Forest Rangers have the direct responsibility to enforce all laws and regulations on State Forests. This necessitates regular patrols, especially in areas prone to greater use.

ADDITIONAL RESOURCES

Use of State Lands Regulations (6 NYCRR Section 190.0 -190.10) – available at:
<https://www.dec.ny.gov/regs/2493.html>

The following activities are prohibited on State Forests:

General Prohibited Activities

- Operating a motorized vehicle on State Forests – except on roads posted and designated as open
- Polluting or disposing of litter, refuse, or waste material on State Forests or in any water resources on State Forests
- Operating a motorized vehicle at a speed in excess of 25 miles per hour on any road under DEC jurisdiction through State Forests
- Use or possession of paint ball guns
- Use or possession of breakable targets, including but not limited to clay pigeons and glass containers
- Gambling
- Intentionally obstructing public vehicular or pedestrian traffic
- Posting notices or signs
- Selling alcoholic beverages
- Obstructing public safety officers or DEC employees from performing their legal duties



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- Establishing permanent structures, including tree stands or blinds, except under certain conditions.
- Leaving personal property unattended on State Forests, with the exception of a:
 1. Geocache that is labeled with the owner's name and address and installed in a manner that does not disturb the natural conditions of the site or injure a tree,
 2. Camping structure or equipment that is placed and used legally pursuant to camping regulations, provided that equipment is not left unattended for over 48 hours,
 3. Trap or appurtenance that is legally placed and used during an open trapping season,
 4. A tree stand or hunting blind that does not injure a tree, is properly marked or tagged with the owner's name and address or valid hunting or fishing license number, and is placed and used during big game season, migratory game bird season, or turkey season, and
 5. Wildlife viewing blind or stand that is placed for a duration not to exceed 30 days in one location per calendar year, does not injure a tree, and is properly marked or tagged with the owner's name and address or valid hunting or fishing license number.

Additional prohibitions necessary for public safety and mitigations developed for natural resource protection are provided under each recreational activity discussed below.

Issuance of Permits for Special Events, Group Events and Planned Activities

Special events, group events and planned activities are regularly accommodated on State Forests through the issuance of a Temporary Revocable Permit (TRP). These events include snowmobile, bicycle, horse and orienteering races and events, runs, rides or competitions (eg. biathlons and triathlons), archery and fishing tournaments, along with re-enactments, encampments and sponsored hikes.



See [page 198](#) for a description of DEC policy regarding TRPs.

USE OF ROADS

DEC roads provide access within state forests. These roads vary in construction standards and allowed uses. Public highways owned or maintained by municipalities (state, county and townships) also provide access to the forests and, in some cases, continue through the forests.

Motor vehicle use is allowed on state forests only on roads that are signed for such use. Some roads may be closed or restricted to motor vehicle travel at certain times of the year, such as in the winter to restrict motor vehicle access because these roads are not plowed. Other roads



may be temporarily closed during summer months due to timber harvesting. Road closures are often related to safety and access issues. When closing a forest road staff will report the closing information to the DEC Commissioner for sign off. This information will be widely distributed to the public using DEC's website and press releases. Road closures are often related to safety and access issues.

Motor vehicle use is not considered to be a recreational program of DEC, but rather a means of access for recreation and other uses. Therefore, facilities are not developed in order to meet a demand solely for motorized use. The existing road system has provided adequate access to most state forests. In recent years, new roads are occasionally built to access remote sections of forest land. DEC also recognizes the negative impacts associated with new roads such as fragmentation as discussed in the Infrastructure section of this plan.

DMV links for ATVs, UTVs, OHVs

Registration information-

<https://dmv.ny.gov/registration/register-atv>

Owner/Operators information-

<https://dmv.ny.gov/brochure/atvs-information-owners-and-operators>



Information on road construction, road types, and construction impacts is found in the Infrastructure section of this plan. (Refer to [page 175](#))



All roads and trails are closed to use by ATVs, unless they are otherwise designated and signed. (For definitions and usage of ATV, UTVs, and OHVs please refer to [page 231](#)).

Impacts and Mitigations (related to use of roads) – Along with public access by road, there are problems of abuse: littering, dumping of trash, illegal vehicle use. Trash pickup costs thousands of dollars in collection costs and tipping fees. Gatherings for parties usually results in littering, improper fires, and vandalism. Illegal motor vehicle use on closed roads and trails can create serious erosion problems which are very expensive to repair. There are safety problems, legal constraints and user conflicts pertaining to discharge of firearms and bows from roads. Containing the size of road systems, responding to elevated use, preventive public education and law enforcement efforts are critical to mitigating these impacts.



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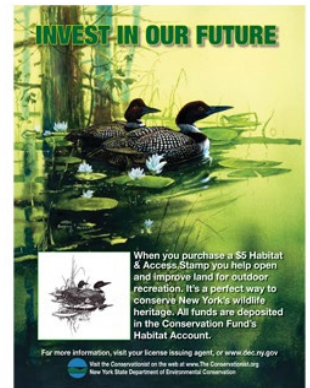
WILDLIFE-RELATED RECREATION

State Forest lands are open to wildlife viewing and with few exceptions, are open to public hunting, fishing and trapping with appropriate licenses. More than 8.5 million person-days of hunting take place on State Forests annually, and approximately more than 39 million person-days of fishing are estimated for the lakes, ponds and streams located on State Forests (OPRHP 2020).

Hunting, trapping and fishing licenses are sold at many town offices, numerous retailers of outdoor equipment – where regulation booklets can also be obtained, and via the phone or internet. For more information regarding hunting and fishing seasons, hunting regulations, places to hunt in New York, and trapping or fishing on state lands, please visit DEC's [hunting](#) and [fishing](#) webpages and/or contact the appropriate DEC Regional Office.

Habitat/Access Stamp Program

This program provides funds for projects like building boat launches and fishing platforms for public access and planting native vegetation for improved habitat. www.dec.ny.gov/permits/329.html



Hunting

Big game hunters often visit State Forests, seeking white-tailed deer and black bear in the fall, while small game enthusiasts hunt for ducks, ruffed grouse, wild turkey, and other small game like the snowshoe hare. Legal hunting is allowed on most State Forests but is restricted or prohibited where there are special hunting regulations such as in intensive use areas and some Unique Areas. Posting of private lands has limited hunting opportunities and increased hunting pressure on public lands open to hunting. Hunting licenses sold in the last 10-years have seen a steady rise and fall in numbers, per DEC's [permit webpage](#). From the fiscal period 2006/2007 through 2019/2020, the average amount of hunting licenses sold was 574,589, with a low in 2018/2019 of 544,448 and a high of 591,973 in 2014/2015. The declining participation in hunting appears to be greater among those from urban or suburban communities than from rural areas. This trend is predicted to continue.



This accessible hunting blind enables broader participation in hunting



Hunting has long been associated with state forests. Hunting (especially big game hunting for deer) has a very positive effect on hardwood forest management and vegetative biodiversity. Deer are browsers and eat hardwood vegetation, especially young trees. When populations become large, it is possible for the deer to over-browse the forest. Over-browsing can prevent the growth of new trees and reduce species diversity in the forest. *This issue is addressed in detail on [page 315](#) in the Deer Management section of this plan.*

Impacts and Mitigations – Improper camping, illegal off-road vehicle use, litter, indiscriminate shooting of trees and illegal taking of wildlife are environmental impacts associated with hunting. In New York State, all hunters must take and pass an education course to obtain a license. This course teaches safety, ethics, wildlife management and biology. Legal hunting is a compatible activity on state forests

ADDITIONAL RESOURCES

Hunting – www.dec.ny.gov/outdoor/hunting.html
www.dec.ny.gov/regs/2494.html

Multiple Use Conflicts – Hunters have noted problems when encountering people with pets. Pets may be unleashed and may chase or harass wildlife. Some pet owners afield during hunting seasons feel that hunters are a danger to themselves and their pets. Hunters have also noted damage to state forests by motorized vehicles and horses. Other hunters have expressed the desire to use motor vehicles to travel into the forest and remove harvested game. Users of foot trails, campers, horseback riders, cross country skiers, mountain bikers, nature observers, and owners of unleashed pets feel their safety is threatened during hunting seasons. Most non-hunters are aware of the arrival of hunting season and have learned to limit their use of State Forests on weekends during big game gun hunting season.

Trapping

Trapping is the placing, setting, staking or checking of traps for the taking, killing or capturing of wildlife or assisting another person with these activities. Trapping does not require trails on state forests and usually occurs near streams and in wet areas away from trails. Trapping must occur 150 feet from any developed infrastructure. Furbearers such as beaver, fisher and river otter are sought by trappers (U.S. Fish and Wildlife Service 2006) where they can be legally trapped. Raccoon, fox, skunk, muskrat and mink, to name a few, may also be trapped on certain State Forests where there is an open season.

ADDITIONAL RESOURCES

Trapping – www.dec.ny.gov/outdoor/355.html
Regulations – www.dec.ny.gov/outdoor/9209.html

Trapping has been a traditional and effective method of controlling animals such as beaver. The prohibition of trapping would allow an uncontrolled buildup of the beaver population which has proven to back up water, causing damage to manmade structures and woodland. Trapping is



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pursued by a relatively small number of sportsmen. In 1997-98, approximately 9,000 trapping licenses were sold throughout the state. The demand for trapping is expected to remain steady, although it may fluctuate with changing fashion trends and fur markets. In 2019-2020, 14,967 trapping licenses were sold. Over the last 10 years, trapping registrations saw a low in 2010-2011 of 11,380 and a high-water mark of 16,575 in 2014-2015.

Impacts and Mitigations – Off-road vehicle use and illegal taking of wildlife are environmental impacts associated with trapping. Trapping is regulated by [Article 11 of the Environmental Conservation Law of New York State](#). Trapping seasons are set by DEC. In New York State, all trappers must take and pass an education course to obtain a license. This course teaches safety, ethics, wildlife management and biology. Legal trapping is a compatible and suitable activity on state forests.

Fishing

The many waters on State Forests support thriving communities of sportfish. The common warmwater sportfish include smallmouth and largemouth bass – the most frequently sought-after fish in the state, as well as chain pickerel, northern pike, walleye, bluegill, pumpkinseed, rock bass, black crappie and brown bullhead. In waters that maintain suitable temperatures for coldwater fish (maximum temperatures do not exceed 70 degrees F for extended periods), common coldwater sportfish include rainbow, brown and lake trout. These coldwater lakes, ponds and streams may be stocked with brook, brown or rainbow trout to supplement existing trout populations, or to provide a trout fishery where trout are incapable of maintaining themselves. Larger, deeper waters may also be stocked with lake trout.



Fishing has a long tradition on State Forests. Although angler surveys have shown a decline in the number of anglers in New York over the past two decades, public input to DEC indicates that fishing is still very important to State Forest users.



Brook trout, New York's state fish, and a species identified as being of greatest conservation need in New York, is found in many of the small, coldwater streams found on State Forest land. It is essential that riparian habitat is protected, and water quality is maintained in these waters.

Brook trout can also be found in ponds but are very intolerant of competition from other non-native fish species. DEC is working to restore and maintain brook trout in many ponds. The primary threats to these populations are non-native



fish species, typically via bait bucket introductions. To address this, waters managed for brook trout are typically managed with regulations that prohibit the use of baitfish. Where possible, brook trout ponds are stocked with native “heritage” strains of brook trout.

New York is a member of the Eastern Brook Trout Joint Venture (EBTJV) which is comprised of a diverse group of partners, including state fish and wildlife agencies, federal resource agencies, academic institutions, and private sector conservation organizations. The EBTJV is working to conserve native brook trout and their habitats. The EBTJV has already produced a range-wide population assessment; completed extensive work that identifies key threats, and developed conservation strategies to protect, enhance, and restore brook trout and their habitats.

ADDITIONAL RESOURCES

Fishing – www.dec.ny.gov/outdoor/fishing.html

Regulations – www.dec.ny.gov/outdoor/7917.html

Impacts and Mitigations – Improper camping, off-road vehicle use, litter, and the illegal taking of fish are environmental impacts associated with fishing. Fishing is regulated by [Article 11 of the Environmental Conservation Law of New York State](#). Fishing seasons in New York are set by DEC. Legal fishing is a compatible activity except where prohibited by regulation.

Viewing Natural Resources

This category includes activities such as birding, nature photography and wildlife observation. Between 1980 and 1995, the US Fish and Wildlife Service reported that all regions of the country experienced at least a 52% increase in nature viewing activities. The demand for birding, wildlife/nature observation and similar activities is predicted to continue to increase. State forests offer large, relatively undisturbed natural areas where people can enjoy nature viewing activities. Forestry activities on state forests have traditionally created, maintained and protected a wide variety of habitats required for a diversity of wildlife and plant species.

ADDITIONAL RESOURCES

Watchable Wildlife – www.dec.ny.gov/outdoor/55423.html

Impacts and Mitigations – Environmental impacts of viewing natural resources are minimal. The Environmental Conservation Law prohibits anyone from removing or destroying natural or cultural artifacts found on state land. The law also states that songbirds and their nests and other wildlife will not be molested or disturbed at any time, except during any open season on these animals. Viewing natural or cultural resources is compatible with state forests.

Multiple Use Conflicts – Activities that have been reported to conflict with natural resource viewing include off-road motorized vehicle use and hunting. Users generally desire a minimum of disturbance and tend to view state forests as places to escape from the daily noise of society and motor vehicles.



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CAMPING

State Forests provide abundant opportunities for camping of a rustic, undeveloped character. Most areas are open to dispersed, primitive, back-country camping while other areas may accommodate use only on designated campsites. Only a few, if any, amenities are offered for camping on State Forests. Where camping sites are designated, there may be nearby parking areas, mowed or cleared areas for camping, picnic tables, fire rings and latrines. Running water, heated facilities, and electricity are not available. There is no fee for camping on State Forests. However, a stay of 4 nights or more in one location or camping in groups of 10 persons or larger requires a camping permit, obtained from the local Forest Ranger or at the regional DEC office listed at the [statewide offices webpage](#). The additional resources box below provides a link to more information on camping regulations.



Dispersed, primitive back-country camping is an appropriate activity, except where specifically prohibited. Individuals may camp throughout State Forests provided they camp at least 150 feet from roads, marked trails, streams, ponds, lakes, and other water bodies. This dispersed camping spreads the impact over a large area and mitigates negative effects, since most sites rarely see repeated use. Camping near roads is often preferred by hunters during hunting seasons. Hunters frequently pull their trucks or campers off the road onto old log landings or other cleared areas to camp over an extended stay while hunting nearby. This use is accommodated through the issuance of a camping permit.

There are some areas where dispersed camping would cause unacceptable degradation of the area and sanitation issues. These are usually areas with a level of use that is higher than normal (eg. in scenic areas and near water bodies) or on sensitive sites, which deserve a higher level of protection. In these areas, camping has been restricted to designated sites only. These sites have been designed and built to withstand repeated occupancy and concentrated use, allowing the remainder of the area to stay in a more natural state. Camping at some designated sites on some State Forests may also require a permit. Permits are used to limit the amount of use where necessary to ease overcrowding, reduce user conflicts, and for resource protection.

ADDITIONAL RESOURCES

Back-Country Camping -

www.dec.ny.gov/outdoor/41282.html


State Lands Regulations -

[https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=1a9bf8a40b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=1a9bf8a40b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))



Lean-to on Sugar Hill State Forest in Schuyler County; most designated campsites on State Forests are undeveloped tent sites

Impacts and Mitigations – Environmental impacts of camping on designated sites may include soil compaction, litter, human waste, and unauthorized cutting of trees for use as firewood. Dispersed camping may cause water pollution from camping too close to water sources, degradation of trees around campsites, and disturbance to wildlife. Camping may also cause damage to rare species or cultural resources. The regulations for camping on State Forests and Unique Areas are listed in [Title 6, Chapter II, Part 190 of the New York State Environmental Conservation Law](#).

Signage, in areas with a high level of use, is used to remind campers to practice campfire safety and follow rules, including requirements to carry-in-carry out and use dead and downed wood only. Camping sites may occasionally be designated “Reserved 

Multiple Use Conflicts – Activities that may conflict with camping include off-road motorized vehicle use and hunting during hunting seasons. Conflicts may result from choosing inappropriate sites for camping, such as forest access road turnarounds or along private land boundaries.

WATER-BASED RECREATION

Swimming

Swimming is permitted on State Forests, unless specifically prohibited by sign or regulation. Lifeguard supervision is not provided on State Forests. Anyone swimming on State Forest shall be responsible for risks associated with their activity.

Impacts and Mitigations – Environmental impacts of swimming are greatest at those areas which receive heavy use. Impacts may include litter, damage to dunes, shoreline erosion, destruction of vegetation, and disturbance to riparian wildlife. Swimming may be prohibited in specific areas, for example, Unique Area properties where habitat requires protection.



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Non-Motorized Boating, Canoeing & Kayaking

The bodies of water typically found on State Forests are well suited to non-motorized boating. In many cases, this is the only suitable form of boating on State Forests. Many of the ponds on state forests are man-made and were originally built for waterfowl nesting. Most ponds are spring fed, so there is usually not a great inflow of water except in the spring after snow melt. Because of their small size, these ponds would be greatly affected by pollution. The dikes of the ponds may be especially susceptible to erosion from wave action that would be created from motorized boating. These ponds are typically shallow and contain stumps from dead trees that can be a hazard to navigation of any boat.



Impacts and Mitigations – Environmental impacts of non-motorized boating are minimal. At present, there are very few regulations or statutes prohibiting the launching and use of human-powered craft on any of waters on State Forests. The regional DEC Office or the recreational webpages will have any specific rules for the water bodies in the area.

Motorized Boating

Due to the size of most of the waters on State Forests, few people use motorized watercraft on them. Certain State Forest properties provide access to waters adjacent to state lands, but which are not wholly within the boundaries of the State Forest. Use of boats on these waters may be regulated by DEC or other government agencies. Electric and gas-powered motors are permitted on water bodies unless otherwise posted against such use or where prohibited by regulation.

Impacts and Mitigation – Environmental impacts of motorized craft include noise, shoreline damage, and air and water pollution. Due to the unique characteristics of each pond or lake, use is generally regulated on a case-by-case basis during UMP preparation or by Environmental Conservation Law. [6 NYCRR Part 190.8 \(t\)](#) prohibits mechanically propelled watercraft on some small ponds and water bodies which are too fragile or shallow or contain submerged stumps. This section also places a 25 Horsepower limit on boats using Long Pond in Chenango County. In addition, regulations have been established for the use of boat launching sites within [Part 190.24](#). Signage at boat launching sites is employed to remind boaters of rules prohibiting inappropriate use, leaving unattended vehicles and boats, obstructing access, erecting structures, building fires, conducting business or mooring for over 24 hours. As things have a habit of changing, it's always safest to reach out to your local DEC Office for clarification on usage issues.



Multiple Use Conflicts – Conflicts occur between motorized and non-motorized boating activities.

TRAIL-BASED RECREATION

Trail-based recreation occurs throughout State Forests on roads as well as on a variety of trails with constantly changing trail surfaces and conditions. Most roads and trails are open to multiple uses, creating demands and impacts on the land. The issues associated with trail use are best addressed from an overarching perspective that considers these many uses and demands. DEC will consider proposals for development of additional trails or the use of undesignated trails to accommodate local use of State Forests on a case-by-case basis, which can be addressed through the UMP process.

In the 1980s-90s, trails were often developed in response to local demand without proper planning or consideration of long-term consequences. Volunteers were authorized to locate and construct trails. This was done without adequate understanding of proper trail location, design and construction requirements. Trails were constructed to minimum standards that were intended to accommodate a low level of use. Years later, these trails are receiving a greater amount of use than originally was anticipated. Trails were also designed for single uses without regard for future multiple uses of the same trail. For example, portions of cross-country ski trails were originally located on areas of poor soil drainage because they were intended to be used during frozen conditions. However, years later, as demand for trails increased, those same trails have become used by horse riders or mountain bikers. Poorly planned trails have become eroded, muddy paths resulting in unsafe and unpleasant conditions for trail users and unhealthy conditions for the environment. In the 1990's mountain biking became a significant activity on state forests resulting in increased use of trail systems on state forests. In some areas trail users have constructed their own trails without approval from DEC, often in unsuitable locations. In other areas, long distance trails established across state forests and private lands sometimes cause problems on the property of adjacent landowners or in nearby communities. These issues must be addressed to ensure healthy state forests with quality recreational opportunities in the future.

Trail Supporter Patch Program

This program helps maintain New York State's trails including those on State Forests.

www.dec.ny.gov/outdoor/36016.html



Volunteer Stewardship Agreements

The development and maintenance of recreational trails on State Forests can often be best accomplished through VSAs, and in rare circumstances the AANR Program, in accordance with guidance in the Infrastructure section of this plan and with any applicable UMP. A VSA is required prior to construction, to further detail guidelines and responsibilities related to the



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trail. Trail locations proposed by VSA holders on State Forests, must be approved by DEC personnel in advance of construction. VSA partners developing trails from private lands across State Forests must follow the prescribed procedure for addressing new trail proposals. DEC will assume no administrative or financial responsibility for trail segments outside of State Forests. Following construction, the sponsor must maintain the trail to DEC standards.



See [page 199](#) for a description of DEC policy regarding VSAs.

Management Planning

Proper management of trail-based recreation is aided greatly by the UMP planning process (see “Mitigation of Environmental Impacts from Recreational Use” above).

Resolving Multiple Use Conflicts

Conflicts between different types of trail use will be minimized, and if necessary, use will be separated. Often, separating use occurs with the changing season (e.g. snowmobiling and mountain bicycling). If demand exists for a type of trail use in an area where it is appropriate but cannot be separated from other trail uses, the use will be allowed on existing trails where shared use will not lead to unacceptable conflicts between trail users or unacceptable physical impacts.

Educating users about the kinds of use allowed on a particular trail is an important tool in reducing user conflicts. On shared-use trails, DEC will inform visitors about the types of trail uses allowed and will promote the principles of trail-sharing etiquette through trailhead signs and publications. Trail use will be monitored. Should monitoring reveal that the addition of a new type of trail use has caused unacceptable levels of conflict between trail users or unacceptable physical impacts to a trail, appropriate action will be taken to reduce such conflicts or impacts. As a last resort, action may include elimination of a type of trail use from the trail, or closing the trail entirely.



Trail Condition Assessments

As staffing and funding are available, it would be helpful to develop a program for carrying out more formal trail assessments on State Forests to identify maintenance needs and avoid overuse and erosion. Trails conditions are (and will be) addressed during an individual Unit’s management planning (UMP) process. Factors that would be evaluated are: suitability of trail use and location, condition of trail surface, and need for erosion control. Assessment forms



could be used to track maintenance needs and costs, obtain budget review and approval, and assemble a request for the next year's regional work projects.

Foot Trail Use - Hiking, Snowshoeing and Trail Running

Hiking includes the use of foot trails for day hikes as well as long distance multi-day backpacking trips. Trail runners use foot trails for training or exercise. In winter, snowshoers and cross-country skiers also use foot trails, primarily for day use excursions. A variety of different types of foot trails can be found on state forests. These include long-distance linear trails, loop trails, destination trails and interpretive trails. There are 1,642 miles of combined road and trail available for hiking on State Forests.

