

# Ohio Department of Natural Resources

## Division of Forestry

### Annual Work Plan

For

### Mohican-Memorial State Forest

For the Period of

**2016/2017**

October 1, 2016 to September 30, 2017



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June 16, 2016

***Approved By:***

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June 30, 2016

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DRAFT

# OHIO DIVISION OF FORESTRY

## I. Forest Overview

### History & Description:

Mohican-Memorial State Forest is located in southern Ashland County, midway between Columbus and Cleveland. This state forest is managed under the multiple-use concept for timber and wildlife habitat, forestry research and demonstrations of good forest land management, primitive recreation and protection of soils and watershed. Timber products obtained from harvest, stand improvement and thinning operations include saw logs, veneer logs with some pulpwood and firewood.

Land acquisition for the forest began in 1928 and has continued with the accumulation of over 4,500 acres (exclusive of state park land). The land use history of the forest is typical of eastern Ohio. Original forests were cleared for agriculture, but eventually erosion ensued and fertility decreased. Farms were abandoned and subsequently reverted to brush and woodland.

At the time of acquisition, planting of trees on abandoned land was a high priority activity. This resulted in the many plantations of white and red pine and mixtures of these and other pine species that you see today. Much of the tree planting was done by personnel of the Civilian Conservation Corps whose camp was located on the forest during the 1930s. Native hardwood of the oak-hickory and beech-maple types and associated species of gum, aspen, ash, cherry and walnut occur on unplanted areas. Native white pine and hemlock are also found.

During the spring and fall fire seasons, a major objective of the forest organization is to prevent, detect and suppress wildfires that occur on state and private land within the protection district.

## II. Resource Management

### Current Forest Composition:

Mohican-Memorial State Forest can be categorized into three broad forest types. Current data show that the forest type with the largest number of acres is pine plantation, which account for nearly 1,800 acres of this state forest or 40% of the forested area. These plantations came from historic efforts of the Civilian Conservation Corps during the Depression and World War II eras. They were planted in order to prevent soil erosion from marginal and degraded farm land that had recently become state property. The intent of these plantations was to conserve soil long enough that a future native hardwood forest would eventually be established through management and eventual removal of the pine trees. A small percentage of these pine plantations were thinned decades ago. The thinned plantations enjoy a vigorous growth of understory vegetation of hardwood trees and shrubs. In recent decades, thinning of pine plantations has ceased. Most of the pine plantations at Mohican are dense with little or no sunlight hitting the forest floor resulting in an understory that is devoid of plants, animals, or other biota. The over-stocked conditions also cause stress to the un-thinned trees resulting in mortality from disease, insects, or moisture and nutrient deficiencies.

The second most common forest type at Mohican is hardwood mixed mesophytic stands. These stands are dominated by tree species such as yellow poplar, sugar and red maple, ash, and beech.

Mixed mesophytic stands occupy about 1,600 acres or 36% of the land area at Mohican. Mixed mesophytic forests are moist sites that occur on north facing slopes, coves, and bottomlands where sunlight is not direct and moisture is not limiting. These stands are generally mature and the understory vegetation in these stands consists of maple and beech saplings.

The third forest type at Mohican includes hardwood stands dominated by oak and hickory species. These stands occupy the least amount of land area at about 1,100 acres or about 24% of the land area at Mohican. Oak and hickory stands are dominated by trees such as white oak, red oak, scarlet oak, chestnut oak, hickory species, with other assorted tree species present. Oak / hickory stands usually occur on dryer southern exposures or on sites with a history of disturbance such as fire or harvesting. Oak and hickory stands at Mohican however, do not have oak and hickory understories. The understories in these stands are dominated by maple and beech species which means that these stands are likely to eventually convert to maple and beech forests. Oak and hickory trees are considered keystone species in this region due to the dependence that many other insects, plants, and wildlife have on these trees. Oak / hickory forests are more resilient to disturbances, climate change, and forest pests. Oak regeneration has been identified as a significant problem throughout the central hardwood region and forest inventory data for Ohio shows that oak forests are declining for many reasons but mostly due to the lack of oak regeneration in the understory.