Accessible Trails

Pedestrian trail access for people with disabilities is one category of trails that are needed on state forests. These trails do not only provide access for those with disabilities, but they also are often preferred by others such as elderly or families with children and baby strollers. More foot trails and associated facilities, meeting ADA and/or ABA Standards, must be developed to accommodate people with disabilities where possible and appropriate.



Interpretive Trails

More interpretive foot trails and loop trails are also needed on state forests. Currently, there are few interpretive foot trails on state forests. Additional trails with interpretive information are needed to provide opportunities throughout the state for the public to learn about and appreciate the unique features found on state forests. Additional foot trails are also needed to provide or improve access to some existing trails or facilities.

Impacts and Mitigations – Environmental impacts of hiking include trail compaction and erosion from poor trail design or overuse. As is the case with most other uses, trails can become widened or braided when users deviate from the course of the trail to avoid wet areas or other obstacles. Trail surfaces can also become degraded when the ground is too soft to support use of the trail. Proper design and construction, monitoring of trail conditions, and trail closures can help to mitigate impacts. Otherwise, most areas of state forests are open to foot travel except for special restricted areas around NYS Department of Corrections facilities and those otherwise marked with visitor restrictions. Competitive events require a TRP from DEC. Staff, when aware and when possible, should update trail conditions on their respective recreational webpages.

Multiple Use Conflicts – Public input to DEC has indicated that people using foot trails prefer trails be restricted to pedestrian use only because they have a variety of conflicts with other



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recreationists, especially with motorized use, mountain bikers and horse riders. They are concerned that foot trails maintained by volunteers can be damaged from these other uses resulting in increased trail erosion and maintenance. These activities sometimes require wider trails and may have more environmental impact on the foot trail than pedestrians do. The riding, driving or leading of horses is prohibited on foot trails on lands under the jurisdiction of the DEC, except where foot trails are part of a publicly maintained road, or are specifically designated to allow travel by horses. They have also expressed concern about hunting because they feel in danger using the trails during hunting season. Hunting is generally a safe activity with relatively short seasons, however, anyone afield during hunting season should wear some blaze orange clothing to increase their visibility to others and reduce their risk for injury. Those seeking to use foot trails and not encounter hunters can obtain the dates of the hunting seasons to better plan their trip.

Long-Distance Trails

Where appropriate, development of long-distance trails that cross UMP units and DEC regions will be encouraged. However, long-distance trails will not be located where anticipated levels of use on new or existing trails or increased access to adjacent areas will have unacceptable impacts on natural resources or the recreational experiences of visitors. Because most long-distance trails cross both public and private lands, the forester will coordinate with private landowners, the managers of other involved public lands and trail organizations in the development and management of long-distance trails.

Each long-distance trail system has its own character, acceptable uses and in some cases even its own formal design standards. To the fullest extent possible accommodations will be made for these criteria on trail sections that pass-through State Forests.

The Finger Lakes Trail (FLT) is a good example of a long-distance trail system with its own character and standards, and is also the only long distance trail of which there is any appreciable mileage found on State Forests. According to the Finger Lakes Trail Conference's website, the trunk trail travels 561 miles from Allegany State Park to the Long Path in the Catskills. In addition, the FLT trail system includes branch, loop and spur trails totaling another 351 miles. The FLT is also an official component of the 4,600-mile long North Country National Scenic Trail. FLT trail mileage is split almost evenly between public and private lands creating interesting management challenges. This over 40-year-old trail system was constructed and is maintained by an extensive and very dedicated group of volunteers on State Forests under the former program



This section of the Finger Lakes Trail crosses the Chenango Creek using large boulders in place of a traditional bridge. Taylor Valley State Forest, Cortland County



for Adopt-a-Natural Resource Agreements. Through its long history the FLT has been constructed and is maintained as a single use hiking trail. This is a very important issue since the trail was designed and built to standards which can't sustain most other uses. In addition, a majority of the private landowners who allow the trail to cross their properties only allow it to be used by hikers.

To the extent possible DEC will accommodate the FLT as a single use foot trail on State Forests in respect for neighboring private landowners who host the trail under that constraint and in full understanding that the present layout, design and volunteer support is limited to the extent that the trail system can only be sustainably managed as a foot trail. There may be very limited exceptions, where segments of the FLT on State Forests may be open for other purposes or multiple uses under the following terms:

1. When the FLT or another neighboring trail is temporarily relocated:
 - to accommodate other management activities, or
 - due to a DEC-imposed closure due to safety concerns, and where it is not feasible for the re-route to accommodate the FLT as a single use foot trail, in the affected section. Examples of this temporary situation might include places where the re-route must follow a Public Forest Access Road or another existing multiple use trail segment or where another trail must be relocated onto the FLT footprint.
2. Where the FLT passes through a State Forest which is also dedicated to an extensive system of trails, accommodating other recreational uses, and it is not feasible or avoidable to have some trail overlaps.
3. When the Finger Lakes Trail VSA partner requests a re-route and the only feasible accommodation includes use of an existing multiple use trail or a PFAR.

These changes will still need to be addressed during and through the UMP process that addresses the concerns regarding the trails and areas of concern.



Cross-country Skiing

Cross country skiing is allowed on State Forests, unless otherwise posted on trails, trailheads, or the respective recreational webpages that they are closed for this use. Cross-country skiers prefer loop trails. There are 1,135 miles of cross-country ski trail (includes unplowed public roads) on State Forests. In addition to the hundreds of miles of old logging roads, firebreaks, public forest access roads and unimproved trails, there are also more formal designated trails, some of which are groomed by volunteers under VSAs. Some of these are designed for classic style skiers and others

for skate style which requires a wider track. To maintain the rustic character of state forests, trails will generally not be groomed. The designated ski trails on state forests are generally



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designed for the beginner to intermediate skill level. No trails are designated for skiing where the conditions would require an expert skill level. Individuals should call their local DEC Lands and Forests office for more information.

DEC does not have the resources to remove snow from all parking areas. In some cases, the local Towns plow parking areas which are accessed by Town roads. If this service is not provided, some facilities may have to be closed.

Impacts and Mitigations – Environmental impacts of cross-country skiing are minimal. Competitive and organized group events require a TRP from DEC.

Multiple Use Conflicts – Activities that have been reported to conflict with cross country skiing include hiking, snowshoeing, taking pets on trails, snowmobiling and motorized vehicle use. [6 NYCRR Part 190.8 \(d\)](#) prohibits toboggans, sleds and snowmobiles on designated ski trails.

Equestrian

Horseback riding, driving or leading is permitted on State Forest lands unless otherwise prohibited by law, regulation, posted notice or this subdivision. 859 miles of designated trails and Public Forest Access Roads are available for equestrian use.



Most trail systems on State Forests are designed to accommodate use where people trailer their horses to the trail to ride. This use requires significant infrastructure for the tender of horses, including outdoor stalls, water supply and manure pits, and occurs in a limited number of locations. However, concentrating this use makes it easier to mitigate potential impacts.

There currently exist user-created, un-designated, “private” trails established and used by local horseback riders on state forests. These trails typically access state forests from private land and they have been located and constructed without approval from DEC. Because these trails may be in unsuitable locations and do not receive regular maintenance, they are likely to become eroded. To address this problem, DEC will allow use of these trails provided that they are in suitable locations, they meet Department technical specifications for design, and a sponsor enrolls the trail under a VSA. This process and the path usage will continue to be reviewed through the UMP process and is subject to DEC staff approval. After enrollment under the VSA, the trails on state forests will be designated as DEC horse trails and the sponsors may be responsible for maintaining them to DEC specifications. By officially recognizing these trails as DEC horseback riding trails, DEC will be able to track them for maintenance while also making them available for public use.



Impacts and Mitigations – Horseback riding is a compatible use of state forests when the trails are properly located, designed and maintained. Environmental impacts of equestrian use on state forests include trail erosion, muddy conditions, manure, unauthorized trail clearing, and damage to trees from leaving horses tethered up at locations outside of horse stalls. Trails are most vulnerable to damage and erosion during periods of wet and muddy ground conditions. Generally, these are the months of November, December, March and April. Trails may be closed during the regular seasons of wet weather to protect the trails from deteriorating. [6 NYCRR Part 190 \(n \(3\)\)](#) prohibits anyone from riding or leading a horse on snow covered cross-country ski or snowmobile trails, foot trails, or on land devoted to intensively developed facilities. [6 NYCRR Part 190 \(ac\)](#) states organized trail-rides of more than 20 people require a TRP. Also, the [TRP policy](#) spells out the specific guidelines for non-competitive and competitive events.

Trails in eroded, muddy condition are environmentally unacceptable, unsafe and unpleasant to use. Trails not specifically designed to support equestrian use are especially vulnerable to erosion and are not suitable for horseback riding.

Multiple Use Conflicts – Horseback riders may experience conflicts with those who hike, hunt, snowmobile, camp without horses, target shoot, or mountain bike. Many conflicts relate to the concern for people becoming injured when horses are surprised by unexpected actions from others.

Bicycling on State Forests

Mountain Biking

Mountain bikes are permitted to travel on any existing road or trail on State Forests unless the road or trail is posted as closed for this use. Riding occurs across a variety of track types and trail conditions. Trails can range from being fairly flat and easily ridden to steeper, narrow “single track” trails with frequent elevation and direction changes, more suitable for the advanced rider.



There are different styles of mountain bike riding characterized by the motivation, conditioning and personal preferences of the participant. Family and leisure riders may travel at a slow to moderate pace on relatively gentle ground on easy-to-ride trails. These riders tend to stop frequently to enjoy the sights and sounds of the forest. Some riders seek a recreational experience that offers challenging physical and technical riding opportunities in a natural forest setting. Competitive riders travel at a faster pace on all types of terrain in order to get a more physically challenging workout. A small percentage of riders gravitate to extreme mountain biking. This type of riding is for professional or advanced riders who do not depend on any certain trail type. Advanced riders travel at various speeds



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over difficult and steep terrain where there are obstacles such as rocks, roots and logs in the path of the rider. Input to DEC has indicated a preference for single track loop trails and for technically challenging trails.

The majority of mountain bike trails on State Forest are for beginner to intermediate users and are designed to be compatible with the natural setting of the State Forest and safety of the users. These trails do not include man-made structures which would negatively impact the aesthetics of the State Forests, however in some instances, natural features like small fallen logs, rocks and exposed roots, occurring naturally in the trail, may be left to provide intermediate and advanced level challenges.

E-Bikes

The use of E-bikes is continuing to evolve as fast as the mechanisms themselves. This plan recognizes the industry standard that separates e-bikes into the 3 classes, and their definitions can be found in the call-out box in this section. Class 1 pedal- assist E-bikes, and for this section's purposes, predominantly e-mountain bikes, are allowed to be used on any trail designated for mountain bike usage, unless otherwise posted on the trails, at the trailhead, or on the respective State Forest's recreational webpage. The [DMV website](#) offers further clarification on which public roads e-bikes are allowed.

Fat Tire Mountain Biking

Fat tire bicycling has seen a rise in interest in recent years, especially during the winter months. When groomed and ridden properly, snow covered trails can offer a very enjoyable winter experience. Studies show, fat tire biking tends to have equal to less of an impact on the resource than traditional mountain biking. This stems

E-Bike 3 Class System per [DMV website](#):

Bicycle with electric assist. A bicycle which is no more than thirty-six inches wide and has an electric motor of less than seven hundred fifty watts, equipped with operable pedals, meeting the equipment and manufacturing requirements for bicycles adopted by the Consumer Product Safety Commission under 16 C.F.R. Part 1512.1 et seq. and meeting the requirements of one of the following three classes:

- (a) "Class one bicycle with electric assist." A bicycle with electric assist having an electric motor that provides assistance only when the person operating such bicycle is pedaling, and that ceases to provide assistance when such bicycle reaches a speed of twenty miles per hour.
- (b) "Class two bicycle with electric assist." A bicycle with electric assist having an electric motor that may be used exclusively to propel such bicycle, and that is not capable of providing assistance when such bicycle reaches a speed of twenty miles per hour.
- (c) "Class three bicycle with electric assist." Solely within a city having a population of one million or more, a bicycle with electric assist having an electric motor that may be used exclusively to propel such bicycle, and that is not capable of providing assistance when such bicycle reaches a speed of twenty-five miles per hour.



from the low tire pressure and wider tire footprint. Managers and riders should take in account the nature of set-in cross-country ski tracks when laying out and using winter trail systems.

Impacts and Mitigations –Soil impacts from mountain biking include widening of trails to avoid obstacles such as water and downed trees. Trail braiding results from several paths in close proximity which avoid the same obstacle. Rutting occurs when the ground is too soft to support the weight of the vehicle and rider, especially during wet periods. Ruts collect rainwater and runoff, keeping the trail wet, and also channel water, leading to erosion of the trail. On unsuitable soils, trails need constant maintenance to control erosion. Where erosion cannot be controlled, the trails need relocation or closure. Trees are often cut or damaged when trails are established by any user, including mountain bikers, without authorization. Water quality impacts include siltation of nearby water resources from riding on wet and muddy trails; erosion of stream banks where the trail crosses a stream; and erosion of trail surface. Aesthetic impacts result from muddy, rutted, poorly designed and maintained trails that are unpleasant to other users of the forests.

As stated above, mountain biking is allowed on all trails unless posted otherwise. Trails may be posted as “closed for mountain biking” during periods of excessive wet weather or if other conditions exist that create incompatibilities to mountain biking. Constructing unauthorized trails, or placing objects (trail structures designed for advanced users, such as jumps, expert ramps, trick bridges, etc.) in or near a trail for the purpose of offering additional riding challenges is prohibited. Such obstacles pose a safety hazard to trail riders and are a liability concern for the state. All mountain bikers riding on State Forests are encouraged to follow the International Mountain Bicycling Association (IMBA) Rules of the Trail, which provides some useful tips for avoiding trail user conflicts at www.imba.com/about/trail_rules.html.

Multiple Use Conflicts – Mountain bike conflicts may occur when horseback riders and horses are startled when they are approached from behind and taken by surprise. Right of way is a common conflict occurring between mountain bikers and hikers on the same trail. Mountain bikers sometimes feel threatened by the presence of hunters on or nearby the trails.



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Snowmobiling

Snowmobiling is permitted on any snow-covered trail on State Forests other than designated ski trails and ski slopes (see [6 NYCRR Section 190.8\[d\]](#)), unless the trail is posted as closed for this use. A majority of the dedicated snowmobile trails on State Forests are a part of the Statewide Trail System. Trails are located on unplowed town roads, DEC roads and on woodland trails. Corridor trails are usually routed along roads or wider trails. There are also numerous secondary trails that spur from the corridor trails. The overall system traverses over 10,000 miles across public and private lands in New York State and is managed by the [NYS Office of Parks, Recreation and Historic Preservation \(OPRHP\)](#) with the assistance of volunteers from numerous snowmobile clubs. The NYS Snowmobile Trail Fund, which is supported by a portion of snowmobile registration fees, is also administered by OPRHP and used to fund trail grooming and maintenance. Segments of the Statewide Snowmobile Trail System on State Forests are maintained by DEC operations staff and volunteer clubs under the VSA program and are partially funded by the trail fund. All trail grooming on State Forests is completed by these volunteer clubs through VSAs.



Snowmobilers on Stewart State Forest in Orange County

Impacts and Mitigations – Environmental impacts of snowmobile trails include air and noise pollution, unauthorized tree cutting and trail creation, and litter. The legal use of horses and the illegal use of ATVs on snowmobile trails in other seasons can create environmental problems on the snowmobile trails. In most cases, the snowmobile trails were designed to be used only in winter. Many of the trails are on soil that does not support activity when the ground is not snow covered. If the trails are used for only snowmobiling, they need little or no maintenance. Use of snowmobile trails in other seasons necessitates maintenance. The New York State Snowmobile Trail Manual published by OPRHP offers these additional environmental considerations: trails should avoid deer wintering yards, wetlands and other sensitive areas. Trail layouts should strive for good snow retention. For safety, trails will avoid crossing bodies of water.

Multiple Use Conflicts – Snowmobiling may conflict with hiking, cross country skiing, snowshoeing, and wildlife populations. Horse use may conflict with snowmobiles on snowmobile trails. Other problems include lack of trail etiquette, poor trail layout, poorly constructed bridges, poorly located signs, and illegal use of trails by ATVs and/or dirt bikes. Neighboring landowners have problems with riders trespassing. Neighboring landowners may have noise conflicts when corridor trails are used at night.

ADDITIONAL RESOURCES

State Forests Containing Corridor Trails – A map of statewide connector trails is developed bi-annually by NYS OPRHP. Contacts for this map and other snowmobile information can be found at <https://parks.ny.gov/recreation/snowmobiles/maps.aspx>.



OTHER RECREATIONAL ACTIVITIES

Use of Unmanned Aircraft Systems (UAS)/Drones

In recent years, due to advancements in technology, unmanned aircraft system (UAS), also known as drones, usage has seen a major increase in popularity. Their abilities to carry advanced diagnostic equipment, portable nature, steep

Commissioners Policy 71 (CP-71):

https://www.dec.ny.gov/docs/leg_al_protection_pdf/cp71.pdf

learning curve, and relatively inexpensive costs has seen a dramatic rise in interest by recreationalists, as well as researchers and law enforcement. Commissioners Policy 71 (CP-71)/Acquisition and Use of Unmanned Aircraft provides guidance to DEC personnel for the acquisition and use of UAS to fulfill the environmental policy of the State set forth in [Environmental Conservation Law \(ECL\) § 1-0101](#), in addition to cooperative agreements, routine DEC contracts that include UAS work, contracts for UAS services, privacy protection for the public, retention of data, and Freedom of Information Law (FOIL) requests. CP-71 also provides further guidance to DEC personnel regarding the take-off, operation, and landing of UAS on State Lands, by the public, which are owned, managed or maintained by DEC, for non-administrative commercial use, non-administrative recreational use, and non-administrative scientific research and/or game management. In accordance with [6 NYCRR 190.8\(ae\)](#), any member of the public requesting non-administrative commercial use of UAS on State Lands owned, managed or maintained by DEC is required to apply for a Temporary Revocable Permit (TRP) before permission may be granted. All other non-administrative commercial use of UAS on State Lands owned, managed, or maintained by DEC is prohibited.

Orienteering

Orienteering is a sport of navigation using maps and a compass. The object is to run, walk, ski or snowshoe to a series of points shown on a map in the shortest amount of time. Orienteering is a compatible use of state forests. State Forests provide ideal areas for orienteering because they are large and remote forested areas where participants can travel long distances while remaining on public land. At the current level of participation, this is a low-impact activity which causes few conflicts with other activities on state forests. Improved maps and information on State Forests will provide a better orienteering experience.

Dog Training / Field Trials

Dog training involves training dogs to hunt and retrieve. Training may involve the shooting of blanks to accustom the dog to guns firing, setting up situations that may be encountered while hunting and teaching the dog obedience to commands. A field trial is a competition to test the skills of the hunting dog. Opportunities are limited on state forests because dog training and field trials require large, unwooded areas which are generally not found on state forests.

Impacts are minimal but include noise from vehicles, dogs, whistles and gunfire, compaction and disturbance of soil where there are parking and staging areas. Dog training and field trials can conflict with other nearby recreational activities because of the noise and from the



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increased traffic on the roads and on the land. Dog training and field trials may disturb wildlife due to the hunting and retrieving activity. The statutes concerning dog training, field trials are found in [Article 11, Title 9, Section 11-0923 of the ECL](#).

Dog training and field trials are acceptable uses of State Forests.

Hang Gliding

Hang gliding is the use of a rigid-framed, wing-shaped glider for non-powered flight. The pilot flies the glider in the prone position. Launch sites are located on ridge tops where thermal updrafts are utilized for flight. Participation in this activity on state forests is limited by topography.

Environmental impacts include maintaining a cleared area for a launch site, constructing an access road for vehicles to transport flying apparatus to the launch site, and maintaining a cleared landing site for emergency landings. A temporary revocable permit (TRP) is required before a launch site may be used for hang gliding. The TRP will only be issued to a hang-gliding club recognized by the US Hang Gliding Association before using the launch site. The TRP will further stipulate that each club member must be certified by the club as being qualified and competent to use a hang glider to gain access to the launch site. Hang gliding may conflict with private property owners when there is a landing on private property without permission. Also, traffic on launch site access roads may present liability and safety issues.

Where the proper site exists and an acceptable access route to the site is available, hang gliding is an acceptable use of state forests. Currently there is only one site on State Forest land that is used for hang gliding purposes.

Paint Ball

Paint ball games are combat simulation games where the participant uses an airgun for a “weapon.” The airgun, powered by CO₂ cartridges, fires a paint ball at high velocity, which splatters on impact. Participants wear safety equipment, including goggles, ear protection and vests. Neutral safety zones, where no weapons can be fired and safety equipment can be removed, are established on the playing fields. Paint ball activities are generally done in organized group events but can be conducted individually.

Paint ball activities may conflict with other uses on the state forests. Conflicts between other users and management activities are possible. Environmental impacts include litter, intensive use of a small number of acres and aesthetics. To conduct timber sales, DEC uses tree marking paint to mark trees for harvest. Paint on trees, as a result of paint ball activity could easily be mistaken for tree marking paint. This confusion could alter timber harvests and have a long-term negative impact on the forest. There is a potential hazard to other recreational users. Non-participants could be seriously injured if they were inadvertently shot by a paint ball. Paint ball activities would require exclusive use of an area, which is not appropriate for state forests.



The use of paint ball guns on state forests is prohibited by [6 NYCRR Section 190.8\(ff\)](#). It is not an appropriate activity due to safety and aesthetic concerns.

Target Shooting

Recreational target shooting includes trapshooting, skeet shooting and silhouette shooting, or shooting to sight-in guns or to improve the accuracy of a weapon for hunting. The recreational shooting of glass bottles, cardboard boxes, clay pigeons, and plastic jugs is prohibited.

The primary concern with target shooting is safety. Without a proper backstop, projectiles can travel long distances and strike unintended targets. Shooting without knowing where a bullet will strike is the cardinal sin of shooting. Damage to trees is a very significant impact from target shooting. Litter is also a large problem. Broken and whole clay pigeons, spent shell casings, broken glass, cardboard and plastic are litter left behind by target shooters. Target shooting as practiced on state forests may conflict with other activities.

Shooting at any breakable target on State Forests is prohibited under [6 NYCRR 190.8\(bb\)](#). This includes target shooting items such as glass bottles and clay pigeons. For these kinds of different target shooting, which aren't allowed on State lands, please visit your local gun club or shooting range to get more information.

RECREATION POLICIES AND GUIDANCE

Best Management Practices

Best Management Practices (BMPs) are those methods, procedures, and/or devices that are designed to prevent or minimize soil erosion, water run-off, damage to natural resources or wildlife habitat, pollution, pathogens, or other negative environmental or aesthetic impacts when conducting various management activities. Use of BMPs are not typically required by regulation or policy, but are incorporated into management activities like the UMP process.



Soil and Water Protection BMPs
(Refer to [page 122](#).)



Infrastructure Construction and Maintenance BMPs
Includes BMPs and guidelines for roads, points of access, signage, trails, campsites and other facilities. (Refer to [page 175](#))

Accessible features

The Americans with Disabilities Act (ADA) mandates that it is the duty and responsibility of public agencies to ensure that people with disabilities have access to public recreational



programs and facilities. While State Forests are generally rustic in nature, there are opportunities for universal access to hunting, fishing, wildlife viewing, nature



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immersion and other recreational programs. Over the past decade, many parking areas, trails, access routes, platforms and other surfaces and facilities on State Forests have been upgraded or designed as described in the Accessibility section on [page 190](#) of this plan. In addition, some roads and trails are open by permit only, to motor vehicle access by people with disabilities.

Limits to Recreational Development

It is important that recreational use is not allowed to incrementally increase to an unsustainable level. DEC must consider the impact from increased use on other management goals or other recreational uses. Even though a volunteer organization may offer the needed materials and labor to develop a new facility, DEC must consider the full range of impacts, including long-term maintenance and the balancing of multiple uses. In most cases, this can only be accomplished within the UMP process or a similar formal public process.

Commercial Use of State Forests

Commercial enterprises occasionally approach DEC requesting the use of state forests for developing new trails or accessing existing recreational trails or other facilities. The development of trails on state forests connecting to a commercial facility may be beneficial to the activities or facilities on the state forest. For example, commercial enterprises can complement trails on state forests because they can provide, on adjoining lands, amenities such as electricity, flush bathrooms, food and supplies or other desired services not available on state forests. However, there can also be negative consequences to such development including trail construction and maintenance costs and impacts to other uses or features on state forests. Furthermore, when such trails originate from commercial recreation facilities, they give the impression that the commercial entity in some way controls that portion of the state forest. The decision on whether to allow commercial use of state forests depends upon numerous factors and will need to be approved through a written agreement with DEC. In no instances will exclusive use of State Forests be granted to any user, including commercial enterprise or their paying customers. In addition, vendors are not allowed to operate on State Forests.

Availability of Recreation Information on State Forests

Informational materials consist of the various methods used to communicate with the public, including brochures, signs, maps, information boards, presentations and web sites that disperse recreation information on state forests.

During management planning meetings, many people have commented about the adequacy and availability of information and educational materials. There is increased demand for recreational information including additional and improved maps of state lands; trail etiquette education to reduce user conflicts; more information about available opportunities; information and signs explaining what is permitted and not permitted on state forests; and more interpretive signs and information.



In order to provide more information to the public with improved maps, brochures and signs, DEC will assess current availability through the UMP process. The availability of official and accurate information has been improved through the use of the DEC website and will be updated during UMP development.

Inventory of Existing Recreational Facilities

Using GIS, DEC staff have gradually built and continue to develop an inventory of recreational assets on State Forests. This information can be accessed through DEC's "Mapping Gateway" at www.dec.ny.gov/pubs/212.html via the DECinfo Locator as well as in Google® Earth and Google® Maps format. It is a priority to update this information during UMP development so that accurate information is available to recreational users.

"REC" OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Recreation (REC) Objective I - Illegal activities will be prevented, environmental impacts reduced, and public safety assured as recreational use is accommodated on State Forests.

REC Objective II – Provide public information regarding recreational opportunities on State Forests. In individual UMPs assess the need in areas of higher levels of public use, for the use of signs, kiosks, outreach to user groups, Backcountry Stewards, online resources and working with neighboring landowners (Neighborhood Watch groups).

REC Action 2 – At least every 10 years, during UMP development, a webpage for each State Forest will be created or updated, including an electronic, printable map showing the location of recreational amenities on the State Forest.

REC Objective III - Recreational facilities and amenities will be provided and maintained such that they are safe, functional, and environmentally sound. All new facilities will strive to meet accessible mandates and standards. Each UMP shall inventory existing recreational amenities and provide an implementation schedule and budget for recreation management actions, which will be subject to change based on funding or staffing constraints.

REC Action 3 – Develop a statewide program for carrying out regular trail assessments of conditions and difficulty on State Forests.

REC Objective IV – Enhancement of sporting wildlife habitat will be considered in UMPs based on ecological need.

REC SEQR Alternatives Analysis and Thresholds

The **no-action alternative**, or in other words, continuing with current approaches to recreational management, has been selected as the **preferred alternative**.



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Due to public demand for forest-based recreation and related quality-of-life and economic benefits, the alternative of reducing support of recreational activities and facilities has not been selected.

The option of dramatically increasing the level of recreational use and development on State Forest cannot be accommodated due to the constraints and concerns expressed in this plan.

SEQR Analysis Threshold: Compliance with the guidelines and strategies of this section will avoid and minimize potential impacts resulting from recreational use and development. Any development of facilities with potable water supplies, septic system supported restrooms, camping areas with more than 10 sites or development in excess of other limits established in this plan will require additional site-specific environmental review under SEQRA.

OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE



OFF-HIGHWAY AND ALL-TERRAIN VEHICLE USE

Off-road motorized recreational activities have grown in popularity over the past two decades. These include four-wheel drive vehicles (also referred to as off highway vehicles or OHVs), ATVs, UTVs and off-road motorcycles. For the discussion of these various vehicles the plan they will collectively be referred to as OHVs and ATVs. Impacts and issues associated with OHVs are much the same as those associated with ATVs, therefore for the purpose of this plan, DEC policy as regards State Forests will be applied to both vehicle types alike.

An **All-Terrain Vehicle (ATV)** is any self-propelled vehicle manufactured primarily for use on off-highway trails or in off-road competitions and that is not more than 70 inches wide and weighs no more than 1,000 pounds dry weight. This includes vehicles with two or more wheels. Snowmobiles are not included and are subject to other regulations.

An **Off-Highway Vehicle (OHV)** is designed for use off highways, weighs more than 1,000 pounds, and is wider than 70 inches. An OHV may also be designed for and registered for highway use. An OHV differs from most vehicles because it is usually a four-wheel- drive vehicle. This means it gets traction from all four wheels. This makes the vehicle capable of traveling on almost every type of terrain.

Some people own and operate these types of vehicles as a relatively benign means of conveyance to access programs like hunting and fishing. Many off-road enthusiasts, however, enjoy a riding experience that includes characteristics such as challenging mud holes and steep hill climbs, as is often depicted in ATV manufacturer ads and on ATV club webpages. As discussed below, those types of uses, as well as other attributes of recreational ATV use are not compatible with State Forest management goals and cannot be successfully managed on State Forest lands.

Environmental impacts from ATV and OHV use include soil erosion, displacement and compaction, direct impacts to streams and wetlands from ATV crossings, including increased siltation and turbidity, noise, disturbance to wildlife and their habitats, damage to vegetation, and air pollution. ATV use impacts neighboring landowners and conflicts with other recreational pursuits.

Illegal use of ATVs and OHVs on State Forest roads and trails officially closed to ATV and OHV use is frequent, difficult to prevent, and presents significant enforcement issues. Despite a variety of signs, gates, boulders, and other barriers designed to notify ATV and OHV users that particular roads and trails are closed to their use, a large amount of illegal riding continues to occur on these prohibited areas. Illegal use of ATVs presents significant enforcement problems because illegal riding often occurs in remote areas, where apprehension of violators is difficult, and impoundment of unregistered ATVs is impractical.

ATVs raise substantial safety concerns in comparison with various recreational activities because they are especially prone to accidents. From 1982-2014 there were 476 ATV related deaths in NYS, according to the Consumer Product Safety Commission's 2021 [website](#), with an



OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE

additional 34 reported from 2015-2017. These figures place NYS 8th nationally in this unfortunate category.

The environmental impacts (including noise), intensity, and nature of both legal and illegal ATV use has been shown to cause other recreational uses to decline, and in some cases completely cease, once an area is opened for ATV use.

Over the years, attempts have been made to accommodate OHV and ATV use on several State Forests but in each case, the use was not sustainable. Serious issues with soil erosion, illegal off-trail use and trail rutting developed. In all cases DEC was not able to find acceptable ways to mitigate the impacts, even when organized user groups were included in the process. In the end, each of the former off-road vehicle trail systems was closed.

Assessment of Current ATV Opportunities

Riding currently occurs on private lands in most rural areas. Farm families often use ATVs and OHVs in their work. Private and club trails exist in numerous locations. In addition, there are commercial ATV facilities in New York State which are open to the public.

DEC administers certain conservation easement lands where the state has acquired the public recreation right for ATV use. On these lands, DEC may designate specific routes that are opened through a public recreation management planning process.

ATV use is also allowed on highways designated by regulation (for state roads) or local law or ordinance (for municipal roads) pursuant to the requirements of [Vehicle and Traffic Law §2405 \(1\)](#), requiring that the designating authority determine that it is otherwise impossible for ATV's to gain access to trails or areas adjacent to the highway and posted for ATV use by the state or local authority having jurisdiction over the highway. A number of towns, primarily in the western Adirondack and Tug Hill regions have opened town roads to ATV use under this statute.

Certain State Forest and Forest Preserve routes are open to motor vehicle use only by those who have a DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD) (*Refer to [page 195](#)*). The permits allow the individual to ride only on marked and designated routes where the public use of motor vehicles is prohibited.



There are no recreational trail systems dedicated primarily to ATV riding on State Forests, due to unsuccessful attempts in the past and other limitations and concerns expressed in this chapter. However, there are limited instances in which DEC has designated short sections of road for ATV use in order to connect adjacent areas that are legally open to ATV use.

OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE



ATV BACKGROUND

Prior to 1983, DEC regulations allowed motor vehicles (including four-wheel-drive trucks, motorcycles and ATVs) anywhere on State Forests except where there were signs prohibiting such use. Unsuitable areas were signed to prohibit motor vehicle use. This approach led to widespread use of motor vehicles on State Forests resulting in serious rutting and erosion problems in many areas. The signs prohibiting motor vehicle use were often removed by the public, making it difficult to enforce the law restricting use in certain areas. In response to this problem, the regulations were changed in 1983 to allow motor vehicle use only on signed roads and trails or through a permit issued by DEC (see [6 NYCRR Section 190.8\[m\]](#) and [Vehicle and Traffic Law §2405](#)). Appropriate roads and trails were then signed for motor vehicles to accommodate local use. Signing these roads and trails created short sections of designated trails. This did not satisfy the recreational demand for a long-distance loop trail system. The low mileage of short trail sections also contributed to illegal off-trail use.

In 1986, [Article 48-b](#) of the Vehicle and Traffic Law was established which required all ATVs to be registered for a \$10.00 fee with 50% of the fee allocated to the New York State ATV Trail Development and Maintenance Fund. The law specified that no more than 25% of the money in this fund could be made available to the NYS Office of Parks, Recreation and Historic Preservation and the DEC for ATV trail development and maintenance on state lands. The counties were also to be given funds to compensate them for the costs associated with ATV trail development and maintenance. In 1990, the state legislature abolished the fund and used the money to balance the budget. ATV and off-road motorcycle riders are still required to pay the \$10.00 registration fee despite the lack of a dedicated fund.

ATV Case Study: New Michigan State Forest (1985)

In 1985, a loop trail for ATV use was established on New Michigan State Forest (Chenango 5 & 24). The trail was approximately 20 miles long and it received much use. ATV riders eventually became dissatisfied with the trail because it was considered too short and there were no other trail systems to ride. ATV riders desired a longer trail similar to the Brookfield Trail system in Madison County which contains 59 miles of off-road horse trails on five State Forests and includes camping facilities. The loop trail on New Michigan State Forest was closed in 1988 due to not meeting the public demand, excessive mud holes and soil erosion.

ATV Case Study: Anderson Hill State Forest (1993-1997)

ATV riding was also allowed through permits issued to clubs for competitive events on Anderson Hill and nearby State Forests in Tompkins and Tioga counties in the Southern Tier. The permits allowed trails to be established and signed for temporary use during the event. This led to problems as the public would ride ATVs on the signed trail before the event. After the race, the trail markers were removed, and water diversion structures were constructed to prevent erosion on the trail. Unfortunately, residual use of the trail continued. A visible trail exists to this day, and it continues to attract illegal use. Illegal use by local ATV and motorcycle riders has resulted in damage to the water diversion structures and has caused soil erosion.



OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE

ATV Case Study: Morgan Hill State Forest and Taylor Valley State Forest (1985)

ATV trails were also established in Cortland County in 1985. A 6.5-mile trail was established on the Morgan Hill State Forest (Cortland 4) and a 3.5-mile trail was established on the Taylor Valley State Forest (Cortland 2). Both of these trails were signed for use by motor vehicles weighing less than 1,500 pounds. In 1991, an assessment of both trails revealed significant environmental problems. The trails were eroding, badly rutted and contained numerous mud holes. In the short span of 6 years, the trails were in need of either relocation or complete rehabilitation to make them acceptable for use. In addition, many unauthorized or illegal trails had been established by trail users. These unauthorized trails were unacceptable for use due to their environmental impacts. Both of the trails in Cortland County were closed for motor vehicle use in 1991 due to their excessive deterioration from use which caused unacceptable environmental impacts.

ATV Case Study: Proposed trail system on the Treaty Line Unit (1993)

In 1993, DEC issued a position paper regarding all-terrain vehicles on State reforestation areas. The paper states that an ATV trail system is consistent with ECL; however, the Division of Lands and Forests must determine whether a proposed trail is compatible with the natural resource as well as with administrative, cultural and recreational demands and uses. This paper led to the examination of the State Forests for a location to potentially develop an ATV trail system.

The draft Treaty Line UMP proposed the development of an 80- to 100-mile ATV trail system. The Treaty Line Unit consists of Chenango 9 & 15 and Broome 2 in Region 7 and Delaware 2, 4, 5, 6 and 9 in Region 4. This Unit was chosen as the most feasible location in the region to develop an ATV trail system. The proposal was withdrawn from the final plan due to significant public opposition, unresolved environmental issues of air and noise pollution, potential conflicts with other users and neighbors, and the impact of the trail system causing significant socially unacceptable changes in the character of the Treaty Line State Forests and surrounding area.

The proposed trail system included a number of measures to mitigate the impacts through trail design, layout, patrol and maintenance. The trail proposal was strongly supported by ATV trail groups. Environmentalist groups were strongly opposed. Other recreational users were greatly divided in support of and opposition to the trail proposal. Hikers and birders generally opposed the trail proposal, while other recreationists more often supported the trail proposal. Most local residents opposed the ATV trail proposal even though the trail system would potentially have provided an economic boost to the region through increased tourism and growth of associated...

OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE**... continued: Proposed trail system on the Treaty Line Unit (1993)**

... small businesses. Comments in opposition to the trail mentioned concerns over increased traffic, trespassing, safety, noise and environmental degradation. Most landowners who lived in the neighborhood of the proposed trail were very strongly opposed to the change in character this trail would bring to the immediate area and concerns will illegal use spilling out on their lands.

In addition, a 1993 DEC position paper states “all cost associated with an ATV Trail must come from an ATV Trail maintenance and development fund. No costs will be directly charged to Department resources.” Although such a fund once existed in New York, it no longer does. Recently, attempts have been made by interest groups to reestablish an ATV trail fund through new legislation. Without an ATV trail development and maintenance fund, sufficient staffing to properly administer, maintain and patrol the proposed ATV trail system was not guaranteed. The Treaty Line ATV trail system proposal was withdrawn based on the criteria that it was not both environmentally compatible and socially acceptable.

ATV Case Study: DEC Region 6 (1985-2008)

In the 1980s, all of the multi-use trails in the Brasher State Forest were opened to ATV use; 36 different trails were opened as well as all 15 Truck trails. Use was low to minimal to begin with, consisting mainly of local ATV enthusiasts who lived adjacent to the State Forest. In a relatively short time, ATV use escalated dramatically, and environmental issues began to surface.

By the early 1990s, ATV use was curtailed on trails that had become badly rutted or which had developed severe mudholes. In most cases, "Braid Trails" were illegally established by ATV riders to avoid the obstacles created by previous ATV activity. With no funding source available to maintain the trails or remediate damage, unacceptable environmental impacts led to further closures. By 2000, 12 trails remained open, and by 2004, only five trails remained legally opened to ATV use. Illegal ATV use continued to occur on the closed trails. Illegal braid trails continued to be created, and unauthorized new trails saw ATV use.

DEC worked with a local ATV club to remediate damage to several key trails, and the volunteers did some excellent work to fix the damage that had occurred on those trails. The rest of the trails that were closed due to ATV damage have yet to be remediated due to a lack of funding. A 2006 DEC legal opinion found that within NYS Vehicle and Traffic Law, ATV's and regular public motor vehicle traffic could not share use on the same public roads and trails over long distances. Since the few remaining open trails were linked by miles of Truck Trails that remained open to car and truck traffic, all roads and trails were closed to ATV traffic.



OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE

Public Input

In the process of UMP planning for numerous State Forests throughout the state, extensive public input regarding ATV and OHV use has been gathered. This input is very similar from one state land unit to another. Input gathered in development of the DRAFT Region 7 Recreation Master Plan is representative of that given throughout the state.

ATV Case Study: Region 7 Recreation Master Plan (2001-2002)

DEC staff in Central New York (Region 7), which holds more State Forest acreage than any other region of the state, conducted an extensive public review of recreational activity on State Forest lands. Five public meetings were held at different locations throughout the region during the month of January 2002. Each meeting offered a brief overview of the completed Draft Recreation Master Plan for State Forests, as presented by DEC staff, followed by a session to receive public comments. All formal comments received at these meetings were recorded, along with hundreds of mail-in comments submitted to DEC following the meetings.

Comments received by DEC concerning ATV use on State lands were numerous and varied. Strong sentiments both for and against ATV use were expressed at the public meetings and in the written comments that followed.

Input from ATV riders included a variety of ideas and comments. ATV riders want access to existing trails or would like new trails constructed. They feel that the benefits they receive are not proportional to the registration fees paid to DMV. Off-highway motorcycle (OHM) enthusiasts are looking for trails 100 miles in length with portions of the trail designed specifically for OHM versus three- and four- wheel ATVs. ATV riders are looking for varied terrain and challenges in trails. Hill climbs and terrain courses are a desired part of a trail system.

Additional comments received from ATV riders in the public meetings and questionnaires include the following:

- Allow ATVs on truck trails.
- Develop a facility for camping and ATV riding.
- Allow ATVs on snowmobile trails.
- Allow people to use ATVs to remove game during spring and fall hunting seasons.

The following are responses to the question “What can DEC do to reduce conflicts?”

- Supervise ATV riders through use of clubs.
- Install gates to control ATV access.
- Allow clubs to develop separate ATV trails.
- Educate DEC on ATVs.

Comments from those who don’t ride ATVs were mixed. Environmental organizations and people who primarily participated in hiking, birding or cross-country skiing tended to be strongly opposed to development of ATV trails. They felt that ATV riding is not compatible with State Forests. Other groups of recreationists tended to have more mixed opinions.

OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE



ATV IMPACTS AND CONSTRAINTS

A properly sited, maintained and restricted ATV trail system could provide for ATV use. However, this is the most difficult type of trail system to properly locate and develop on State Forests due to the potential environmental impacts and constraints, the possibility of conflicts associated with the activity, and the general desire by ATV riders for a long-distance loop trail system. Many constraints limit the potential for the development of an ATV trail system and include:

ATV Use on Conservation Easement Lands

It is important to note that the analysis of impacts and constraints associated with State Forest lands is not applicable to Conservation Easements. The important differences include: rights retained by fee owners; differences in road standards; and use by and wishes of the fee owners and surrounding landowners. ATV use may be found to be compatible with the different set of circumstances found on Conservation Easement lands.

- **Maintenance** – Preventing and controlling erosion and rutting is an expensive and difficult proposition. In most cases trails must be maintained by moving large quantities of gravel into remote wooded locations with manual labor or small specialized equipment. A full-time maintenance staff with a significant budget would be required to maintain a viable trail system. The types of hardened trails DEC would construct are not the type of trails a majority of the ATV or OHV user's desire.
- **Potential conflicts with neighbors of State Forests** - State Forests are generally located in rural settings with a moderate level of housing development in the immediate area. Homes and building lots adjacent to State Forests are highly valued on the market. People who live near State Forests often choose to live there because it is a relatively quiet, undisturbed location. Neighbors are often opposed to the development of ATV trails because of increased ambient noise and disturbance levels.

Even though State Forests are "working" forests, harvesting normally only occurs on 1% of the land area or less on an annual basis and there is usually over 20-30 years between harvests.

ATV use can create impacts that spread across the State Forests and neighboring lands, occur much more frequently, and occur without end. This constitutes a major change of the character of a State Forest. Neighbors are frequently concerned that ATV trail riders on State Forests may ride off the trail and go across the property line onto their land. In addition, increases in traffic patterns on local rural dirt roads and associated dust produced by trucks and trailers are issues which have blocked proposed off-road vehicle trail development on State Forests in the past.



OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE

- Potential conflicts with other recreationists** - Recreationists who value and use State Forests because they provide places where one can experience solitude are opposed to the development of ATV trails because of concerns such as noise, pollution, disturbance to wildlife and ground or vegetation impacts. The impacts, intensity, and nature of both legal and illegal ATV use has been shown to cause other recreational uses to decline, and in some cases completely cease, once an area is opened for ATV use.



ATVs have made hiking this trail difficult and unpleasant

- Size of the forest area or group of forests** - An ATV trail system suitable for day use must be at least 30-40 miles long. The area under consideration for trail development should be at least 5,000 acres or larger to accommodate this size of a trail system.
- Environmental impacts** - Public use of ATVs can cause significant, adverse impacts to natural resources, including soil degradation; destruction of vegetation; disruption of local hydrology; increases in surface runoff and erosion; direct impacts to streams and wetlands from ATV crossings, including increased siltation and turbidity, destabilization of shorelines, destruction of in stream and riparian habitat, and destruction of vegetation; fuel discharges, resulting in degradation of water quality; air pollution; and impacts on wildlife including direct mortality, habitat modification, and disturbance.



Increased runoff and erosion from ATV impacts occur across the landscape and have serious consequences for soil and water quality (*Refer to [page 119](#)*) causing increased sedimentation and turbidity in multiple water bodies throughout the forest. These factors can affect biological health, for example, a stream's ability to support trout populations or aquatic plants' ability to photosynthesize. Sedimentation from recurring ATV damage often increases with successive storm events.

- Design requirements for a suitable trail** - The DEC's 1993 position paper stated that any consideration for trails in New York will stay within standards established by the US Forest Service. The paper also stated that all trail locations should have stable soils and avoid steep or wet areas. Therefore, it is critical that the area chosen for a potential trail system have few areas of poorly drained soils. Otherwise, portions of a trail system on poorly drained soils need costly improvements to the trail surface and drainage to prevent those areas from becoming muddy or eroded. Establishing a trail on poorly drained soils without improvements to prevent trail erosion is unacceptable to DEC. The

OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE



position paper also required that critical wildlife areas and significant habitats be avoided. Unfortunately, a trail system designed to these specifications cannot provide the experience a majority of ATV/OHV enthusiasts are looking for: steep challenging terrain and mud holes.