Mohican-Memorial State Forest has an estimated standing timber inventory of 32 million board feet of hardwood sawtimber and over 250,000 tons of pine. Timber inventory data show that the annual growth of hardwood sawtimber is approximately 647,000 board feet per year of hardwood sawtimber growth and nearly 9,000 tons per year of pine growth. There are three different management zones at Mohican that delineate the management activities that may occur in those zones (See also the 5-year Management Plan for State Forests for a description of zoning). One zone at Mohican permits forest management for demonstration purposes. This zone consists of 750 acres. In the demonstration zone, the annual growth of hardwood sawtimber is approximately 111,000 board feet per year and 1,500 tons of pine growth per year.

Most of the forested stands at Mohican are dominated by trees that are between 12 inches and 18 inches in diameter (measured at 4.5 feet off the ground) and have complete crown closure in the canopy allowing no sunlight to hit the ground during the growing season. 78% of the forested stands are in this condition. Less than 1% of the forest has stands that are young, early successional forests dominated by seedlings, saplings, and shrubs. Less than 10% of the forested stands have open canopies whereby sunlight could reach the forest floor to allow herbaceous plants to grow. Early successional forests are also lacking throughout Ohio, and are a key component for a variety of forest-dependent wildlife species (See 5-year management plan for state forests).

#### ***Planned Silvicultural Practices:***

- *Ongoing Removal of Hazard Trees and Ash Trees:*

Several insect and disease pests have caused mortality of trees in localized areas. These pests include the emerald ash borer (EAB), gypsy moth, and others. Division staff will take measures to ensure the safety of visitors to Mohican as well as the health and sustainability of the forest. The major public roads in the forest are scheduled to be repaved and improved in the coming fiscal year. In order to protect and maintain these road improvements, a number of hazard trees and right-of-way trees will be removed to facilitate the road improvements and protect visitors. These salvage trees will be processed and sold to local sawmills or offered for public firewood permits.

- *Demonstration Area Updates: Planned timber harvesting in the Discovery Forest:* Mohican-Memorial State Forest has approximately 750 acres that have been designated to serve as demonstration areas or outdoor classrooms. Outdoor “classrooms” are in short supply in our culture and there exists an opportunity to provide a place for students to learn about the management of natural resources. Mohican State Forest is within one hour of several universities including The Ohio State University branch campuses, Ashland University, College of Wooster, Mount Vernon Nazarene University, and others. By providing an outdoor educational area to showcase forest management we can foster an educational partnership with these institutions for the betterment of students.

Over 10 years ago, the “Discovery Forest” was developed as a demonstration area to showcase forest management techniques. This area has several different silvicultural treatments which can be viewed by visitors including an 8-acre clearcut, an improvement cut, and several pine thinnings. The Discovery Forest was not completed at that time and several more areas are ready for treatments in order to complete this demonstration area.

In the next fiscal year, the Division plans to continue to manage the “Discovery Forest” by completing additional timber harvesting treatments. These timber harvests include 16 acres of white pine thinning in compartment A-3, and 8 acres of crop-tree release treatments in compartment A-4. In the pine thinning areas, white pine trees will be thinned and the remaining white pine trees left standing will provide cover and growing conditions so that hardwood seedlings and shrubs will begin to grow in the understory. This treatment will generate merchantable pine material, which will be sold to local sawmills. The crop-tree release area is an area of forest that is young. This treatment is designed to give outstanding trees more room to grow. This treatment is pre-commercial meaning that no merchantable timber products will be cut.

Please see attached map for planned harvest demonstration areas.

#### High Conservation Value Forest Monitoring:

Certain areas of High Conservation Value Forests will be maintained and monitored. To accomplish this task we will partner with the Division of Wildlife’s Biodiversity Program to monitor a select number of Zone 1 areas each year. HCVF areas at Mohican are found in zones A and B. HCVF areas will be monitored as time and budgets allow.

#### Minerals:

Columbia Gas Transmission holds a lease with the State of Ohio for operation of 54 natural gas storage wells and about 13 miles of pipeline right-of-way located on the forest. Rights-of-way will have trees removed in a 30 foot width over gathering pipelines and a 50 foot width on main transmission lines. Well sites will be maintained with no trees within 60 feet of the well head. There are no planned tree removals on gas rights-of-way, however, maintenance occurs yearly and some hazardous trees may be removed.

#### Invasives:

Invasive plant species are targeted for control by forest operations. State forest personnel will continue to target bush honeysuckle, ailanthus, and other invasives as they are encountered on the forest during the coming year.

Boundary:

Approximately 5 miles of forest boundary will be repainted with yellow and/or red paint. Yellow paint is used between private property and the state forest, red paint is used in no hunting areas. Signage and boundary markers will also be checked and replaced as necessary.

Licenses/Leases:

Columbia Gas's leases and agreements will be monitored to assure compliance when operating on the forest. Monitor The Energy Cooperative (electric company) leases and agreements to assure compliance when operating on the forest.

In 2013, the facility formerly managed by the Ohio Department of Youth Services was leased to the Mohican Youth Academy.

Insects & Disease:

The Division of Forestry has an active forest health program. Our staff are monitoring and controlling the effects of several invasive pests including emerald ash borer, hemlock woolly adelgid, and thousand canker's disease.

Gypsy moth activity on the forest will be monitored and communicated as events occur.

Utilization & Marketing:

Public firewood permits are available at the state forest office on a first-come, first-serve basis. Permits are issued as the need for firewood removal arises. Firewood permits are intended for homeowner use only and not for commercial firewood businesses. Interested individuals may contact the state forest office for information regarding firewood permits.

Certification:

The Division of Forestry will continue third party dual certification under the Forest Stewardship Council<sup>®</sup> and the Sustainable Forestry Initiative standards. Surveillance audits will be conducted in the fall of 2016.

Research:

The U.S. Forest Service monitors a plantation of American elm trees on the forest. We will continue to cooperate with their Dutch elm disease research project. There are currently 30 trees planted in the research project that began in the summer of 2003.

We will cooperate with the American Chestnut Foundation in their research effort to bring back American chestnut to North America. American chestnut trees provided by the Ohio Chapter of the American Chestnut Foundation are planted in a 2-acre research area within the Discovery Forest.

Summary (2-3 year projects):

Most of the above projects are ongoing and are expected to last a numbers of years. No prescription cruises are scheduled for this time period.

### **III. Maintenance**

Buildings:

There are 13 buildings and/or structures located on Mohican-Memorial State Forest.

These include:

1. Forest Office
2. Office Well House
3. Service Center
4. Long Garage
5. Saw Shop
6. Memorial Shrine
7. Shrine Latrine
8. Shrine Well House
9. Bridle Latrine #1
10. Bridle Latrine #2
11. Mountain Bike Latrine
12. Fire Tower
13. Bridle Area Shelter

Building maintenance projects include a new garage door at the service center, new siding on the service center, and new gutters on all the shop buildings.

Memorial Shrine:

Utilizing funding provided by Columbia Gas Transmission, the Division has completed a number of improvements and maintenance projects at the Memorial Shrine. The remaining improvements include the installation of new street light poles that flank the shrine building.

Infrastructure (water, wastewater, utilities):

The Division of Forestry has applied for a Recreational Trails Partnership grant to assist in funding a new ROMTEC latrine at the Bridle Day Use Area. If the division receives an award, construction should begin in the fall of 2016. No other major repairs are planned or anticipated.

Vehicles/Equipment:

Continue the preventive maintenance, timely service and repairs to the unit's fleet of vehicles and equipment.

Vehicles:

- 2009 Ford F250 Pickup
- 2000 International Dump
- 2011 GMC Pickup
- 2010 Ford F250 Crew Cab Pickup

Equipment:

- John Deere 350 Bulldozer
- John Deere 450 Bulldozer
- John Deere 6410 Tractor with boom mower
- Ford 6640 Tractor
- Ford 5030 Tractor
- 20,000 lb GRVW Lowboy Trailer
- Polaris ATV (6 wheel drive)
- Polaris ATV (4 wheel drive)
- Steiner 430 Riding Mower
- Scag Zero Turn Mower

Roads:

The paved forest roads are planned to be re-paved with new culverts and berms in fiscal year 2017. This will be a significant project that will impact forest visitors. This project is in cooperation with the Ohio Department of Transportation and is funded through the ODOT cooperative roadway maintenance fund.

State forest staff will mow the roadsides approximately 3 times per year. State forest staff will reduce the number of hazard trees along the roadside over the winter months. All parking areas on the state forest will be maintained.

Limited access roads are monitored annually. Any repairs and/or maintenance needs will be done by the forest or the appropriate agency using the road (e.g. Columbia Gas and other utility companies).

Signage:

Conduct annual inspection of forest signs, repairing and/or replacing as necessary. Work with Mohican State Park on standardizing recreational signage within the forest and park. Work with Mohican State Park to maintain the American chestnut planting at the gorge overlook area and construct an educational kiosk.