- **Air and noise pollution** - There are varying opinions about the environmental impacts of the air pollution produced by ATVs. Presently, it is not possible to measure air pollution caused specifically by ATV's. Noise pollution is generally an issue of concern for those who currently use or live near State Forests as described above. The 1993 position paper states that machines will be monitored for compliance with muffler requirements and a minimum 1,000-foot buffer zone must be left between the trail and neighboring private structures. Leaving a 1,000-foot buffer zone from private structures precludes ATV trail construction, as it is nearly impossible to accomplish due to the pattern of ownership of State Forests and private lands.
- **Enforcement challenges**- Where ATV trails have been opened in the past, enforcement staff found it very challenging if not impossible to prevent illegal use. This issue is not as significant on conservation easement lands, since there are enforcement resources (landowners, lessees) available beyond DEC's enforcement staff.
- **Cost** – While poorly drained soils commonly found on many State Forests are unsuitable for trail development, marginally acceptable soils would require extensive and costly improvements to the trail surface and drainage to prevent those areas from becoming muddy or eroded. There is currently no dedicated funding source to support an ATV trail system. The high costs for construction, maintenance and operation of an ATV trail system on public lands are best assumed by an agency with a formal fee structure and on-site staffing including an enforcement presence. Other agencies responsible for providing recreation opportunities on public lands include the NYS Office of Parks, Recreation and Historic Preservation and county and local parks. Trail systems may be best developed by collaboration between private landowners.

ATV Positive Impacts

Accommodating ATV use could potentially have some positive impacts on the communities surrounding State Forests. Benefits that come from ATV use include individual recreational benefits and may include jobs, income to businesses, and tax income. Limited studies have shown evidence for trip-related spending by ATV enthusiasts (Karasin 2003).



Off road vehicles can also provide a means of access for recreationists who have impaired mobility. This use is accommodated by the DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD) (*Refer to [page 195](#)*) which allows qualifying people with disabilities to use motor vehicles along specific routes for access to programs, such as hunting and fishing on state lands.



OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE

ATV Demand and Trends

Advertising in sportsmen/outdoor magazines and TV programs has resulted in a growing number of machines and riders seeking riding opportunities. It is expected that demand for this activity will continue to increase. There have been many requests, outside of the previously mentioned case studies, for DEC to revisit the possibility of developing ATV facilities across public lands. However, due to DEC's long and unsuccessful history with ATV trails and usage, continued local public support for preventing ATV usage on State Lands, and the absence of viable plans and private partnerships, DEC continues its stance of providing connector trails and access routes for people with disabilities, but not entire trail systems, on State Forests.

As the statewide landscape continues to become subdivided into fragmented private land parcels, State Forests, with a relatively large land area in public ownership, are expected to face greater pressure to accommodate ATV use. However, in the midst of these trends, State Forests also are becoming more valuable for the various ecosystem services (water quality, habitat, forest retention) and non-motorized recreational opportunities they provide. It is important to note that within the context of the statewide landscape, public lands make up approximately less than 20% of the total land area, whereas almost 77% is in private ownership with no public mandate for conservation. State Forests make up roughly just 2.5% of the total land area in New York State.

STATE FOREST ATV POLICY

The mission of the DEC Division of Lands and Forests is “to care for and enhance the lands, forests and natural resources in the state of New York for the benefit of all through the care, custody, and control of state-owned lands, and promotion of the use and protection of all natural resources.” This is a broad mission which reflects that DEC has many other responsibilities beyond satisfying public recreation desires. Rather, recreation opportunities are provided on DEC lands that are compatible with other multiple uses and the ecosystem management approach described previously in this plan.

Based on evaluation of past efforts to accommodate ATV use and the many impacts and constraints associated with off road vehicles, DEC will not permit ATV use on State Forests, except:

- as may be considered to accommodate a “connector trail” through UMP planning or a similar public process; and
- on those specific routes designated for use by DEC-issued Motorized Access Permit for People with Disabilities (MAPPWD).

OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE**ATV Trail System**

An ATV trail system, minimum of 30-40 miles long and at least 5,000 acres or larger, that is sited wholly or substantially on State Forests cannot be accommodated.

Any smaller trail system will not meet the desire by ATV riders for a long-distance loop trail system and has proven to increase illegal use and natural resource damage and therefore cannot be considered.

Connector Trails

In the event another entity is establishing a legitimate public ATV trail system on lands adjacent to a State Forest, and a State Forest is needed to serve as a connecting link, or in the event that a State Forest road or trail could serve to connect already designated ATV trails open to the public, DEC will evaluate and consider the proposal. Any such trail proposal must comply with state law, department policy and regulations. If it is determined to be environmentally compatible, a connecting trail could be established on the State Forest. This would be dependent on the availability of sufficient funds to establish and maintain a sustainable trail. The State Forest based connector trail, if approved, must follow the shortest environmentally acceptable route available.

The inclusion of a connector trail in a UMP and the subsequent establishment of any such trail could only occur if it does not compromise the protection of the natural resources of the Unit, significantly conflict with neighbors of State Forests, nor interfere with other established recreational areas. Such designation shall only occur through the amendment or adoption of a UMP or another process which provides similar opportunities for public review and comments and full SEQRA review of the proposed designation.

Connector trails will be monitored to ensure that legal use does not lead to illegal off trail use within State Forest lands or on neighboring private property. Should illegal use increase significantly adjacent to any connector trail, that trail will be subject to closure.

Vehicle and Traffic Law

[Vehicle and Traffic Law §2405](#) provides that ATVs and regular motor vehicle traffic may not share use on the same public highways except in specific, well-defined instances. Several State Supreme Court decisions have held that, in order to satisfy the “otherwise impossible to gain access to areas or trails adjacent to the highway” requirement, a governmental agency must make a specific finding that the purpose of opening a road is to provide ATVs with access to areas or trails adjacent to the highway which are otherwise impossible to access. (See, e.g. *Matter of O'Brien-Dailey v Town of Lyonsdale* 2009 WL 5909095 (N.Y.Sup.), *Krug et al. v Town of Leyden*, Sup Ct, Lewis County, September 5, 2008, Joseph D. McGuire, J. Index No. CA2008-00138.)



OFF-HIGHWAY and ALL-TERRAIN VEHICLE USE

Since the few trails remaining open on State Forests were linked by miles of Public Forest Access Roads that remained open to car and truck traffic, this led to the closure of all but one remaining trail. Proposals for any new ATV connectors will continue to be reviewed on a case-by-case basis.

“ATV” OBJECTIVES, ACTIONS AND SEQR ANALYSIS

All-Terrain Vehicle Use (ATV) Objective I – Limited ATV use will be accommodated via consideration of opportunities to enhance access to State Forest recreational programs under DEC’s MAPPWD program in all UMPs

ATV Objective II – Limited ATV use will be accommodated on State Forests via consideration of requests for ATV connector routes on a case-by-case basis following criteria detailed above, including a formal public input process in accordance with the managing UMP.

ATV SEQR Alternatives Analysis and Thresholds

The **no-action alternative**, which in this case involves limited accommodation of ATVs and OHVs on State Forests with connector trails and as a necessary component of the MAPPWD program, following the criteria established above, has been chosen as the **preferred alternative**.

The alternative of closing State Forests to all ATV and OHV use has not been chosen since this option would not allow DEC to accommodate individuals with disabilities and would provide unreasonable barriers to the development of trail systems on neighboring private and municipal lands in regions where State Forests dominate the landscape.

The alternative of developing extensive ATV trail systems on State Forests has not been selected due to past failed experiences (many of which are recounted above), issues with illegal use and increasing budgetary and staffing constraints.

SEQR Analysis Thresholds: Limited ATV accommodations and related mitigations outlined in this section will avoid and minimize potential impacts to the maximum extent practicable and no further SEQRA review will be conducted.



MINERAL RESOURCES

New York State is rich in minerals which are extracted for industrial and construction uses throughout the state. Sand and gravel account for the vast majority of the state's 1,800 active mines. Oil, gas and solution mining wells are also economically important in New York State with more than 75,000 wells drilled in the state since the late 1800s; about 15,000 of these are still active and some new drilling continues.

There are currently 132 active wells on State Forest lands and 76 inactive wells located in DEC Regions 8 and 9. There are no oil or gas wells on State Forest lands in DEC Region 7. There are no commercial mines on State Forests. Management of mineral resources on State Forest properties is unique, in that the Division of Lands and Forests works in cooperation with others, most notably the Division of Mineral Resources, the Office of General Services and the Public Service Commission. DLF staff will follow the April 2020 inclusion of the New York State's ban on "hydrofracking," [ECL §23-0501](#).

The term "Minerals" refers to any substance which is removed or extracted at or from beneath the earth's surface, in whatever form (solid, liquid, or gas). Mineral activity on State Forests falls into three categories.

Oil, Gas and Solution Mining

- Exploration and production of oil, natural gas, and solution salt and storage of natural gas

Mining

- Surface mining of sand, gravel, shale and other aggregate
- Underground mining of "hard rock" minerals

Emerging issues

- Geologic sequestration of carbon is an emerging science where utility plants powered by fossil fuels are adapted to capture carbon that would have otherwise been released into the air. The captured carbon is then to be injected into depleted oil, gas, salt or other non-mineral bearing formations, or far below the surface, using existing wells or newly drilled wells.

The Division of Lands and Forests is responsible for managing surface impacts from Oil and Gas Exploration and Development on State Forests. These activities are regulated under lease and permits which include special terms and conditions required by DEC to reduce overall impacts and include mitigation measures. A bond is always required to ensure all terms are satisfied.

The regulation of subsurface impacts related to Oil and Gas development and protection of aquifers as well as the protection of correlative rights of all owners are the responsibility of the DEC Division of Mineral Resources and are not discussed in this plan. The Division of Mineral Resources acts as the oil and gas leasing agent for New York State.



Well drilling on State Forest land over the Trenton-Black River natural gas formation



MINERAL RESOURCES

- Geomechanically pumped energy storage is an emerging green-energy storage technology in which water is pumped under pressure into non-hydrocarbon bearing formations. This pressurized water can then be stored and released to turn hydroelectric turbines to generate power during times of peak energy demand or when variable renewable energy is not available.

Minerals and Property Rights – The “Split Estate” Case

Minerals, as with any other property right, can be severed from the fee estate. This is usually done by means of a mineral deed or mineral rights reservation, thus creating a split estate.

(Leases do not confer permanent rights to the lessee. A deed or reservation, on the other hand, permanently transfers rights from the grantor to the grantee.) In these situations, the mineral estate is considered the dominant

"Split Estate" In split estate situations, the surface rights and subsurface rights (such as the rights to develop minerals) for a piece of land are controlled by different parties.

estate, meaning it takes precedence over other rights associated with the property, including those associated with controlling the surface (i.e., “surface estate”). However, the mineral owner must show due regard for the interests of the surface estate owner and occupy only those portions of the surface that are reasonably necessary to develop the mineral estate.

In some areas of the state, there are significant issues with “split estate” mineral control. In limited cases, the state only controls the surface and did not (or could not) acquire the mineral rights associated with the State Forest parcels. In such cases, rare though they may be, the mineral rights may be controlled by another government entity (e.g., US Department of the Interior – Bureau of Land Management) or a private party.

When another party controls the minerals estate, there is potential for impacts to the surface estate. The degree of impact depends on a number of factors:

- What type of mineral development can be reasonably foreseen? Hard rock mining and surface mining are likely to have a greater surface impact than oil and gas development.
- What does the mineral estate owner actually hold? The entire mineral estate? Only rights to oil, natural gas, and other fluid minerals? Only mineral rights within certain formations? Only rights to surface mine gravel deposits?
- Are rights to the mineral estate time-limited? For example, in certain areas of the state, it is not uncommon for timber companies to sell a piece of property, subject to a 10-year reservation of timber rights and a like reservation of the rights to mine for sand and gravel (primarily for maintenance of interior roads serving the property).

In almost all situations the courts have held that the owner(s) of the mineral estate has the right to make “reasonable use” of their estate. Therefore, the surface owner is forced to negotiate when, where, and how much impact constitutes “reasonable use.” DEC will prioritize acquisition of the mineral estate wherever it is split from a State Forest tract.



EXPLORATION AND PRODUCTION OF OIL, NATURAL GAS AND SOLUTION SALT

Oil, natural gas and solution well drilling has been historically located in the western half of New York State, including the Finger Lakes region.

Oil

The first commercial oil well drilled in New York was the “Job Moses #1” well, drilled in 1864, near Limestone, NY. The oil industry expanded rapidly in the late 19th century leading to the development of thousands of oil wells across the landscape, especially in Cattaraugus and Allegany counties. In the early days of the industry, these wells were not regulated, and records are incomplete. The plugging liability for many unplugged, abandoned wells would later be transferred to the state during the acquisition of State Forest tracts.



Natural gas production equipment on Hill Higher State Forest in Chautauqua County

Natural Gas

The natural gas industry went through a similar expansion. The earliest exploration activities occurred in shallow shale and limestone-shale deposits along the eastern shores of Lake Erie and Lake Ontario. Further development ensued, with the 1930s exploration and development of the Oriskany Sandstone, the more recent exploration of the Medina natural gas play in the Southern Tier in the 1980s and exploration of the Trenton – Black River formation in the early 2000s. In general, the development of natural gas has trended eastward over time. During this time, many gas wells have been developed on State Forest lands in DEC Regions 7, 8 and 9 under lease agreements.

Solution Mining

Solution mining is a process whereby salt is removed by dissolving an underground salt formation (rock units consisting of bedded salt) using water that is pumped in and producing the resulting brine out of a well or series of wells. Solution mining is currently confined to Regions 8 and 9, with historic sources in Region 7. Solution mining does not impact any State Forest properties, although solutioned salt is produced from the Carlton Hill Multiple Use Area (administered by the Division of Fish and Wildlife and not subject to this plan) in Region 9.

ADDITIONAL RESOURCES

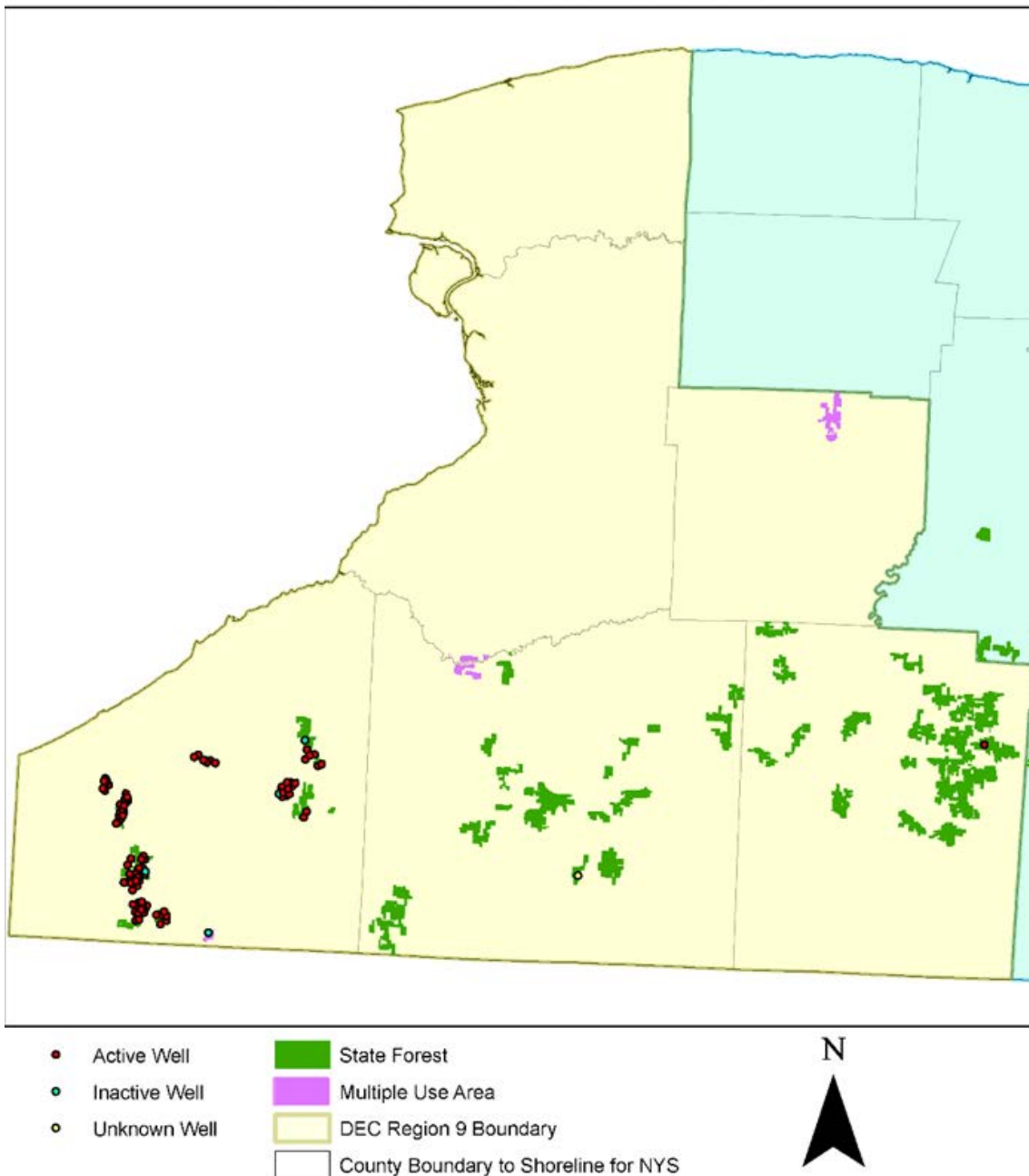
Database of oil, gas, and solution mining wells is available in DEC’s mineral resources GIS layer or available via DECinfo Locator at <https://gisservices.dec.ny.gov/gis/dil/index.html?REC>.

MINERAL RESOURCES

Existing Oil and Gas Development on State Forests

There are currently 132 active wells and 76 inactive wells on State Forest lands. The following series of maps shows existing individual wells* (as they appear in the oil and gas well coverage in DEC's Oil and Gas GIS layer) for Regions 8 and 9.

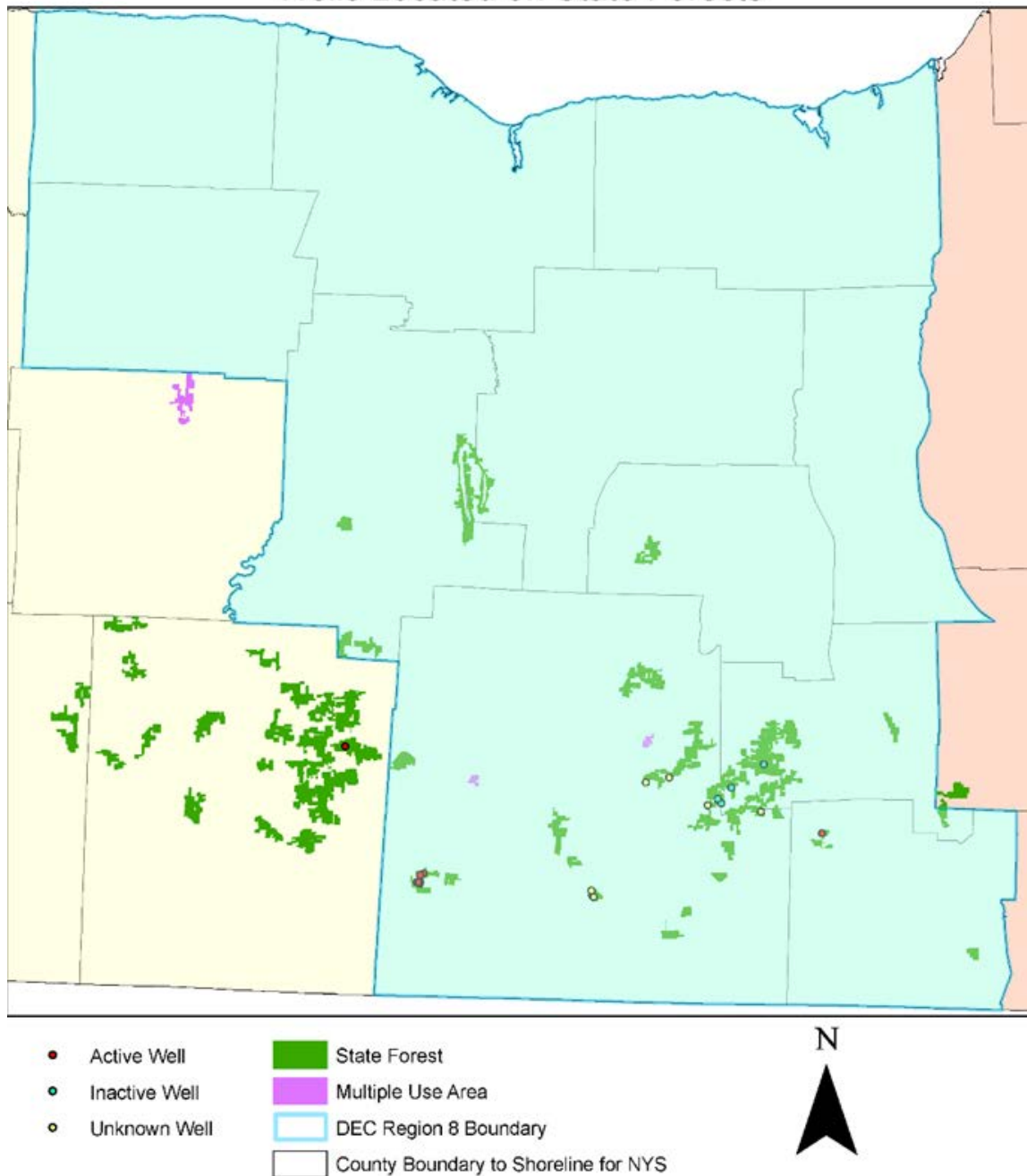
Region 9
Wells Located on State Forests





Region 8

Wells Located on State Forests



* **Please note:** the well locations depicted on these maps pertain only to wells located on state land parcels. They do not show wells which access “state” minerals from well pads located on adjoining private lands.

MINERAL RESOURCES

Oil and Gas Demand and Trends

Demand for oil and gas varies, depending on general economic conditions and activity. Forecasting demand for New York State's production is difficult, however it is worth noting that the industry is generally hesitant to invest significant resources in leasing, well drilling, and production in the state. Peaks and valleys in price and production (and corresponding changes in demand for leasing State Forest parcels) should be expected over the term of this plan.

Hydraulic Fracturing

In accordance with state law, no mineral exploration or extraction from the Marcellus Shale formation and any other formation using high volume hydraulic fracturing will be considered at this time for permitting in the state, including on State Forest lands.

Mineral exploration and extraction that does not utilize high volume hydraulic fracturing may continue, consistent with the 1992 Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program (GEIS) and leases.

Natural Gas Development

Further development could also occur in the Trenton – Black River and Theresa formations on private lands, although low wellhead prices for natural gas may dampen industry enthusiasm for these deeper formations. These developments will, most likely, result in further nominations of State Forests for new leases could occur, however, DEC will prohibit new surface disturbance wells from occurring. Exactly when or if additional lease sales may occur is unclear at this time, but no new leases for **Marcellus Shale** development utilizing high volume hydraulic fracturing will be undertaken.



This service rig is an example of the heavy equipment that is needed to drill and work over a natural gas well.

Oil and Gas Policies and Guidance

Lease Agreements

Oil and gas production from State Forest lands, only where the surface disturbance (well drilling) occurs on adjacent private lands.



As surface managers, the Division of Lands and Forests will look to prohibit surface disturbance oil leases, as well as natural gas leases, on State Lands. No mineral leases will be considered on State Forest properties that are part of the State Nature and Historical Preserves or in the Adirondack and Catskill Forest Preserves.

Construction activities associated with oil and gas development are usually regulated through the use of a Temporary Revocable Permit (TRP) and the terms and conditions of a permit to drill. Long term operation of the facilities constructed under the TRP is covered under the lease.

Tract Assessments

Whenever lands are considered for leasing, DEC will conduct a comprehensive tract assessment process to determine where the lands are able to support or accommodate related surface impacts. The site-specific conditions for limiting impacts on natural resources will be drafted by land managers in coordination with Mineral Resource staff and incorporated into contract documents. These conditions will include but not be limited to criteria for site selection, mitigation of impacts, and land reclamation upon completion of drilling.

A number of factors will be considered during the “tract assessment process” to determine the compatibility of surface disturbance associated with natural gas development including, but not limited to, proximity to wetlands, riparian areas, slope steepness, recreation trails, rare, threatened or endangered species, and other unique ecological communities. Compatibility will be determined during field inspection and the tract assessment process on a case-by-case basis.

The following areas will be considered non-compatible for any activity associated with oil or gas exploration or extraction:

- water bodies wetlands and a 250-foot buffer around them
- slope greater than 15%
- archeological and cultural concerns

ADDITIONAL RESOURCES

Information Regarding New York State Oil and Gas Leases is available at

<https://www.dec.ny.gov/energy/1528.html>“

Listing of current State Forest leases is available at

https://www.dec.ny.gov/docs/lands_forests_pdf/landsforest_lease_attachment.pdf

Guidance on Utilities

Division of Lands and Forests’ preference is not to have utilities cross state land unless all other options and avenues have been exhausted. To this point, if the case can be made that allowing a utility to cross state land will allow renewable energy production and transmission to benefit the people of NYS, DEC will agree to the process. However, at the very basic level, DEC does not have the authority to convey an easement over lands under our jurisdiction, but the Office of General Services (OGS) does have that authority.

If DEC decides to consider the easement, the next decision to make is whether to make the request for OGS to do it, or if the easement is significant enough to warrant having the legislature grant the authority for that easement. Numerous factors such as the size of the proposed easement, its location within the State Forest, its purpose, etc. are evaluated on a case-by-case basis to reach this determination.

MINERAL RESOURCES

- known occurrences of rare and endangered species
- Natural Areas not related to buffers and slope
- spring seeps, vernal pools, and an appropriate buffer

Individual tract assessments for each forest within a Unit, including determinations made regarding exclusion zones, will be completed prior to leasing, and will be incorporated into the lease agreement. Any parcel designated for non-surface entry in the lease will no longer be subject to the review process detailed above due to the prohibition of surface disturbance(s). Exceptions to the tract assessments are possible if additional analysis, protective measures, new technology, or other issues warrant a change in compatibility status of an area.

The process of locating well sites will be guided by a drilling hierarchy that incorporates stand management objectives. The hierarchy will first consider drilling in areas such as fields and conifer plantations. Drilling options will decrease as stand management moves from even aged to uneven aged conditions. The least favorable locations for drilling will be in stands managed for old growth characteristics. Upon completion of drilling, well sites will be reclaimed with native vegetation to a condition consistent with the surrounding stand management objectives.



Sanford West lease road in DEC Region 9 was developed to support a natural gas well site

DEC may consider well pad densities of greater than one well pad in 320 acres only when the additional impact can be effectively managed with mitigation measures, such as well location restrictions. These will address well site placement, along with routing considerations for supporting roads and pipelines. Well pad densities of greater than one well pad in **40 acres** will not be considered.

To ensure the compatibility with natural resources, land managers will review and evaluate all proposals for surface disturbance associated with oil or gas leasing. This will determine the suitability of these activities and will include a review of the well siting and drilling pad development plans, well site disturbance and the location of distribution, collection and utility lines. **It is recognized that DEC's review will result in the use of "no-occupancy leases," for some sensitive State Forests (or parts thereof), thereby reserving those lands from any oil and gas development impacts. Under this type of lease, well pads, access roads and gathering pipelines will not be located on those sensitive State Forest lands.**



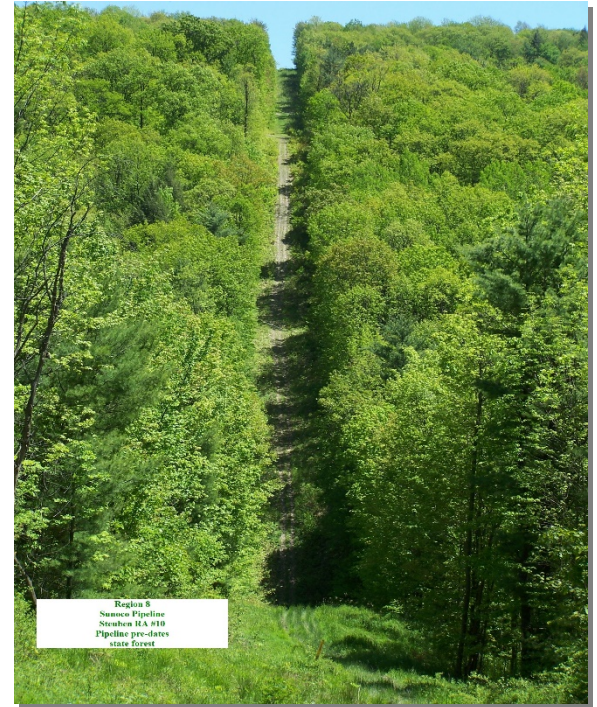
Access Roads

Access roads associated with well sites will not exceed 14-feet in width between ditches and will be designed to maintain closed canopy conditions, where appropriate. On turns and intersections roads will not exceed a total clearance width of 36 feet. Roads will be constructed with gravel over filter fabric to minimize soil disturbance. Upon completion of drilling, access roads may be closed to the public and will be reclaimed to a condition capable of supporting both vegetation and periodic access to maintain the well site. Site restoration will be a condition of the lease and will be authorized by a Temporary Revocable Permit (TRP).

Pipelines

The production of natural gas is not possible without a pipeline from the wellhead to the point of consumption. “Gathering” lines serve to collect natural gas from several different wells. “Transmission” lines generally begin at the point where two or more “gathering” lines intersect. Either of these types of pipelines may be subject to regulation by the Department of Public Service, depending on length and operating pressure. DEC does not have the legal authority to issue easements for pipeline or utility corridors, other than as granted by an active lease on the state-administered parcel.

An important issue to consider is the location and number of pipelines needed. Pipelines presently located on State Forests have created restrictions of forest uses due to the precautions which must be taken to cross the pipeline. DEC is regularly faced with requests to site transmission lines across a State Forests. In most cases, DEC staff are successful in routing these lines around State Forest lands. However, there are those cases where routing across a State Forest is the most “environmentally friendly” alternative. DEC’s ability to respond to this type of request is currently extremely limited. There are many instances where this type of facility was historically authorized under a (long expired) Temporary Revocable Permit (TRP), leaving pipelines in place without legal authority. These situations will be identified in their corresponding UMPs with



The Sunoco Pipeline on Moss Hill State Forest in Steuben County, developed before State Forest land acquisition



The Frost Pipeline on South Bradford State Forest in Steuben County exhibits the surface impact that occurs with pipeline development

MINERAL RESOURCES

recommendations for their final disposition (closing or legislatively establishing real property rights for its continued use, on a case-by-case basis).

Although it is not a rationale for pipeline construction, it should be recognized that in some instances, pipelines may offer recreational opportunities to users of State Forests. Because the lines are buried, some pipelines have proven to make very good snowshoeing and cross-country skiing corridors and these corridors may also be used by hikers in other seasons.

The transportation of gas will be through pipelines and utility lines located adjacent to Public Forest Access Roads or the existing disturbed areas created to construct the well sites wherever possible. Exceptions must be approved by the Division of Lands and Forests. Additional surface disturbance associated with such construction will be considered in areas other than uneven-aged stands which are managed for closed canopy conditions. Surface disturbances such as pipeline construction will also be excluded from protected areas within these stands which are managed to exclude tree cutting and other disturbances.

Seismic Exploration

Seismic exploration is the search for mineral deposits by the recording and interpretation of artificially induced shock waves in the earth. Shock waves are generated by shallow borehole explosives, such as dynamite, or vibratory mechanisms mounted on specialized trucks (Pendleton 2008). These procedures are used to determine what subsurface structures are present and may help to define the extent and distribution of natural gas fields. The Division of Lands and Forests and the Division of Mineral Resources have developed a guidance document dealing with seismic exploration on State Forests.

Requests to use State Forest land to conduct geophysical (such as seismic survey), geochemical, and/or surface sampling procedures will require an approved lease and a Temporary Revocable Permit (TRP). Sampling procedures are less invasive than development operations and will be subject to DEC's seismic testing guidelines. Only the lessee, or parties authorized by the lessee, can be issued a TRP. Seismic exploration on State Forest lands, including lands under public rights-of-way, will not be allowed without a current lease and TRP.

ADDITIONAL RESOURCES

Guidelines for Seismic Testing on DEC Administered State Lands – 12/20/07, can be found at http://www.dec.ny.gov/docs/lands_forests_pdf/sfseismic.pdf



Natural gas storage well on Rock Creek State Forest in Steuben County



Public Involvement

This plan establishes statewide policy for the exploration and production of oil and gas on State Forest lands through a process of public involvement and review. As individual UMPs are developed, this policy will be included by reference.

Generally, the Division of Mineral Resources conducts public involvement activities prior to conducting a lease sale. Following the tract assessment previously mentioned, DEC's Division of Lands and Forests and Division of Mineral Resources will hold joint public meetings and solicit comments. Consideration of any new leasing on State Forests will be conducted in an open and transparent manner which will involve public meetings as part of the decision-making process.

Storage of Natural Gas

Underground storage of natural gas in New York is, generally, undertaken in either depleted natural gas production formations or in salt caverns, created through solution mining or purposely created for this use. There are currently six natural gas storage sites beneath State Forests: five in Zoar Valley MUA and one in Greenwood State Forest/Rock Creek State Forest. Gas storage under State Forest parcels has been occurring since at least the early 1960s under the terms of gas storage leases with DEC.

The northeastern portion of the country and New York State in particular, is already a large consumer of oil and gas resources. The demand for new natural gas storage in New York State is not likely to increase through the period covered by this plan.

Storage Policy

DEC's oil and gas production leases on State Forest lands do not permit gas storage, which is the temporary storage of gas produced elsewhere. In the case of a storage field proposal, the applicant would need to apply to the DEC to obtain a storage permit after leasing the necessary storage rights. A proposal may require a UMP amendment process, including additional public meetings and full compliance with SEQRA. Any proposal for gas storage development must be consistent with the objectives of this Plan.

Oil and Gas Laws and Regulations

The applicable laws relating to the exploration for and production of oil and gas from State Forests are:

- [Environmental Conservation Law Article 23](#)
- [Environmental Conservation Law Section 9-0507](#)

Regulations applicable to state lands leased for oil and gas production are found in [6 NYCRR Parts 550 – 559](#), inclusive.



MINERAL RESOURCES

Some pipeline/utility corridors may fall under the regulatory authority of the Department of Public Service, and as such are governed by a different set of laws:

- [Public Service Commission Law, Article 7, Titles 120 through 130](#), inclusive

ADDITIONAL RESOURCES

MOU regarding management of mineral resources on state lands along with assembled laws and regulations pertinent to oil and gas development is available at http://www.dec.ny.gov/docs/lands_forests_pdf/sfoilgasmou.pdf

Please note that facilities which are subject to an Article 7 review by the Public Service Commission are excluded, by statute, from the provisions of the State Environmental Quality Regulations (SEQR). The Article 7 review stands in place of the normal environmental quality review.

Environmental impacts related to oil and gas exploration and development on State Forests have been reviewed in the 1992 GEIS for oil and gas activity and its findings and supplemental findings for public lands; under the 2015 SGEIS and its findings; and within this plan. Gas exploration and development on State Forests will be in full compliance with SEQR and will be in compliance with the 1992 Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program.

A Memorandum of Understanding was established in 1986 between the Division of Lands and Forests and the Division of Mineral Resources establishing a framework for cooperation between the respective divisions on the management of mineral resources on state lands.

The applicable state laws relating to storage of natural gas on State Forest properties are:

- [Environmental Conservation Law Section 23-1103](#)
- [Environmental Conservation Law Section 9-0507](#)
- [Environmental Conservation Law Article 23, Title 13](#)

In addition, should these storage facilities store, or propose to store fluid minerals which are involved in interstate transport, they would be subject to regulation at the federal level by the Federal Energy Regulatory Commission.

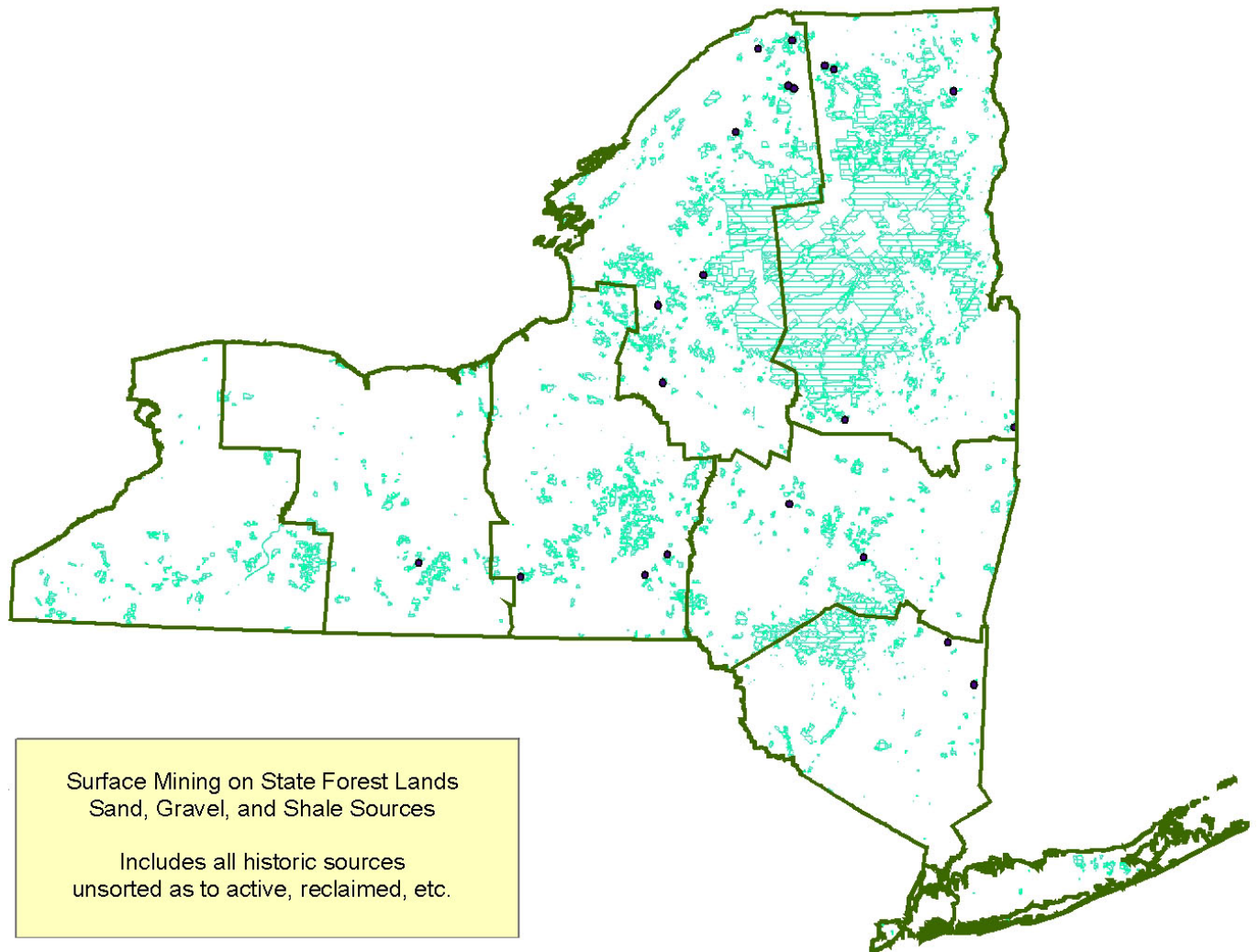
MINING

New York State is rich in minerals which are mined for industrial and construction uses. Under Article 7 of the New York State Consolidated Laws, any citizen of the United States may apply for permission to explore and/or extract any mineral on state lands. At present, there are no mining contracts, permits or commercial operations on State Forest lands across the state.



Surface Mining of Sand, Gravel and Shale

Historically, minerals including limestone, sand, gravel, shale, sandstone, bluestone, and other aggregate materials have been produced, statewide, from State Forest lands, both for use in development projects within the forests and for commercial sale. Most of commercial sales from State Forest properties occurred prior to state acquisition.



The type and amount of surface minerals present on State Forests is not large, however it is valuable for a variety of purposes. Surface minerals occurring on State Forest lands are generally reserved for administrative use for road building and surfacing material. The State Forest road system benefits the sale of forest products and recreation programs.



Underground Mining of Hard Rock Minerals

Metal ores and gem minerals, such as garnet, are mined chiefly in mountainous regions. Salt is extracted from rich deposits in central and western New York where extensive mines occur; both active and historic. Zinc and wollastonite are still being actively mined in the North Country region. Underground mining of lead, iron (in several forms) and graphite also occurred in both the North Country and Hudson Valley regions. Historically, some limestone (for cement) was mined from underground locations in the Hudson Valley region. The [Mined Land Reclamation Law \(MLRL\)](#) was enacted in 1975. Historic underground and surface mines that were affected prior to 1975 but not re-affected by mining activities after 1975 are not subject to the jurisdiction of the MLRL.

There is no existing underground mining on State Forest lands and no known impacts from historical mining activity. Mine subsidence and collapse have been an issue with historic mines, particularly in central and western New York. Subsidence from historic mines in the Adirondacks has occurred in the past and may pose a potential problem in the future on or adjacent to state lands.

Mining Policies and Guidance

Current DEC practice is to decline any commercial mining application(s) pertaining to State Forest lands, as the impacts from these activities are not compatible with the purposes for which Reforestation Areas were purchased. In the rare cases of larger deposits, a land exchange procedure may be appropriate. This could be handled as a “land for land” exchange or a “minerals for land” exchange, depending on the specific situation. This should be analyzed on a case-by-case basis for each UMP.

Small-scale surface mining may be permitted if DEC deems it necessary for infrastructure purposes. This mining activity will remain below the regulatory thresholds established in ECL, above which a Mined Land Reclamation Permit is required (1,000 tons or 750 cubic yards, whichever is less, removed from the earth during twelve successive calendar months; this is approximately equal to 40-50 tandem-axle (10-wheeler) dump truck loads). Therefore, the activity is not subject to jurisdiction under the Mined Land Reclamation Law and there is no requirement for a New York State mining permit.

If DEC proposes future mineral resource extraction within any Unit, then the Regional Forester/Operation Supervisor and Mined Land Reclamation Specialist will determine if a mined land reclamation permit is required before excavation begins. If it is determined that proposed annual extraction requirements will be greater than regulatory thresholds, then an application for a NYS mining permit, including detailed mining and reclamation plans will be prepared and submitted to DEC for review and approval before any excavation takes place.



If it is determined that a mined land reclamation permit is not required, but mineral resources will be extracted for infrastructure maintenance and construction necessitated by DEC, the basic mining and reclamation standards will be followed. If extraction takes place at any level on State Forest lands, the exact location of the area to be disturbed will be mapped and be incorporated in UMP planning until all sites are closed and reclaimed according to Division standards.

Mining Laws and Regulations

The applicable state laws relating to the exploration for and production of mineral resources from State Forest properties are:

- [Environmental Conservation Law, Article 23, Title 27](#) (Mined Land Reclamation Law), all sections
- [6 NYCRR Section 190.8 \(a\), \(g\)](#); also, if a Mined Land Reclamation permit is issued, [6 NYCRR Parts 420-425](#) would also apply

Underground mining is also regulated by the [Federal Mine Safety and Health Act of 1977 \(USC Title 30, Chapter 22\)](#) and the federal rules and regulations promulgated by the Mine Safety and Health Administration.

EMERGING ISSUES

Injection Wells (Disposal by Injection)

According to the United States EPA, “an injection well is a device that places fluid deep underground into porous rock formations, such as sandstone or limestone, or into or below the shallow soil layer. These fluids may be water, wastewater, brine (salt water), or water mixed with chemicals. Injection wells have a range of uses that include waste disposal, enhancing oil production, mining, and preventing salt-water intrusion.” (See EPA website http://water.epa.gov/type/groundwater/uic/basicinformation.cfm#what_is)

There are no injection wells located on State Forest lands. As disposal by injection becomes a more critical issue, proposals to drill new injection wells or use existing depleted production wells may arise. If and when such proposals are made, no decision will be made without an opportunity for public comment to be presented and an assessment of all potential environmental impacts. Although there are no injection wells on State Forests, there are several brine disposal wells in New York State. There are no wells in New York State that are permitted for the disposal of hydraulic fracturing fluids. Regardless of the substance being disposed of, this type of disposal requires:

- A SPDES permit from DEC’s Division of Water;
- Permission from US EPA to operate an Underground Injection Control disposal well;



MINERAL RESOURCES

- Permission from the Division of Mineral Resources to drill a new well or convert an existing well to this use (should an existing well be proposed for use).
- Written approval of the surface owner.

Carbon Capture and Sequestration

Carbon capture and storage is a means of mitigating fossil fuel emissions, based on capturing carbon dioxide (CO₂) from large point sources such as fossil fuel power plants, and storing it away from atmosphere by different means. Although CO₂ has been injected into geological formations for various purposes, the long-term storage of CO₂ is a relatively new concept. For more information on carbon sequestration and climate change please visit the Carbon Sequestration section of Chapter 3, [page 129](#) of this plan.

Geomechanically Pumped Energy Storage

Geomechanically pumped energy storage is an emerging green-energy storage technology in which water is pumped under pressure into non-hydrocarbon bearing formations. This pressurized water can then be stored and released to turn hydroelectric turbines to generate power during times of peak energy demand or when variable renewable energy is not available.

These emerging technologies (i.e., carbon capture and sequestration, and geomechanically pumped energy storage) have yet to be comprehensively evaluated for use with New York State's geology, but they are a potential activity for consideration.

ADDITIONAL RESOURCES

A DEC pamphlet explaining **Carbon Capture and Sequestration** is available at http://www.dec.ny.gov/docs/lands_forests_pdf/ccs_pamphlet.pdf

The impacts of these technologies are as yet unknown, as there have not been any long-term studies completed in the state. Useful rock formations, including areas with wells that reach depleted production formations, could be the subject of these types of potential proposals.