Residences:

There are no residences located on the forest.

Dams:

There are no dams located on the forest.

Capitals Projects:

There are no capital projects proposed currently.

Summary (2-3 year future projects):

With the exceptions noted above, no major repairs to the buildings and/or structures are anticipated in the next two to three years.

**IV. Recreation**

Bridle Area Day Use Parking/Softball Field

The 2-acre site on the north side of State Route 97 has been developed into a softball field by Mohican Youth Academy for use during the time frame of May 1-August 31, 2016. The field area will be open for day use trail rider parking from September 1, 2016 to April 30, 2017. In order to accommodate the displaced horse trail users, the Division of Forestry expanded the bridle camp area on the south side of State Route 97.

Trails (bridle, hiking, etc.):

Recreational bridges will be inspected annually for their integrity, needed repairs or replacement.

Evaluate the bridle and hiking trail systems for maintenance, repairs and improvements.

Continue working with volunteers to maintain 25 miles of bridle trails, two bridle day use areas, 2 miles of hiking trail, and 24 miles of mountain bike trails.

Campgrounds:

The state forest maintains 10 Park and Pack camp sites. Continue working with Ashland County- West Holmes Career Center, Natural Resource class, in removing hazard limbs in and around the camp sites.

Park and Pack Campgrounds, picnic areas, trailheads, and other places where forest visitors congregate will be periodically inspected for hazard trees. Trees identified as being a possible hazard to forest visitors will be removed by the forest crew.

**V. Wildland Fire**

Suppression:

Aggressively suppress wildland fire starts within the forest.

When requested, support area fire departments in their suppression efforts with equipment, personnel and planning.

1. Bakersville VFD
2. Bladensburg Fire District
3. Coshocton City FD
4. Danville Fire Department
5. F. C. V. VFD
6. Glenmont Volunteer Fire Department
7. Holmes County Fire District #1
8. Jackson Township Fire Department
9. Killbuck Volunteer Fire Department
10. Loudonville Fire Department
11. Monroe-Lucas Volunteer Fire Department
12. Perrysville and Green Township VFD
13. Three Rivers Fire District
14. Walhonding Valley Fire District
15. West Lafayette Fire Department
16. Western Holmes County Fire District
17. Worthington Township Volunteer Fire Department

Prevention:

Support area fire departments and schools with their fire prevention activities.

Continue to work with volunteers to maintain the Mohican Fire Tower for its historic and fire prevention message.

Prescribed Fire:

No prescribed fires are planned for the forest.

Interagency Fire Crew:

Mohican staff members will be allowed to participate in the division's Interagency Fire Crew program as workloads allow.

Training:

Training will be offered to employees as workloads and the budget allow. Annual red pack inspections (personal protective clothing and equipment) and fire shelter deployment training will be conducted in late winter before fire season.

Fire Department Contacts:

Contact each of the 17 cooperating fire departments in the Mohican Fire Protection Area to update our fire department information sheets.

Attend a fire association or fire department meeting in each of the 5 counties in the Mohican Fire Protection Area

Firewise:

Continue to promote the Firewise program within the Mohican Fire Protection Area.

Federal Excess Personal Property (FEPP) program / Fire Fighter Property (FFP) program:

Continue to complete annual inspections of federal property within our fire protection project.

- 1997 Ford Pickup Truck – West Lafayette Fire Department
- Military, 2 ½ ton, 6 x 6 – Walhonding Valley Fire District
- 1982 Mack 5,000 gallon Tank Truck – Western Holmes County Fire District

Continue to promote the participation of fire departments in the FEPP and FFP

Summary (2-3 year future projects):

In general, the Mohican Fire Protection Area does not have a major wildland fire problem. Even so, our goal is to be prepared to support and assist cooperating fire departments within the protection area with: prevention activities, wildland fire suppression and wildland fire.

Recent changes in the Ohio Revised Code have created the opportunity for the forest fire protection area to expand and include other areas. As required by law, considerations will include forest cover, threat to forest resources, population, and fire occurrence. If the area is expanded in north central Ohio, division staff will assist new departments with their needs relating to wildland fires.

**VI. Law Enforcement**

Due to re-organization, the Division of Forestry's Law Enforcement staff was transferred to the Division of Parks in Fiscal Year 2013. These officers continue to enforce laws on state forests, as well as continuing to investigate and enforce Ohio's wildfire laws.