Production leases currently in place may not be sufficient for this use. Any proposals would be predicated on obtaining a storage lease for the property in question.

“MR” OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Mineral Resources (MR) Objective I - Provide for mineral resource exploration and development while protecting natural resources and quality recreational opportunities.

MR Action 1 – Apply a hierarchical approach that classifies areas of each State Forest into four categories as part of a tract assessment to be conducted prior to leasing.



Category A - Compatible with road and utility development.

Category B - High Forest Canopy Areas with one well pad per State Forest.

Category C - 250-foot stream and designated recreational trail buffers. Not compatible with well pad development; may be compatible with road and utility development.

Category D – Infrastructure Exclusion areas. Not compatible with well pad, road, or utility development.

MR Objective II – Clarify DEC’s position on outstanding issues affecting the management of mineral exploration, extraction, and transportation on State Forest lands.

MR Action 2 – Adapt the draft guidance for pipelines on State Forests to the DEC policy system and expand it to include guidance on strategies for dealing with existing pipeline corridors and establishment of new pipeline corridors. If the issue of existing unauthorized pipelines cannot be sufficiently addressed at the policy level, propose legislation to resolve the issue.

MR Action 3 – Finalize and adopt the current draft policy on seismic exploration

MR Action 4 – Adopt policies addressing disposal by injection, carbon capture and sequestration, and geomechanically pumped energy storage.

MR Action 5 – Adopt a policy on tract assessments for oil and gas leasing, based on mineral character and expected mineral activity, site condition, and public use.

MR Action 6 – Adopt a policy on water use for oil and gas extraction, based on information in the Division of Mineral Resources GEIS.

MR Objective III – Prioritize acquisition of the mineral estate wherever it is split from a State Forest tract.

MR SEQR Alternatives Analysis and Thresholds

The **preferred alternative** (also the **no-action alternative**) is for DEC to consider any nominations from the oil and gas industry for leasing on a case-by-case basis, conducting a tract assessment and public input meeting(s) prior to granting any new lease. The analysis process and mitigations detailed above in this section will be followed.

Another alternative would be to close State Forests to all future leasing. This alternative has not been selected because minerals leasing provides economic benefits and resources needed by society. Development on public lands, with heightened protections and oversight, has proven to be a compatible use of State Forests.

SEQR Analysis Thresholds:

The tract assessment process set forth in this Plan analyzes identified impacts, and establishes mitigation measures relating to oil and gas developments as it applies specifically to State Forests. Compliance with the guidelines of this tract assessment process



MINERAL RESOURCES

will avoid and minimize identified potential impacts resulting from mineral resource activities.

Further site-specific environmental review under SEQRA will be required for any proposals for development on State Forests involving:

- natural gas well drilling plans which exceeds well pad densities of greater than one well pad in 320 acres or which does not comply with limitations identified through a tract assessment;
- proposals for carbon capture and storage;
- proposals for geomechanically pumped energy storage; or
- waste-water disposal.



SUPPORTING LOCAL COMMUNITIES

TOURISM

State Forests can be an economic asset to the local communities that surround them. The [Outdoor Industry Foundation's \(OIF\) website](#) estimated that a little over half of Americans participate in at least one outdoor recreation activity of some sort in 2019. When they do, they spend money, generate jobs, and support local communities. When recreationists travel to visit State Forests, they often spend money for such things as gas, food, lodging, supplies and equipment. The amount they spend depends on how far they have travelled to reach their destination, how long they stay, and what activities they undertake while they are there.

The size of this economic contribution is difficult to determine without direct surveys of State Forest users. There are many estimates of how much money outdoor recreationists spend each year. The [OIF website](#) also estimates that in 2019, outdoor recreation generates nearly 291,000 direct jobs, \$15.9 billion in wages and salaries, and a total value of \$29.2 billion. Unfortunately, there is no way to tell what portion of that amount should be attributed directly to the existence of State Forest lands.

Local communities can take advantage of the presence of State Forests by encouraging businesses to cater to State Forest users as part of their business planning. Local chambers of commerce or regional RC&D councils might undertake surveys of State Forest recreationists to find out what goods and services they would be most likely to purchase during their stay in the area.



Nelson Swamp Unique Area in Madison County has accessible hardened trails, a viewing platform and signage that helps provide a positive experience for visitors and greater potential for interpretive tours



SUPPORTING LOCAL COMMUNITIES

TAXES PAID

The New York State Real Property Tax Law provides that all Reforestation Areas (96% of all State Forests) are subject to taxation for school and town purposes. Certain reforestation areas are also subject to taxation for county purposes. Most Unique Areas and Multiple Use Areas (4% of all State Forests) are exempt from taxation. All of these lands are assessed as if privately owned.

FIREWOOD

The provision for local individuals to enter State Forests under a timber sale agreement to cut firewood for their use has been an important longstanding tradition in many rural communities. This tradition, as well as the opportunities it presents for collaboration, education, outreach and community support, is supported by the Division of Lands and Forests. Unfortunately, as staffing levels continue to decrease these programs have been cut back. The DEC will make an effort to continue this program, though delivery of the program may be inconsistent and difficult to maintain at current staffing levels.

COMMUNICATION AND EDUCATION

It is important that local governments and stakeholders are notified of UMP meetings and included in the long-term planning process to integrate their concerns and desires whenever possible. Staff will continue to work with local governments and communities to develop facilities that are appropriate for State Forest lands, and will attract new users who will support the local outdoor tourism community. Communication and education would be enhanced by the employment of more seasonal stewards, as mentioned elsewhere in this plan.

“LC” OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Supporting Local Communities (LC) Objective I - Provide revenue to New York State and economic stimulus and jobs for local communities and businesses.

LC Action 1 – Increase the level of timber harvesting on State Forests at least to 1990’s levels, not to exceed the statewide sustainable threshold.

LC Action 2 – Support local governments and school districts through payment of property taxes according to law.

LC Objective II – Improve local economies through forest-based tourism.

LC Action 2 – Provide local chambers of commerce and regional RC&D councils information about State Forests and the opportunities they present.

SUPPORTING LOCAL COMMUNITIES



LC Objective III – Protect rural character and provide ecosystem services and open space benefits to local communities.

LC SEQR Alternatives Analysis

Preferred alternative: Continuing to support local communities on an economic and environmental basis (the **no action alternative**) has been chosen as the preferred alternative. The vast majority of the goals in this plan directly or indirectly support local communities by enhancing local economies and quality of life.



CHAPTER 6

FOREST MANAGEMENT AND HEALTH



FOREST PRODUCTS

TIMBER

Early forestry activities on State Forests focused on planting and growing trees rather than selling them, as much of the land acquired was abandoned farmland (hence the category of Reforestation Areas). The Civilian Conservation Corps (CCC) planted millions of seedlings on State Forests during the 1930s. Non-forested areas that were not planted by the CCC reverted naturally to forest. Many of the properties acquired did have some forested areas, as most farms had a woodlot which served as a source of heating fuel for the home.

During the 1940s and 50s, the sale of timber from State Forests dealt primarily in firewood, fence posts, poles, and Christmas trees, due to the fact that the majority of the stands available for management were of smaller diameter classes. Available markets and staffing were a boon to forest management efforts, since thinning and tending operations of relatively young stands could be accomplished through commercial sales, rather than having to pay contractors to do the work.

Over time the acreage of larger timber increased and with it the proportion of sales that were comprised primarily of sawtimber. It was not until the mid-1990s that sawtimber sales comprised more than half of the acreage harvested in a given year. The demand for smaller wood continued to exist, in the form of firewood and pulpwood markets, and to a lesser extent, post and pole sales.



Cut logs produced from State Forest lands

Existing Conditions and Trends

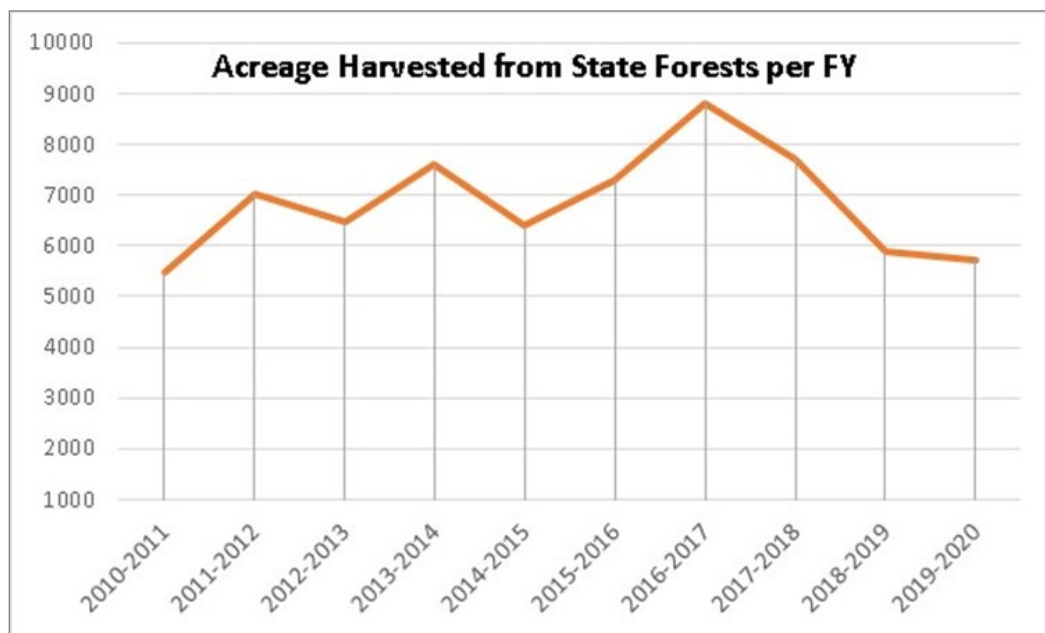
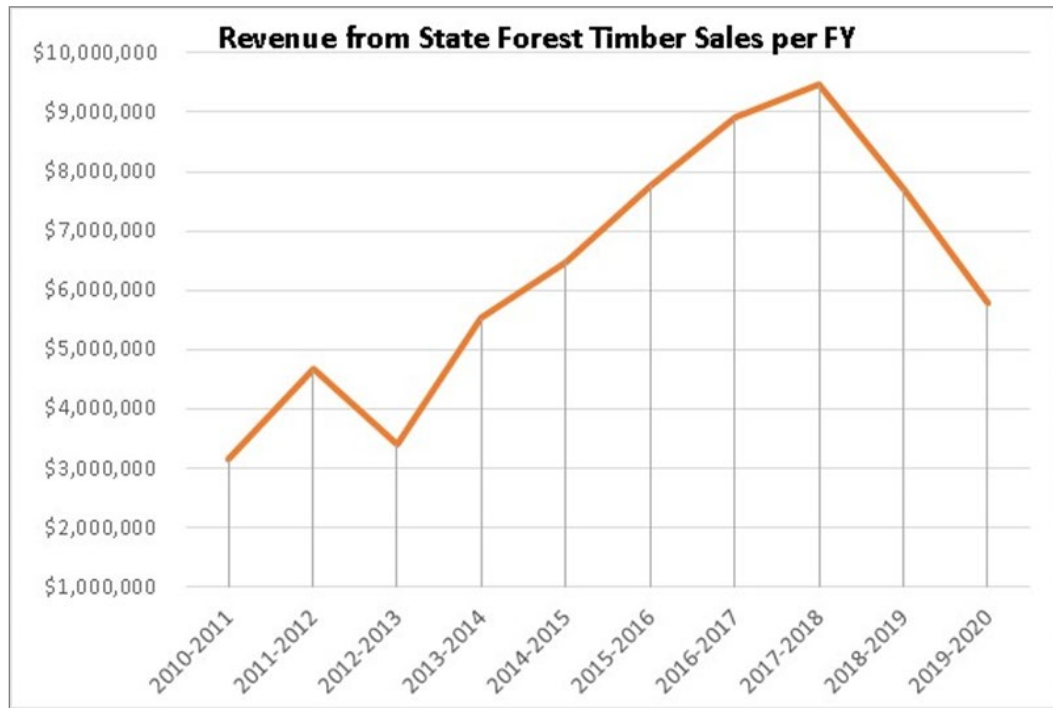
During the ten-year period between 2011-2020, sales of forest products from State Forests generated average revenues of \$5,888,923 per year. This represents roughly 2-3% of the total value of forest products harvested from public and private lands in New York State each year. The highest amount of revenue from forest product sales on State Forests for any one year during that period was \$9,716,713 in 2018, and the lowest was \$2,819,930 during 2012.

The acreage harvested during that same period varied widely, the highest area was 8,805 acres harvested in FY 2016-2017, and the lowest area was 5,471 acres harvested in FY 2010-2011. The average number of acres harvested per year was 6,842. This average is approximately 2-3% of the total forested acreage on public and private lands that receives some form of harvest each year.

FOREST PRODUCTS



The charts below highlight how the correlation between the more acres DEC was able to treat, directly related to an increase in revenues. The previously mentioned bump between FY 2015-2016 and FY 2017-2018 is a most likely a response to the short-lived Timber Sale Initiative program, which saw a temporary increase in forestry staff across the state.





FOREST PRODUCTS

The charts also highlight a precipitous fall in acres treated following fiscal year 2016-2017, and the resulting drop in total FY revenue continues to follow that trend.

The timber market tends to cycle up and down with the rest of the economy. This is reflected more clearly in the revenue figures, rather than in the acreage figures. As timber prices have dropped, the amount of revenue received by the state from the sale of timber has decreased accordingly, even in the face of a slight increase in harvesting activity. Due to the COVID-19 pandemic causing a shortage in the timber “pipeline,” there was a rise in timber values across the market. The timber values have already started to plateau and even drop, in some instances.

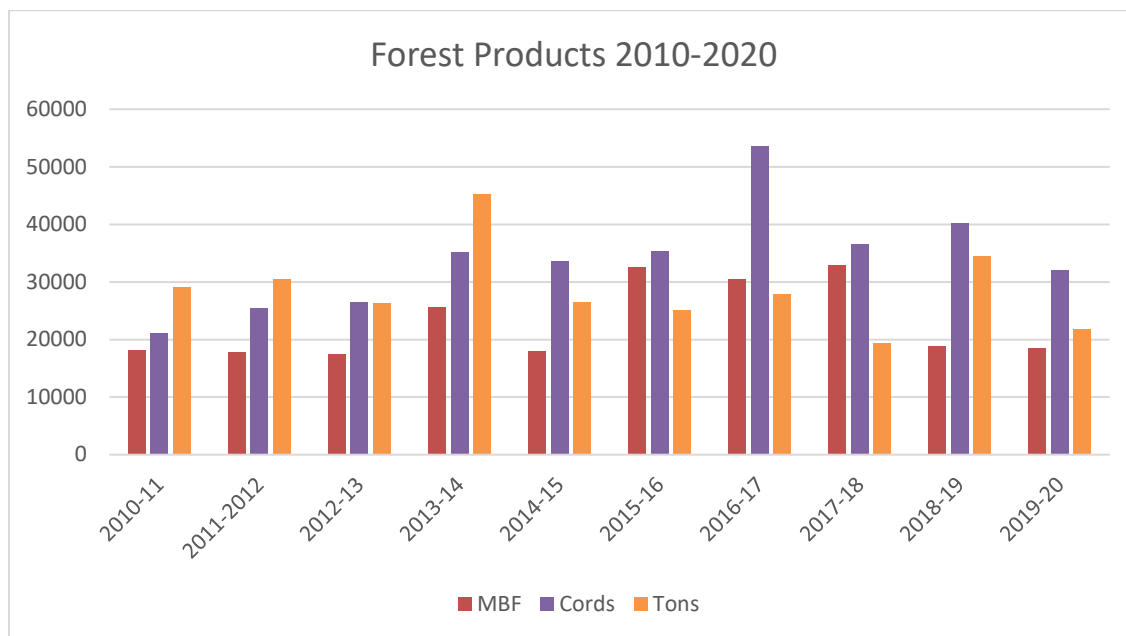
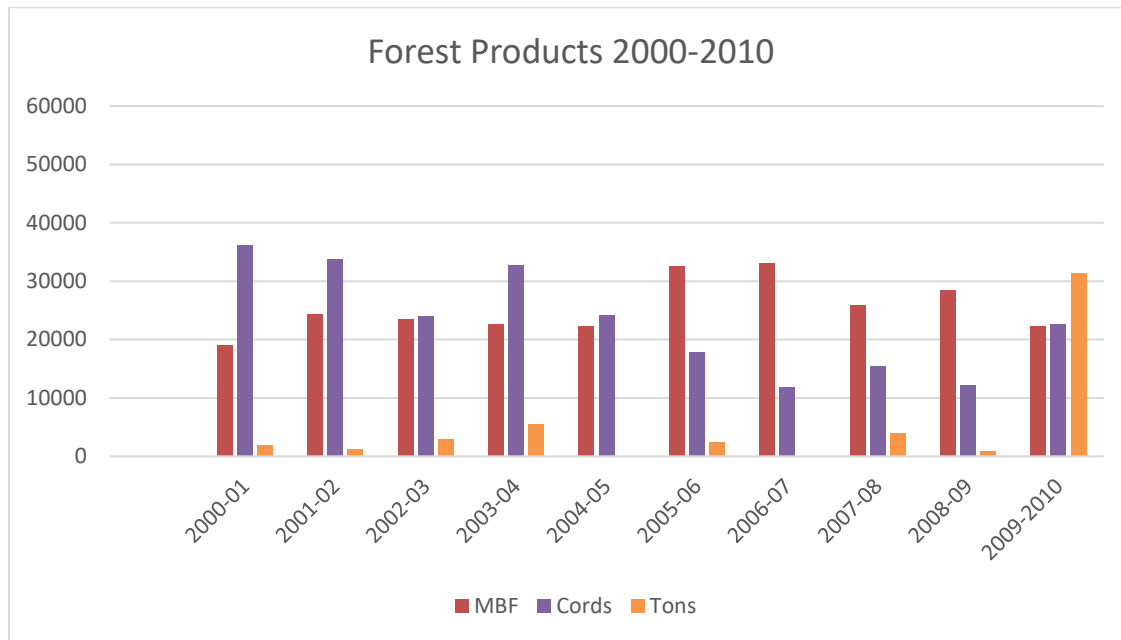
Timber Harvesting and Staffing

The number of acres harvested in a given year is affected most by staffing levels and the occurrence of events that necessitate taking staff time away from the timber sale program. Current (as of early 2021), regional staffing levels show 44 Forester 1’s, 3 Forestry Tech 3’s, 14 Forestry Tech 1’s (year-round seasonal staff), and 3 Contract Staffers. In addition, Central Office staff consist of 1 Forester 3, 1 Forester 2, 1 Environmental Program Specialist, and 1 Contract Staffer.

Growth Versus Removal

Another factor that is likely to affect the amount of timber harvested in future years is the [2015 report](#) prepared by SUNY-ESF estimating the periodic annual growth increment on State Forests. The report indicates that approximately 21% of the timber added through annual growth is not removed through harvesting. (To be clear, Forest Preserve lands were not factored in this study.) The report concludes, among other things, that “overall forest growth for the State forest lands is a positive net growth of 0.248 MBF/ac/yr (equivalent to 188,360 MBF/ac/yr). This estimate is greater than the overall PAI estimate of 0.119 MBF/ac/yr for State forest lands in 2010 (Bevilacqua & Bueno, 2010). (Note: MBF stands for thousand board feet.) This means that **after** accounting for mortality and harvest removals, the volume of timber on State Forests is increasing by over 72 million board feet per year. The 2011 SPSFM contained a rough estimate of around 43 million board feet of timber harvested annually from State Forests between 2000-2010. As a caveat, the plan highlighted the very difficult nature of equating MBF, cords, and tons of timber in order to make a total volume calculation. This iteration of the SPSFM sought to take some of that guess work out of the equation by simply comparing each of the 3 categories from 2000-2010 period to the 2011-2020 period to see how things have changed. Below you will see the two charts highlighting those figures.

FOREST PRODUCTS



There are some noticeable differences between the two graphs. The first and maybe most noticeable, is the nearly 6-fold increase in tonnage of timber for chips between the original plan and the current version. Another big difference highlighted here, is the sizeable increase in timber harvested for pulp wood products. Lastly, there was a drop slight drop off in mbf harvested for lumber. One of the primary reasons for the shift in timber removals stems from the numerous mature softwood plantations on State Forests (many are over-mature and starting to decline in health and vigor) that are being harvested in order to capture their volume



FOREST PRODUCTS

and value before they succumb to natural mortality. It also highlights the increased demand for pulp wood and wood chips. These charts also speak volumes about what regional staff are able to produce, in light of dwindling resources.

Comparing harvest rates to the net growth rate of the forest provides a valuable yardstick to measure sustainability. However, it must be recognized that sustainable management relies more on promotion of biodiversity, high-quality habitat and forest resiliency than a simplistic approach of cutting below the net growth rate. Therefore, on a year-over-year or unit-level basis, removals may need to temporarily exceed the growth rate to create the desired future conditions or to respond to natural disasters and invasive outbreaks. An example would be the ice storms and blowdowns of the late 1990's that necessitated large-scale salvage harvests. A more recent example can be seen in the salvage cutting of ash across the State, due to the impacts from the emerald ash borer.

Public Input

Overall public input regarding the State Forest timber sale program is mixed, and varies widely based on the geographic location in question. Not surprisingly, in areas closer to urban population centers, public comments demonstrate that a higher value is placed on the availability of public land for recreation, whereas comments in more rural areas typically show a propensity to place more worth on the jobs and economic input that State Forest lands can generate for local communities.

Public comments received during the different planning process for each UMP, indicate that people want to know that timber harvests are conducted in an environmentally responsible and sustainable manner. Some of the specific areas of concern expressed are:

- Water quality
- Soil erosion
- Wildlife habitat
- Biodiversity
- Effects on recreational facilities
- Impacts on adjacent public lands
- Visual impacts

One common theme is that many members of the general public are willing to accept timber harvesting on public land, but would like to know that controls are in place to make sure the harvesting is done responsibly, and would also like to know that there are areas of state land that will not be logged.



These recently harvested logs are stacked among residual trees



Comments are received from time to time, either during the UMP process or in reaction to ongoing harvest operations, indicate opposition to all timber harvesting on State Forests. In some cases, these individuals have a change of mind if they have an opportunity to discuss their concerns directly with DEC Foresters, and gain a better understanding of the ecological goals behind the harvest.

While there is a small number of comments received from time to time indicating opposition to



all timber harvesting on State Forests, comments opposing specific harvesting practices such as clearcutting are more common. Further discussion regarding clearcutting and other forest management tools is found under Active Forest Management on [page 95](#).

There is also a segment of the population that strongly supports timber harvesting on State Forests. This obviously includes members of the timber industry, but also encompasses those people who understand that conservation of natural resources allows the use of those resources so long as they are not being depleted.

Timber Harvesting Standards and Guidance

Current guidance regarding timber harvesting has been compiled into the [Sale Guidance folder](#) on SharePoint, and the [Timber Sales Manual](#) (updated 2020), are available on the SF SharePoint page or can be requested from BFRM CO staff. These resources will continue to be updated as policies and guidance are clarified.

Changes to policies, standards and guidance

Over the last 10 years there have been some changes to the policies, standards and guidance relating to timber harvests on lands managed by the Bureau of Forest Resource Management (BFRM). One such change has to do with the elimination of references to the 45-year-old DEC Timber Management Handbook that were throughout the former Strategic Plan. During the planning process for the SPSFM update, the Timber Management Handbook was also reviewed for updates. However, during this process, BFRM staff noted the relevant guidance from the old handbook was already incorporated into the updated Timber Sales Manual or other sections of the updated SPSFM, making it redundant. A copy of the Timber Management Handbook can be requested from BFRM CO staff, if needed.

Another document that has undergone some changes over the last 10 years, is the [Notice of Sale](#) (NOS) (located in the [Core Components folder](#) on the SF SharePoint page). The following updates have happened since the initial SPSFM was drafted:

- In response to a Minor Corrective Action Request during the 2013 Forest Certification Audit, language establishing a 5% residual damage threshold throughout a sale area was included.



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- A section was added for the Herbicide Action Plan. This section effectively defines the targeted vegetation, application methods, chemicals used and the allowable applications dates for any herbicide work related to the sale.
- In 2007, New York State passed legislation establishing the Diesel Emissions Reduction Act 2006 (DERA.) This Act amended the Environmental Conservation Law (ECL) by adding [Section 19-0323](#) which requires the use of best available retrofit technology (BART) and ultra-low sulfur diesel fuel (ULSD) for heavy duty vehicles owned or operated by, including on behalf of, state agencies and state or regional public authorities. DEC has promulgated regulations ([6 NYCRR Part 248](#)) to provide guidance on provisions of the law. A successful bidder must comply with the specifications and provisions of [ECL Section 19-0323](#) and [NYCRR Part 248](#), which require the use of BART and ULSD, unless specifically waived by DEC. These requirements are now documented in the NOS
- Inclusion of Sexual Harassment Prevention Certification language into the NOS. [State Finance Law §139-I](#) requires bidders on state procurements to certify that they have a written policy addressing sexual harassment prevention in the workplace and provide annual sexual harassment training (that meets the minimum requirements of section two hundred one-g of the NYS Labor Law and Department of Labor’s model policy and training standards) to all its employees.
- Addition of language further refining and specifying the reporting standards for Fluid Leak Controls. All petroleum leaks need to be reported, excepts spills that meet all of the following criteria:
 1. The quantity is known to be less than 5 gallons; **and**
 2. The spill is contained and under the control of the spiller; **and**
 3. The spill has not and will not reach the State’s water or any land; **and**
 4. The spill is cleaned up with 2 hours of discovery.

One last notable policy change, deals with the use of pesticides on State Forests in relation to forest certification. In August 2019, a revised [Forest Stewardship Council \(FSC\) Pesticides Policy](#) (also found in the [Green Certification folder](#) in the Forest Certification section of SF’s SharePoint Page) regarding the use of pesticides on certified lands was published and became effective. In summary, the policy states that any pesticides applied to FSC certified lands (not specifically prohibited by the policy) must have an Environmental and Social Risk Analysis (ESRA) completed.

Laws, regulations and policies

Environmental Conservation Law ([ECL](#)) [§ 9-0505](#) authorizes DEC to “sell the trees, timber and other products” from State Forest lands. Trees to be sold must be designated before the sale, and must be sold for not less than fair market value. Sales over \$25,000 must be approved by Office of the State Comptroller (OSC). Any sale for more than \$500 must be made to the highest responsible bidder through an open public bidding process. Sales of products valued at less



than \$500 may be conducted without bidding the sale, so long as Department staff can provide that the state receives fair value for the product being sold.

Timber Harvesting Impacts and Mitigations

The practice of timber harvesting inherently includes the potential for significant environmental impacts if specific mitigation measures and BMPs are not properly employed. Some of the resources that are potentially impacted and related mitigations are listed below.

- Forest soils
- Water quality
- Aesthetics
- Rare and endangered species and unique natural areas
- Cultural and historic sites
- Recreational facilities and assets

An increase in the size of the program would likely increase the potential for water quality impacts, but the use of Best Management Practices and adherence to the Special Management Zone Rules should adequately ensure that water quality impacts would be minimal. Standard reviews of the Natural Heritage Database should minimize potential impacts to known instances of protected species and sensitive habitats. In fact, the inclusion of pollinator friendly seed mixtures in post-harvest site remediation guidance for landings, skidder trails, and along forest access roads can be a boon for many native species. At the same time, native grass mixtures would provide help with soil stability, native wildlife browse, and combat invasive grasses that have been an increasing problem. Visual impacts could increase, particularly in association with even-aged management systems, but could be mitigated using appropriate screening measures and configuring sale layouts to minimize such impacts. A larger number of timber harvests could result in greater conflict with recreational users. This impact could be mitigated by better communication with the public on upcoming harvests, and better education about benefits of timber management.

ADDITIONAL POLLINATOR RESOURCES

Pollinator friendly links:

- NYS State Pollinator Plan - https://www.dec.ny.gov/docs/administration_pdf/nyspollinatorplan.pdf
- USFS - <https://www.fs.usda.gov/treesearch/pubs/53180>
- FAO - <http://www.fao.org/sustainable-forest-management/toolbox/sfm-home/detail-events/en/c/1279695/>
- <https://sdg.iisd.org/commentary/guest-articles/forests-and-pollinators-close-companions-with-a-shared-destiny/>
- <https://blogs.oregonstate.edu/siskiyouwoodlands/2020/09/22/bees-in-the-woods/>
- <http://xerces.org/pollinator-resource-center/northeast>



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NON-TIMBER FOREST PRODUCTS

Non-timber forest products have been a very small part of the sales program. The following products have been sold from State Forests at one time or another:

- Maple Sap
- Hay
- Shrubs for landscaping
- Scrap metal (such as derelict vehicles, unusable metal structures, etc.)

Demand for most non-timber forest products has historically been very limited. Those sales that have taken place have been conducted using the local sale process (i.e., the value of the sale has been less than that which would require OSC approval). There is very little change anticipated in the level of activity in this area, with the exception of maple syrup tapping, which is addressed below.

Perishable items, such as mushrooms, ginseng, and other plants or fruits, could be sold under the authority of [ECL § 9-0505](#), but have not been because of logistical limitations. Existing staff levels do not permit the close sale supervision that would be required to ensure that contractors only removed the amount of material agreed to in the sale contract.

Support for selling non-timber products has been quite localized. There was a brief time period when the regulations were being drafted that comments were received supporting the picking of mushrooms on State Forests, mainly related to proposed regulations that would allow a minimal amount of such gathering. While not explicitly stated, the gathering of items found on State Forest lands for commercial use is not allowed, however, items taken for personal consumption **ONLY**, are permitted.

Hay

Over the years, a number of fields on State Forests have been managed to provide hay for use by local farms. In all cases, these were fields that were present at the time of acquisition and were considered important for the support of area agricultural business. Over time, management of these open fields has evolved to use the sale of hay as a means of maintaining grassland habitat. All hay sales are now managed with input from DEC biologists to prohibit hay cutting and harvesting during peak nesting periods.

To protect soil productivity and fertility, hay will only be sold under multi-year contracts which include requirements for soil testing and any indicated liming or fertilization needs. When resources are available and soil fertility and habitat quality are in decline, DEC may hire contractors to manage grassland in order to rebuild and maintain fertile soils by: cutting and mulching or allowing the grass to remain on site; liming and fertilizing in accordance with soil tests; or replanting.



Maple Syrup

Limited tapping of maple trees for sap, using buckets, has been permitted on State Forests under forest product sales contracts for over 70 years, as authorized by [ECL § 9-0505](#). In the 2006 Legislative session, an amendment was made to [ECL § 9-0505](#) which specifically listed maple sap as a forest product. Although this amendment did not actually grant new authority to the DEC to sell maple sap, it has sparked interest from maple syrup producers.

Existing Conditions and Trends

Since the amendment to [ECL § 9-0505](#), interest in producing maple sap from State Forests has increased. The Empire State Forest Products Association has expressed support for tapping on DEC lands, under certain conditions, and the New York State Maple Producers Association has also urged DEC to implement a tapping program.

It is possible to designate certain stands as sugarbush, much the same way we designate other stands for specific management considerations. For further information reach out to BFRM Central Office staff.

Potential for Maple Tapping on State Forests

There are areas on State Forests that could be considered ideal for tapping if staffing resources are available and the necessary access roads were to be well drained and stable during spring thaw. There are areas of State Forests which are reserved from harvesting; therefore, the economic losses (to timber value from tapping) would not have to be considered. Potential stands would be dominated by sugar and red maple trees and located on steep slopes, growing in poor soils, or dedicated to other goals such as the development of late-successional habitat (*refer to [page 53](#)*). The ideal maple stands could be composed mainly of trees that have developed in relatively open growing conditions, and as a result, have little potential for developing high quality sawtimber or veneer values.



State Forests are legislatively dedicated to multiple uses. It is unlawful for DEC to allow any use that by its nature excludes all other uses. Semi-permanent installation of tubing lines, lasting through multiple seasons or years, could prevent other users, such as hunters from utilizing an area for extended periods. This would be considered an exclusive use. Therefore, DEC will only consider maple tapping that involves collection of sap with a system that will not inappropriately preclude the use of the area by others.



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The UMP process will be used to identify potential maple tapping stands, considering the above criteria and staff availability. This approach provides a transparent decision-making process and allows other user groups to express their viewpoints.

If interest is expressed from a maple producer, maple tapping contracts and guidance have been developed for staff use and are available on SharePoint at:

https://nysemail.sharepoint.com/:w:/r/sites/DECInSite-DLF/_layouts/15/Doc.aspx?sourcedoc=%7B90734F9D-F974-44BB-9BEC-97227F4A068D%7D&file=mapletappingcontractdraftshpc.docx&action=default&mobileredirect=true.

Carbon Credits from State Lands as a Non-Timber Product

Understanding the changing nature of how business is done is essential to remaining adaptable in a changing climate. Modernizing DEC's position on what is considered to be a non-timber product could create a market in NYS for carbon credits. Earlier in this section assessments showed that State Forests are stocking an additional 111 mbf timber volume annually, on top of the 2010 plan's assessments for a total of 188 mbf over the business-as-usual scenario. These figures highlight the availability of possible credits to be sold. Being able to tap into this market could provide necessary resources, which could then be reinvested to further boost both the public and private land management capabilities of BFRM.

"FP" OBJECTIVES, ACTIONS AND SEQR ANALYSIS

Forest Products (FP) Objective 1 – Sustainably manage State Forests such that no forest resource is used or removed at a rate greater than the rate at which it is produced, and such that the overall quality of all resources is maintained or improved.

Actions related to timber management:

FP Action 1 – Harvesting on State Forests will be conducted at a rate which does not exceed annual net growth rates as established by the 2010 SUNY College of Environmental Science and Forestry study of the periodic annual increment on State Forests, until such time as additional data is collected and analyzed. Harvesting rates will be established on a regional basis by the Bureau of Forest Resource Management and incorporated into annual work plans.

FP Action 2 (also AFM 2) – The original 2010 SPSFM sought to re-establish a statewide system of permanent sample plots on State Forests to provide an accurate and detailed picture of forest growth, mortality and removals (harvests) following the same protocol and methodology as used to develop the forest statistics for New York's forests by the US Forest Service Forest Inventory and Analysis Unit. The goal to establish these plots by 2013 was not achieved. DEC will continue to investigate procuring funding and/or staffing resources adequate enough to accomplish this goal.

FP Action 3 – Continue using SFID data to calculate the sustainable harvest threshold once every five years.



FP Action 4 (also AFM 1) – Manage forests using timber sales to improve forest health, increase carbon sequestration rates, increase the diversity of species, enrich habitats and diversify forest stand structure in order to enhance the resiliency of ecological systems and forest sustainability. Harvests will be planned in such a way as to develop a wider range of forest successional stages. To accomplish this action, UMPs will develop harvesting plans and schedules.

FP Action 5 – Invasive species BMP language has been included in all forest product harvest and construction contracts, to protect State Forest lands from the introduction, establishment and spread of invasive species.

Actions related to non-timber forest products:

FP Action 6 – Follow guidance and standards that have been developed when identifying stands to be considered for maple syrup production. This information can be found on our SharePoint page.

FP Objective II – Educate the public about the benefits of silviculture.

FP Action 7 - If funding becomes available, develop and publish brochures explaining the benefits of silviculture.

FP Action 8 - As opportunities arise, demonstration areas should be developed to provide education about silvicultural activities undertaken on State Forests.

FP Action 9 – Explore the possibility of setting up a pilot program to sell carbon credits from State Forests, which could be reinvested in the program.

FP (Timber Harvesting) SEQR Alternatives Analysis and Thresholds

In the most basic terms, there are three possible alternatives to the current timber harvesting program: increase harvesting to the sustainable levels that occurred in the 1990's, discontinue or decrease the size of the program, and continue the harvesting program in its present form (the **no-action alternative**).

Another alternative would be discontinuing or decreasing the size of the program, would reduce DEC's ability to meet ecological objectives such as: improving the biodiversity, health, productivity, and sustainability of State Forest lands; increasing recreational opportunities; soil conservation; water quality protection; carbon sequestration; and wildlife and fish habitat improvement. The economic consequences of not conducting timber sales are foregoing revenues to the state and missing opportunities to stimulate local economies. For these reasons, this alternative has not been chosen.

The **no-action alternative**; continuing the program in its current form and at its current activity level is not likely to produce any adverse environmental impacts that are not addressed in other sections of this plan. However, similar to the alternative of reducing the program, this alternative would forego the opportunities to meet ecological objectives and stimulate local economies.



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Preferred alternative: Increasing the size of the program to the sustainable levels that occurred in the 1990's would obviously mean a larger volume of wood being harvested and an increase in net revenue. According to the SUNY-ESF report referenced above, current harvest volumes could be doubled without exceeding growth. In addition, harvesting levels will need to increase in order to accommodate ecological goals established in this plan, such as dealing with aging plantations, invasive species, and the need for maintained biodiversity.

SEQR Analysis Thresholds: Timber management and harvesting procedures, levels and strategies, as established in this section will avoid and minimize potential impacts to the maximum extent practicable and no further SEQRA review will be conducted, except as discussed elsewhere in this plan. SEQR analysis and thresholds for specific harvesting methods and use of pesticides to accomplish plantation management goals have been addressed in the Active Forest Management section. Timber harvests shall be conducted only where DEC foresters can ensure that harvest activity conforms to the sustainable management guidelines described herein.

FP (Non-timber Forest Products) SEQR Alternatives Analysis and Thresholds

The alternatives for the sale of non-timber forest products are similar to those for the timber sale program: increase the size of the program, discontinue or decrease the size of the program, and continue the program in its present form (the **No Action alternative**). Given the extremely small size of the program, discontinuing it and continuing it in its present form are nearly identical options, and will be treated as such for the purposes of the following discussion.

Increasing the size of the program is not likely to have significant environmental impacts, so long as the program is not increased to the degree that the amount of products being sold is greater than the amount being produced. Since the program is miniscule at present, a substantial increase would be necessary to reach a point where resources were being unsustainably extracted. This alternative has not been chosen due to staffing constraints and potential impacts on other uses.

Preferred alternative: Continuing the program in its current form (no action) will have no significant environmental impacts, due to the small extent of operations undertaken in the program, the small volume of resources being harvested, the renewable nature of those resources, and the small size of the equipment used to harvest them.

SEQR Analysis Threshold: Management strategies established in this section for non-timber forest products, under the preferred alternative will not create significant adverse impacts and no further SEQRA review will be necessary.



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Plantations on state land fall into two categories: softwood/conifer plantations and hardwood plantations. Most plantations established on state land are conifer plantations comprised of various spruce, pine, and larch species. Conifer plantations of other species, such as cedars and firs, make up a very small component of the conifer plantations on state land. The amount of acreage that has been planted with hardwood species such as oak and locust is also very small. In light of this, most of the following information will pertain to the management of spruce, pine, and larch plantations.

History of Plantation Establishment

Beginning in 1929, to solve the serious problem of soil erosion on newly acquired Reforestation Areas, a massive tree planting campaign using labor provided by the Civilian Conservation Corps (CCC) was used to establish vast plantations. The CCC planted millions of trees, primarily conifer species, on hundreds of thousands of acres of reforestation areas in the 1930s and 40s.

Department work crews and crews from correction camps also planted trees in the 1950s, 60s and 70s on reforestation and multiple use areas. These conifer plantations have helped provide landscape-scale species diversity on State Forests that is seldom found on private land. The mix of natural hardwood stands and conifer plantations found on State Forests have created diverse wildlife habitat as well as aesthetically pleasing forest landscapes.



Civilian Conservation Corps crew planting seedlings on Palmer's Pond State Forest in Allegheny County, 1949.

There are also some areas where hardwood trees were planted when certain State Forest lands were acquired. Plantations of red oak, sugar maple (hard maple), white oak, and black walnut can be found on some State Forests. Some of these hardwood plantations have not fared well, while others have thrived, depending on site/species compatibility. There are also a small number of plantations of white cedar, red cedar and black locust that have been successfully established on State Forests.



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Importance of State Forest Conifer Plantations on the Landscape

Since the establishment of the State Forest system, plantations have helped control erosion and improve water quality, provided species and habitat diversity on the landscape, and contributed to local economies by helping to establish a segment of the forest products industry that utilizes conifer species. Most of these benefits were goals outlined in the Reforestation Law. DEC has met these goals in the past and will continue to meet these goals through sound forest management, following established standards and procedures for managing plantations.



Photo from a 1929 red pine planting on R. Milton Hick State Forest in Otsego County.

Conifer plantations are invaluable on State Forests in part because they provide a type of habitat that is not commonly found on the landscape. Maintaining conifer/conifer-hardwood mixed stands is an extremely important component of ecosystem management. Conifer stands, whether natural or planted, satisfy a variety of wildlife needs. Some species derive most or all of their year-round requirements from conifer stands, while an even greater array of species incorporate conifers as an essential or highly sought-after component of their habitat on a year-round or seasonal basis. Examples of such species include snowshoe hare, spruce grouse, pine martin, fisher, ovenbird, Cooper's hawk, and northern saw-whet owl. Conifers provide thermal cover in the winter and escape cover year-round. The potential value of plantations becomes particularly important because of the extensive loss of native conifers due to past demands and harvesting practices, and because of current and future threats from forest pests such as hemlock woolly adelgid. The limited amount of early-stage growth of native conifers, particularly of hemlock, limits the abundance of many wildlife species. Management programs that provide for the creation and maintenance of several stages of conifer growth (both natural and planted) are essential to the needs of many wildlife species and desirable for the maintenance of a high wildlife species richness.



A conifer plantation tree canopy viewed from the forest floor.

Forest products produced by conifer plantations include dimension lumber, softwood pulpwood, and unique forest products such as high-quality utility poles, fence boards, and cabin

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logs. DEC's active management of conifer plantations has resulted in trees that are healthier, have a larger average diameter, and are of a higher timber quality than trees in conifer plantations that are located on private lands, which are often left unmanaged. These qualities make conifers sold from State Forests highly sought-after by the forest products industry.

Plantations require an investment of resources in order to plant the conifers and then prevent them from being outcompeted by hardwoods that will naturally try to occupy the site. Similar to young natural hardwood forests, as young plantations grow and mature, resources are needed to release the more vigorous, healthy trees from competition with their less healthy neighbors. In the case of plantations, however, such investments in active management result in significantly more volume of timber per acre than can be found in actively managed hardwood forests. Therefore, the return on the investment required to establish and maintain plantations is high.

Hardwood plantations also offer varied benefits to wildlife. During the establishment and stem exclusion stages, the most pronounced benefit of young, dense hardwood plantations is protective cover from predation for birds, small mammals, reptiles, and amphibians. Some species of owls and raptors, including the barred owl, great-horned owl, northern goshawk and the broad-winged hawk, have difficulty navigating through the dense saplings and poles which in turn provides natural protection for their prey.

As hardwood plantations mature, nut producing species such as walnuts, oaks, and hickories begin producing mast crops which, are invaluable to a many wildlife species as a food source, while species which produce berries, such as black cherry, benefit many bird species. The legumes produced by black locust can be an important food source for bob-white quail, eastern cottontail rabbits, squirrels, white-tailed deer, and wild turkey, not to mention that honeybees produce an excellent honey from the flowers of black locust. As more species begin feeding on these fruits and nuts, they also act as vectors for dispersing seeds. Blue jays in particular are renowned for their acorn burying habits (Jacobs, 2006.).

As the trees grow, they begin outcompeting each other. Some trees will thrive and grow into dominant canopy positions, others will become suppressed, and others will die which helps contribute to coarse woody material and snags on the landscape. This competition also creates partially shaded conditions that encourages shade-intolerant species to shed their lower branches. As lower branches begin to die in the surviving trees, the branch stubs can be excavated for cavity nesting birds and other wildlife. This stage of forest growth creates ideal hunting conditions for predators, especially those raptors and birds of prey that can easily navigate open woodlands.

Many of the hardwood plantations have the potential to produce high quality forest products. The dense early conditions can create straight stems with few knots which is necessary for hardwood veneer logs, flooring, and furniture, while black locust poles are naturally rot



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resistant and produce high-demand fence posts. In both cases, many of the species planted make ideal fuelwood.

In addition to the many benefits of hardwood plantations, artificially planting these trees ensure they have a continued presence on the landscape. In the case of red and white oak in particular, naturally regenerating these species can be difficult and intensive and without scarification, fire, and mechanical/herbicide treatments, they are at risk of decreasing in the landscape.

History of Plantation Management

Management activities in the early years included establishing and maintaining fire lanes around the perimeter of the plantations as well as releasing them from competing vegetation. Eventually, easily accessible stands were treated through non-commercial thinning and, less commonly, pruning of crop trees.

Non-commercial thinning of plantations has been accomplished primarily using three systems of management: row thinning, single tree selection, and small-group selection. A row thinning operation involves removing rows of trees, a method that is easily applied since when the plantations were established, the trees were planted in rows. Usually, a number of adjacent rows are removed in order to attain the desired result.

Single tree selection involves removing individual trees evenly distributed across the whole plantation. Small-group selection occurs when small groups of trees are selected for removal. These small groups are usually evenly distributed across the whole plantation.

Many of the early treatments were row thinnings to help establish equipment access to and within the plantations for future management activities. Early treatments were accomplished with labor provided by Department work crews, using a mechanical means such as saws to cut or girdle the trees that were to be removed. Less frequently, trees to be removed were killed through the injection of herbicides into the stems. The more remote plantations usually received no treatment at all.

In the 1970s, markets for conifer pulpwood developed in parts of the state. These markets were predominately for spruce. As a result, many of the easily accessible stands were commercially



Row thinning in 28-year-old white pine plantation, 1955.