**VII. Employee Development**

Employee List/Vacancies/Table of Organization:

Chad Sanders	Forest Manager
Paul Kanagy	Equipment Operator 2

- All employees will attend the annual refresher training for CPR.
- Employees will be allowed to participate in other safety related training as workloads and the budget allow.
- The forest manager will attend two forest management training sessions
- The forest manager will attend the Annual Forest Health meeting.

Safety:

- Monthly safety meeting will be held for all employees.  
Affected employees will attend annual respirator training and fit testing.
- Employees will be provided with one pair of safety toed work boots.  
Inspect and replace as needed employees hardhats, eye protection, hearing protection, chainsaw chaps and other PPE equipment.
- Employees will be provided with two pairs of work gloves.
- Conduct annual inspection of lock out/tag out tool boxes.

Other Employee Development:

Employees will be allowed to participate in professional development and educational training programs as workloads and the budget allow.

**VIII. Public Information/Outreach**

Planned Events:

Open House for Mohican State Forest and Eastern Forests:	July 28, 2016
OHC State Ride & Chili Cook-off:	September 17, 2016
Gold Star Mother’s Memorial Service (Memorial Shrine):	September 25, 2016

Partnerships:

Ohio Federation of Women’s Clubs  
 U. S. Forest Service  
 American Chestnut Foundation  
 Columbia Gas Transmission  
 Ashland County – West Holmes Career Center  
 Ohio State University  
 Ohio State University Extension Service  
 Mohican Chapter of the National Lookout Tower Association  
 Mohican State Park  
 Boy Scouts of America  
 17 Cooperating Fire Departments in Ashland, Coshocton, Holmes, Knox and Richland counties  
 Mohican Protection Group  
 Ohio Department of Agriculture  
 Gorman Nature Center  
 Ohio Agriculture Research and Development Center  
 Energy Cooperative  
 Muskingum Water Conservation District

Volunteer Groups:

Volunteer agreements will be updated as necessary with the following volunteer groups:  
 Cowboys for Jesus

Holmes County OHC  
Wayne County OHC  
Mohican Trails Club  
Mohican/Malabar Mountain Bike Club

*Interpretive Programs:*

A Self-Guide Tour brochure is being developed for the Discovery Forest.