Row thinning on Sugar Hill State Forest in Schuyler



thinned for the first time. As with the early non-commercial plantation treatments described above, many of the commercial pulpwood treatments were row thinnings or single tree selection thinnings to help establish access. Over time, markets for conifer pulpwood, sawtimber, cabin logs, landscape timbers, utility poles, and wood chips developed, resulting in increased demand for conifers grown on State Forests. The increased demand has resulted in the development of numerous conifer timber buyers and loggers that rely almost solely on State Forest plantations as their source of raw material. In other areas of the state, where conifer pulpwood markets did not develop in the 70s, conifer plantations were left unthinned.

The equipment used to implement commercial thinnings in plantations has changed over the years. Some of the early thinnings were accomplished by cutting the trees with a chainsaw and then removing four-foot-long pieces of pulpwood from the woods using a farm tractor and cart. Continuing advancements in equipment technology have seen a progression from this simple system to more complicated systems. Today, many logging operations utilize machines to do most of the work. Harvesting machines can be used to cut and delimb the trees, while other machines such as forwarders and skidders are used to bring the trees out of the woods. Some logging operations still consist of one person with a chainsaw and farm tractor, but with the trend towards mechanization of tree harvesting, these smaller operations are becoming rare.

Current Condition of Plantations

Conifer plantations State Forests fall into three categories: the original plantations that were established in the 1930s and 40s; plantations that were established in the 1950s, 60s, and 70s; and second-generation plantations that were established in the 1980s, 90s, and 2000s after the removal of the original plantations. The original plantations are the most common and are reaching or are at biological maturity. The 1950s, 60s, and 70s plantations could be considered “middle-aged”. The second-generation plantations are young and more vigorous than those in the other two categories. More detailed descriptions of each category are below.

Plantations established in the 1930s and 40s

These plantations are now between 80 and 90 years old and are usually comprised of conifer species such as Norway spruce, white spruce, red pine, Scots(scotch) pine, white pine, jack pine, European larch, and Japanese larch. Some plantations are purely of one species, while others are combinations of two or more species. Small plantations of other conifer species such as Austrian pine, balsam fir, Douglas fir, Dunkeld larch, red spruce, white cedar, red cedar, and pitch pine may occasionally be found. In some areas, there are small experimental plantations of species such as lodgepole pine and limber pine.

In accordance with the Environmental Conservation Law, most of these plantations have been actively managed to produce pulpwood and timber. The periodic removal of the smaller, unhealthy, or damaged trees through thinning operations has allowed the larger, healthier



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trees left behind to grow more quickly. In many cases, it has also allowed conifer and hardwood seedlings and saplings to grow in the understory.

Some of the more accessible plantations have been thinned more than once. The condition of the understory in the thinned plantations varies widely across the state and is dependent on treatment methods, harvesting equipment used, residual stand density and species composition, and other factors. In plantations that were row thinned, strips of mature conifer trees may alternate with strips of much younger conifer and hardwood seedlings and saplings. Plantations that received single tree selection generally contain trees that are more evenly spaced than those in stands that were row thinned. In these selectively-thinned plantations there may be a carpet or dense understory of hardwood and conifer seedlings and saplings, or there may be very little understory. Plantations that were thinned through small-group selection contain open patches that are usually occupied by hardwood and conifer seedlings and saplings.

Many of these plantations have an understory that is comprised of seedlings or saplings of hardwood species such as striped maple or beech. Hay-scented fern, New York fern, and bracken fern are also common in managed plantations. These and other species are considered “competing vegetation” or “interfering vegetation”, meaning their presence in a plantation is considered undesirable because they have little to no commercial value and they inhibit the establishment and growth of more desirable hardwood and conifer species such as sugar maple (hard maple), white pine, or Norway spruce.



Dense fern groundcover under a managed 1930s Norway spruce plantation on Stone Store State Forest. Notice the lack of desirable advance regeneration.

In areas of the State where pulpwood markets did not develop in the 1970s, most of the 1930s and 40s plantations were not thinned. Plantations that are not accessible, either because of wet ground conditions or their distance from a good road, were also left unthinned. The trees in these plantations are tightly spaced, small in diameter, and have small crowns. The health of these trees is usually very poor because there are a large number of trees on the site competing for limited resources. These unthinned plantations demonstrate very clearly how much improvement in tree growth and health can be achieved through thinning operations. Usually, very little sunlight reaches the forest floor in these plantations because of how closely spaced together the trees are. As a result, there are very few hardwood or conifer seedlings or saplings growing under the plantation trees.

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Most of the thinned 1930s and 1940s plantations have reached or have begun to reach biological and economic maturity. As the trees reach biological maturity, they become less vigorous and their ability to thrive on marginal sites begins to decline. As trees grow older their ability to fend off disease and recover from physical injuries lessens. Their large crowns and sometimes shallow root systems make them susceptible to damage from weather events such as high winds, snowstorms and ice storms. The main types of weather-related damage to softwood plantations are as follows:

- **Windthrow.** Also called blowdown, windthrow occurs when high winds cause the trees to fall over. During a high wind event, the large crowns of the trees catch the wind, causing them to bend and sway. This puts a tremendous amount of strain on the root systems of the trees. On sites with shallow, rocky, or wet soils, the root systems aren't strong enough or deep enough to anchor the trees against the force of the wind. As a result, the trees tip over, frequently taking neighboring trees with them.
- **Ice and snow damage.** The many branches and needles of softwood trees can accumulate large amounts of ice and snow. As ice and snow accumulates, it puts stress on the trunks of the trees. If a tree develops a heavy enough ice or snow load, the trunk of the tree can snap. Sometimes the trunk will snap close to the top of the tree, resulting in the tree losing only a small portion of its crown. Other times the trunk will snap at a point closer to the ground, resulting in the tree losing most or all of its crown. The ice and snow load in the crown of the tree can also cause the entire tree to tip over, resulting in damage similar to the windthrow damage described above.

Usually, ice and snow damage occurs in conjunction with wind. The action of wind combined with the weight of ice or snow in the crowns of the trees results in the trees either snapping off or tipping over. Regardless of how the damage is done,



Storm damage in a 1930s Norway spruce plantation on Ashland Pinnacle State Forest. The woody material on the ground is the broken-out tops of the spruce trees.



Storm damage in a 1930s red pine plantation on High Knob State Forest (2007).



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once a portion of a plantation is damaged, the remainder of the plantation is more susceptible to similar damage. This is because the root systems and crowns of plantation trees are intertwined, causing the trees to act as a unit in response to wind. As the trees sway in the wind, each tree relies on and assists its neighbors to resist the force of the wind. Once trees start to fall over or snap off, an opening is created, which allows stronger winds into the plantation. During subsequent weather events, the trees around the edges of that opening don't have as many neighbors to support them, so they are more likely to fall over or snap off. Another factor is a domino effect that occurs when trees that tip over fall on neighboring trees, causing them to fall over as well.

Because many plantations were established on the less fertile, shallow, rocky or wet soils found on hilltops and mountaintops across the State, these plantations are much more susceptible to storm damage than plantations that are located on deep, well-drained soils. This is because the shallow, weak root systems that are developed by trees growing in poor soil conditions are less able to support the trees during storm events. The trees in plantations that are on deep, well-drained soils develop deep, strong root systems that are better able to handle the stresses produced by a storm event.

Plantations Established in the 1950s-1970s

These plantations are now between 50 and 70 years old and are usually comprised of red pine, Scots (Scotch) pine, Norway spruce, white spruce, European larch, and Japanese larch. At this point of state land management, many of the more unusual species, such as jack pine, ponderosa pine, and slash pine, that were experimented with during the initial 30s and 40s plantations were phased out in favor of the species which grew better on state forest soils.

Some of the plantations on exceptional sites have been thinned or regenerated and have produced sawtimber grade products, while many are still in the pole and small sawtimber stage. In general, the plantations from this time period that were thinned have larger diameters and natural regeneration has been established in the openings, while the unthinned plantations are still fairly dense with small, tight crowns, smaller average diameters, and little growing in the understory.

When demand in the 1970s for softwood pulp was established, the plantations established in the 1950s-1970s were not large enough to produce pulpwood. Since then, softwood pulpwood markets have seen times of high demand and low demand, and generally forest management has had to adapt to the market. Cogeneration plants, wood chips for construction products, biofuels, and mixed conifer/hardwood pellets have contributed to the demand for pulpwood. As technology improved in softwood sawmills, even small diameter trees down to seven inches could be used for fence boards, and fence poles could be made with even smaller logs. At the present time, the softwood pulp market appears to be soft and somewhat unreliable.



Plantations Established from 1980s-Present

The plantations that were established from 1980 to the present day typically look different than what the 1930s and 40s plantations looked like when they were the same age. Rather than being planted by CCC crews in neat rows in abandoned farm fields, today's young plantations are usually planted as trade-off work required in timber sale contracts as described in the Current Plantation Management section below. As the seedlings grow, the presence of a hardwood seed bank in the soils and a ready seed source from adjacent hardwoods results in the planted conifers having a higher level of competition with hardwood tree species growing on the site. This factor, combined with a lack of resources DEC currently commits to removing the competing hardwoods and later conducting non-commercial thinnings, has resulted in young plantations that are largely unmanaged and thus include a variety of hardwood tree species, shrubs, and herbaceous plants and a lesser number of planted conifers per acre. In contrast, when the 1930s and 40s plantations were young, farming practices had removed most sources of hardwood competition and New York State had a robust plantation management program. Thus, these plantations generally consisted of a higher density of closely spaced conifer trees that had been actively managed and were therefore growing more vigorously.

Another primary difference between present-day young plantations and the 1930s and 1940s plantations is the species composition. Today's young plantations consist primarily of Norway spruce, European larch, Japanese larch, white spruce and white pine. Red pine, a commonly found species in the 1930s and 1940s plantations, has not been commonly planted in the past fifty years. While red pine has grown very well on many State Forests, and red pine plantations have produced high-quality trees preferred for use as utility poles, re-establishing red pine after a clearcut has been unsuccessful on State Forests due to Pales weevil (*Hylobius pales*), an insect that thrives in the dead wood left on a site after a clearcut. The larvae of this weevil will feed on the bark of the roots and stems of red pine seedlings, thereby girdling the seedlings and resulting in high seedling mortality. For more information on the challenges presented by weevils, please see the Challenges to Plantation Management section ([page 290](#)) below.

Hardwood and Cedar Plantations

In the past twenty years, attempts have been made to establish new plantations of red oak and white oak on State Forests. The presence of white-tailed deer can make it difficult for these plantations to succeed. The deer eat the buds that form on the seedlings, hindering their growth. Tree shelters and fences have been used to prevent the deer from browsing on the seedlings, but such measures are expensive and have proved difficult to maintain. When the tree shelters and fences were installed, they were initially maintained by inmate crews from nearby correctional facilities. As time passed and the aforementioned correctional facilities were closed, the primary source of labor to maintain the tree shelters and fences was no longer available. As a result, the success of these hardwood plantations has been limited.



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There are a small number of acres on State Forests that are currently occupied by older hardwood or cedar plantations. Lower deer population numbers allowed these plantations to be successfully established between 1930 and 1970. These plantations include species such as red oak, white oak, black locust, red cedar, and white cedar. The oak plantations have been managed similarly to natural hardwood stands, while the black locust, red cedar, and white cedar stands have been managed primarily for the production of fence posts.

Current Plantation Management Practices

The management practices currently employed in conifer plantations include releasing young plantations from hardwood competition and conducting non-commercial thinnings, commercial thinnings, clearcuts, or overstory removals in older plantations. The management practice selected depends largely on the age and condition of the plantation.

Plantation Release

Young plantations, typically those ranging from five to twenty years old, should be released from hardwood competition if the goal is to allow the planted conifers to fully occupy the site. The methods of release include applying herbicides to the hardwood saplings that have grown in among the conifers or mechanically removing the hardwood saplings by cutting or mowing them down. Such mechanical release may be accomplished using hand saws, brush saws, chainsaws, or a larger machine such as a forestry mower.

In some situations, it is desirable to retain a hardwood component in the conifer plantation. Such a decision might be made where the end goal is to have a wider variety of tree species on the site. In these cases, the chemical or mechanical release can be targeted to remove the undesirable hardwood saplings while leaving the desirable ones. Whether a sapling is desirable or undesirable will typically depend on what species it is.

Non-Commercial Thinnings (Timber Stand Improvement)

Ideally, plantations that are between twenty and fifty years old should be thinned using the methods previously described (row thinning, selective thinning, or patch cuts). The timing of the thinning will depend on how large the trees have grown and how tightly packed together their crowns are. Typically, plantations in this age range do not contain merchantable material, so the thinnings that are conducted are non-commercial and are referred to as “timber stand improvement”. As that name implies, the thinning is geared towards improving the overall health and timber quality of the plantation by removing some of the trees and thereby increasing the resources available to the residual ones. This allows the residual trees to grow with more vigor.

Timber stand improvement may be carried out using chemical or mechanical means. If herbicides are used, they are typically applied through the injection of the herbicide into the stems of the trees to be removed. Mechanical means include chainsaws or forestry mowers.



Commercial Thinnings

Plantations that are older than forty to fifty years generally are able to start producing timber products such as pulpwood and dimension lumber as they continue to grow. Plantations in this category may be thinned commercially, which means that the trees to be removed can be sold. The thinnings are still accomplished via row thinning, selective thinning, or patch cuts, only now the trees to be removed are cut by a logger through a state timber sale contract, using a chainsaw or a mechanized harvesting machine.

Both non-commercial and commercial thinnings may be conducted more than once during the life of a plantation. Plantations that are actively managed through these types of treatments contain trees that are healthier, more vigorous, and grow more quickly than trees in plantations that are not managed or are not managed very actively. Thus, overall forest health is improved through these types of intermediate treatments, and valuable wood products are produced and brought to market.

Clearcuts and Overstory Removals

Regardless of the thinning methods that are used, a conifer plantation can only be thinned so many times before it becomes necessary to remove the planted trees altogether. This is because each time a thinning takes place, there are fewer trees from the original planting left on the site. Eventually there would be an insufficient number of trees left on the site to resist windthrow and ice and snow damage. In order to avoid such loss, the plantation trees are removed in what is called a regeneration harvest. The main goal of a regeneration harvest is to regenerate the forest on the site, to re-set the clock and start over with a new, young forest. A regeneration harvest may either be a clearcut if advance regeneration is not established, or an overstory removal if there is sufficient advance regeneration present. Advance regeneration is seedlings and/or saplings that have naturally seeded in under the plantation and may consist of hardwood species, conifer species, or a mixture of both.



Clearcuts are also helpful in plantations that are either highly susceptible to storm damage or have already been damaged by storm events. In addition, plantations that were never thinned due to inaccessibility or lack of pulpwood markets usually have to be clear cut. Unthinned plantations that are 70 to 80 years old are usually in poor health or are not vigorous enough to respond to a thinning operation. More information and SEQR analysis of the use of clearcuts can be found in the Active Forest Management section on [page 95](#).

When a plantation is removed, either through a clearcut or an overstory removal, a decision must be made to either retain the site as a conifer plantation or allow it to convert to natural forest. The type of natural forest it will convert to (hardwood, conifer, or a mix of both,) depends on the advance regeneration that is present at the time of the removal.



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Natural Regeneration

Conversion from a plantation to a natural forest can occur if advance regeneration is in place or if there is a ready seed source for such regeneration nearby. There can be a large amount of hardwood and/or conifer advance regeneration on the site, depending on the size and shape of the plantation, the proximity of adjacent seed-producing hardwood trees, and past management activities. If the advance regeneration is composed primarily of desirable species, often the decision is made to allow the natural regeneration to take over the site after the original plantation is removed. In some cases, there may not be a sufficient amount of advance regeneration on the site, but conditions are such that it is reasonable to expect that the surrounding forest and the seed bank in the soil will provide a ready source for natural regeneration to quickly occupy the site after the removal of the plantation. This is often the best choice when the plantation to be removed is smaller than five to ten acres, because the opening created by the harvest is relatively small and is therefore likely to seed in with natural regeneration quickly.

The “**desirable tree species**” will be different in each site and situation. Undesirable hardwood advance regeneration would consist of species that won’t provide sufficient economic or biological value as the next forest stand.

Artificial Regeneration

Frequently, there is either inadequate desirable hardwood or conifer advance regeneration to occupy the site after the plantation is removed, or there is advance regeneration on the site, but it consists of undesirable hardwood species. In the latter situation, the undesirable hardwood advance regeneration is typically removed through a pre-harvest herbicide application or through mechanical means. In both situations, after the harvest of the original plantation is complete, conifer seedlings are planted on the site to establish the next plantation. The seedlings are planted by hand, using hand tools such as a hoe-dad or dibble, and are spaced as uniformly as possible given the site conditions. Norway spruce is the most commonly replanted conifer species, due to its ability to thrive on many different types of sites, its greater wood volume production in comparison to other species, its resistance to deer browsing, its importance for habitat diversity, and its relatively low susceptibility to insect and disease problems. Other species that are planted could include white spruce, European larch, Japanese larch, and white pine.

Where herbicide applications are required to establish new conifer plantations, the applications will target specific vegetation that will compete with the new plantation. Application methods will use the safest products available that have the least environmental impact. Herbicide applications are always performed under the supervision of a licensed herbicide applicator. As with timber harvesting activities, the herbicide application and tree planting activities are overseen by a DEC Forester.



This plan serves as the Generic Environmental Impact Statement for the application of herbicides on State Forests associated with silvicultural activities. (Refer to the Active Forest Management topic “Pesticide/Herbicide Use” on [page 110](#) of this plan.)

After several years of initial slow growth and root establishment, planted conifer seedlings begin to grow at a faster rate. However, as described above, competing hardwood and shrubby vegetation may out-compete the planted seedlings. When this happens, managing the site as a conifer plantation requires that the competing vegetation be removed either through mechanical or chemical means. This may have to be done more than once before the planted seedlings grow large enough to fully occupy the site and is referred to as “tending”.

In an average year, approximately 120,000 seedlings are provided by the Saratoga Tree Nursery to be planted across all state managed lands, with the vast majority being used for State Reforestation Areas. This translates into approximately 135 acres planted annually statewide. Compared to the approximately 150,000 acres that were planted in the 1930s and 1940s, today’s plantation establishment efforts are minimal.

Hardwood Plantations

Current management practices in hardwood plantations include maintenance of tree shelters and fences for the young plantations and thinning operations conducted in the older plantations. Such thinnings may be commercial or non-commercial. Management in hardwood plantations is similar to management performed in natural even-aged hardwood stands. Typically, these thinnings are single tree and group tree selection, with patch cutting, shelterwood, and seed tree methods becoming more common as the plantations mature.

Forest products such as fence posts, firewood, and sawtimber are sold from hardwood plantations that are thinned commercially.



Oak plantation with tree shelters (right) and deer enclosure fence (left side of image) on Charleston State Forest.



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Challenges to Plantation Management

Resources

The primary challenge to plantation management is that DEC currently does not have a robust plantation management program. While a limited amount of funding is available on an annual basis for purchasing seedlings and conducting herbicide applications, the labor and funding that are a necessary investment to plant conifers, release them from competition as they grow, and conduct non-commercial thinnings on a broad scale have not been made available. A reduction of labor available from state correctional facilities across the state has all but eliminated a ready source of labor that was formerly used to conduct plantation release and timber stand improvement activities. In addition, more Department Foresters are needed so that more plantations can be actively managed through timber sales. As a result of the lack of resources committed to plantation management, many of the plantations on state forests are becoming stagnant as growth slows and conifers are lost to mortality and competing hardwoods. This represents a loss of the timber volume that could be realized if the plantations were managed, healthy, and vigorous.

Due to the lack of a plantation management program, other methods must be used to conduct plantation management activities. The most commonly used method is state timber sales. When timber is sold from state land, sale-related replanting and timber stand improvement work may be included in the contract for the wood. The contract typically requires that the buyer replant the harvest area with conifer seedlings provided by the state. Contracts may also require the buyer to cut unmerchantable trees as part of timber stand improvement. While these activities are overseen by the DEC Forester, the buyer is responsible for providing the labor required. The number of state forest acres that are treated through timber sales each year is limited by the number of DEC Foresters that are available to conduct the sales. Further, not every sale conducted involves any sort of conifer plantation management. Many sales include only hardwood stands. As a result, the amount of plantation acreage treated each year through planting conifers or timber stand improvement activities is declining.

ADDITIONAL RESOURCES

Program Policy: Plantation Management on State Forests – Developed by the Bureau of Forest Resource Management.

http://www.dec.ny.gov/docs/lands_forests_pdf/sfplantationpolicy.pdf

Program Policy: Clearcutting on State Forests – Developed by the Bureau of Forest Resource Management.

http://www.dec.ny.gov/docs/lands_forests_pdf/clearcuttingpol.pdf

Rules for Establishment of Special Management Zones on State Forests – June 2008. Developed by DEC Division of Lands and Forests.

http://www.dec.ny.gov/docs/lands_forests_pdf/sfsmzbuffers.pdf

Rutting Guidelines for Timber Harvesting and TRPs on State Forests – May 2008.

Developed by the Bureau of Forest Resource Management.

http://www.dec.ny.gov/docs/lands_forests_pdf/ruttingguidelines.pdf

All of these resources can be accessed at www.dec.ny.gov/lands/64567.html



Some of the timber stand improvement (TSI) accomplished in hardwood plantations presently is done through smaller local sales for fuelwood thinnings. These local sales are typically purchased by individuals, homeowners, and smaller contractors with local markets. These sales tend to be small acreages which are both affordable and manageable without significant investments and overhead in equipment and employees. In recent years, local sale programs have become increasingly burdensome to administer. With forest certification, Trained Logger Certification (TLC), insurance requirements, and longer, more complicated timber sale contracts, the trend appears that fewer individuals and smaller contractors express interest in local sales, and larger outfits tend to gravitate towards higher value products and larger sales, creating a void where TSI treatments used to exist. As these factors combine, fewer acres are being treated with TSI than in years past, and growth in the stands has not been optimized.

Threats to Plantation Health

Growing threats to softwood plantations have become increasingly common in recent years. Spruce decline, Scots (Scotch) pine decline, white pine needle cast, white pine blister rust, as well as other pests and pathogens have in the past caused DEC to reconsider perpetuating single species plantations. Currently, consideration is given to establishing plantations using multiple planted conifer species or allowing desirable natural hardwood species to grow along with the planted trees. This practice reduces the problems associated with planting single species on a site.

Establishing new conifer plantations is made more challenging by forest pests. Root collar feeders such as Pales weevil and pine leader weevils such as white pine weevil (*Pissodes strobi*) cause damage and mortality to young conifer seedlings.

Plantation Management Options

Many of the plantations on State Forests have matured and are in various levels of declining health and vigor. As with any forest in this condition, these plantations have reached or passed economic maturity. The most severely declining plantations should be identified and regenerated first before mortality negatively impacts the stand. Regeneration options include converting the plantation to natural forest or establishing a new plantation on the site.

To convert a plantation to natural forest conditions, natural regeneration must first be established. Natural regeneration can include plantation species of trees or naturally occurring tree species from surrounding forests. Encouraging these species to establish under a plantation would eventually result in conversion to a natural forest type when the planted trees are removed. When a seed source of preferred species is present and environmental conditions – soil type, slope and aspect, and low deer densities to name a few - are right, converting to natural regeneration can be the most cost-effective option because the land manager does not have to purchase and plant seedlings.