**IX. Budget**

*Operational Budget*

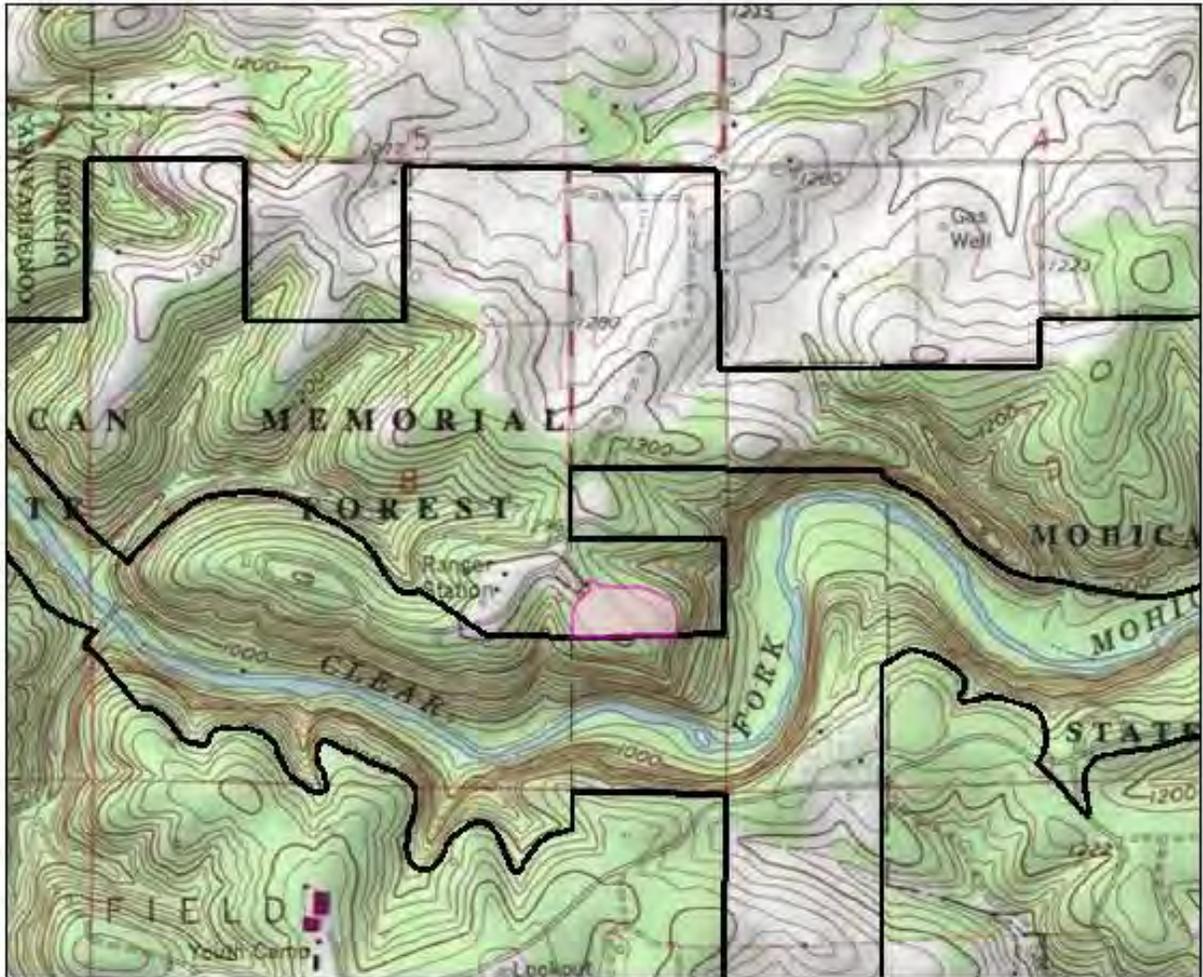
The FY2017 operational budget allocated to state forest units covers the general expenses necessary to the operation of the particular state forest. State forest managers and staff purchase supplies, services and equipment to keep the forest unit running, and report all expenditures. The proposed FY2017 operational budget for Mohican State Forest is \$48,000.00

*Revenue:*

Management activity may generate revenue from timber and product sales, firewood permits and special use permit application fees. A percentage of timber sale income is returned to the local township, county, and local school district through the "Trees to Textbooks" Program. A portion of the timber revenue kept by the Division of Forestry is utilized to pay fire departments for each wildland fire report that is submitted. These reports are generated by the fire department for each fire response that they conduct.

# Mohican-Memorial State Forest Proposed Crop-Tree Release Fiscal Year 2017

Date: 8/27/2016



0 750 1,500 3,000 Feet

1 in = 0.25 miles

**Legend**

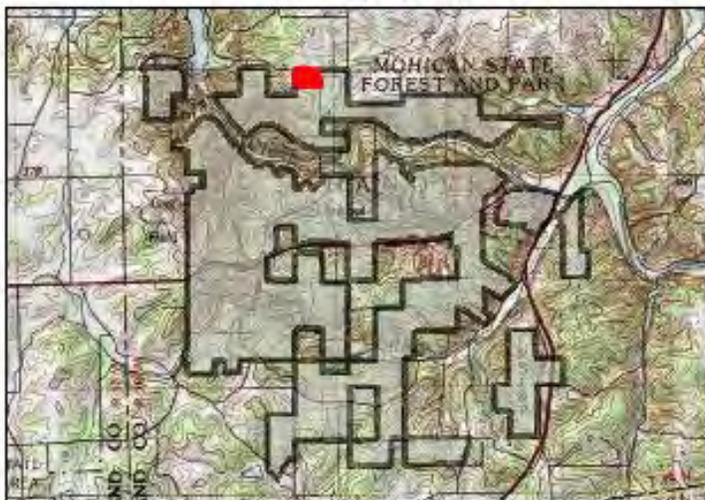
**Silv**

- Crop Tree Release
- State Forest Boundary

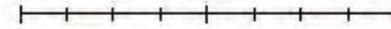


# Mohican-Memorial State Forest Proposed Timber Sales Fiscal Year 2017

Date: 8/24/2016



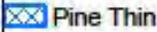
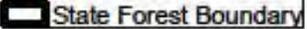
0 750 1,500 3,000 Feet



1 in = 0.25 miles

**Legend**

**Silv**

-  Pine Thin
-  State Forest Boundary

