Wisconsin State Forests
Monitoring the Implementation of State Forest Master Plans

Property: Northern Highland-American Legion State Forest

Master Plan Year: 2007

Land Management Areas
Forest Production Management Classification, Area 1, Winegar Moraines

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain and enhance existing stands of northern hardwoods to increase age diversity and to maintain stand health and vigor. • Manage at a landscape level considering how these lands can compliment the objectives in the adjacent Hemlock Hardwood Native Community Management Areas. • Maintain areas of early successional forest (aspen, white birch) in mixed forest stands. • Maintain diversity of forested and unforested wetlands. **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Develop a diversity of ages and stand sizes for aspen, white birch and northern hardwoods. • Retain and encourage yellow birch, white pine and hardwood components on aspen dominated sites. Some harvesting of these species is permitted to meet stand goals. • Maintaining diversity of forested and unforested wetlands would be maintained. Some black spruce and tamarack stands would be regenerated through active management. Priorities are in biologically mature stands on productive sites that can be regenerated by recommendations outlined in the General Management Prescriptions section. • Manage a small reduction of aspen acreage to northern hardwood stands. • Increase northern hardwoods with active management from aspen, white birch and fir-spruce cover types. Manage these stands for multiple age classes, tree sizes and a diversity of tree species. • Encourage white pines, red pine components in natural stands and manage plantations for biological maturity. • Maintain hemlock-hardwood stands at existing levels and encourage scattered hemlock in all stands.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as additionally noted in Chapter 2, page 22.
Accomplishments 2007	*Established timber harvests on 339 acres of Area 1. This includes tracts, 4-07and part of 5-07.* *Tree planting on 18 acres.*

Forest Production, Area 2, Manitowish Peatlands

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain the high quality open sedge meadow/bog, shrub and forested wetland system primarily for ecological, water quality and habitat values. • A diversity of forested and unforested wetlands would be maintained. The small patches of existing old growth pine and hemlock-hardwoods would be maintained, and expanded where possible. • A larger portion of the area would maintain a variety of successional forest types and stages across the Areas. Early successional types (aspen, white birch and fir) would be managed at economic age maturity. Later successional stages of long-lived trees (hemlock hardwoods, northern hardwoods, and red and white pine) would be managed to their biological mature ages (Eckstein, 2001). **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Encourage forest management practices and the production of forest products that sustainably meet the needs of current generations while providing adequate resources to meet the needs of the future. • Maintain red and white pine communities. There are many small scattered stands existing as islands in wetland communities that are challenges to access. Plantations will be managed at biological maturity and replanted back to pines. • Increase acres of Northern Hardwood stands with management as mixed stands of white birch and 'not classified' acreages are harvested. Most Hemlock- Hardwood stands will not be managed or will use special techniques to attempt hemlock regeneration. • Aspen stands will be maintained using General Management Prescriptions. A slight reduction in aspen acres will be seen as remote stands succeed to hardwoods or converted to pines by planting or natural succession. • Unforested-Wetland communities' objectives would be met through passive management in most areas. • Regenerate black spruce and tamarack stands through active management. • Access across some wetland areas in a frozen ground condition may be required in certain circumstances.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, <u>except as additionally noted in Chapter 2, page 26.</u>
Accomplishments 2007	*No timber sales established and no planting in 2007.*

Forest Production, Area 3, Vilas Sandy Plains North

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Increase red and white pine as a dominant community type in some stands and as a greater component in others. • Maintain aspen as a strong component in mixed stands across the landscape and as the dominant component of more diverse stands. • Develop a primarily mixed forest with areas dominated by older red and white pine (150-250 years old) with aspen, white birch, jack pine, and older red oak as important secondary species. Other areas will continue to be dominated by aspen but with greater stand diversity and older pines than exist today. • Maintain a diversity of habitat conditions to support harvestable populations of the major forest game species including white-tailed deer, black bear, ruffed grouse, American woodcock, and snowshoe hare. • Increase the availability of habitat for non-game species which use pine forests such as evening grosbeak, pine siskin, red crossbill and pine warbler. • Maintain a diversity of forested and unforested wetlands. • Protect and maintain the water quality and riparian habitat on lakes and streams. **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Increase the presence and age of red and white pine on suitable sites across the area. Specifically, increase the acreage of stands that are dominated by red/white pine and, in mixed forest stands where red and white pine are not the dominant species, increase the average pine component. • Maintain aspen as a strong component in mixed stands across the landscape but reduce the number of aspen dominated stands as the red/white pine increase. Manage for a variety of stand sizes and species mixtures. • Manage for current levels of red oak, assuring natural regeneration through harvest and site disturbance and increasing the average age of this type. • Manage for current levels of white birch, jack pine, fir-spruce and northern hardwoods. • Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack applying General Management Prescriptions. • Maintain current levels of natural and artificial grass openings for wildlife.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, <u>except as additionally noted in Chapter 2, page 30.</u>
Accomplishments 2007	*Established timber harvests on 1482 acres. Tracts include, 6-07, part of 11-07, 17-07, 22-07, 23-07, 25-07. 30-07, 31-07, 32-07 and 33-07.* *Planted trees on 154 acres.*

Forest Production, Area 4, Vilas Sandy Plains Central

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVE (100 YEARS)** • Develop, increase and maintain a mixed forest dominated by older red and white pine with aspen, red oak, white birch, and jack pine as important secondary species. Areas with slightly richer soil would be managed for red oak with red and white pine. • Maintain a diversity of forested and unforested wetlands. • (Harvest would occur when long-lived trees reach biological maturity.) **SHORT TERM OBJECTIVE (50 YEARS)** • Increase the presence and age of red and white pine on suitable sites across most of the mixed forest as opportunities present. Specifically, increase the acreage of stands that are dominated by red and white pine and, in mixed forest stands where red and white pine are not the dominant species, increase the average pine component. • Maintain or increase abundance of red and white pine trees in aspen, red oak, white birch, jack pine and northern hardwood stands. • Maintain sites with early successional forest types such as aspen, jack pine, and white birch. Although white birch will be decreased by mortality and regeneration challenges. Some white birch stands will be converted to pine plantations. • Maintain aspen as a dominant community as well as maintain aspen as a secondary component in other stand types. Some of the white birch and fir-spruce types will convert to aspen. Some aspen type will convert to pine types. • Manage for current levels of red oak, assuring natural regeneration through harvest and site disturbance and increasing the average age of this type in mixed stands. • Northern hardwood communities will be decreased as these stands are managed for red oak and natural pine regeneration. • Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack, applying General Management Prescriptions. • Grass opening reduction will go to pine plantation or natural regeneration of aspen or white pine.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as additionally noted in Chapter 2, page 34.
Accomplishments 2007	*Established timber sales on 1433 acres. Includes tracts, 1-07, and part of 2-07, 3-07, part of 8-07, 12-07, 13-07 and part of 29-07. Planted trees on 58 aces.*

Forest Production, Area 5, Big Arbor Vitae Loamy Hills

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain a mixed forest dominated by older red and white pine and (northern hardwoods) with aspen, red oak, white birch, and jack pine as important secondary species. • Large-scale ecosystem management with increased forest block size, stand age, and conifer component that enhances the ecological characteristics of this area. • Maintain a diversity of forested and unforested wetlands. • Maintain and expand the white birch and red oak type. • Maintain early successional forest types. • Manage small scattered old growth stands. **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Increase the presence and age of red and white pine on suitable sites across the area. Specifically, increase the acreage of stands that are dominated by red/white pine and, in mixed forest stands where red and white pines are not the dominant species, increase the average pine component. • Retain and increase pine components on aspen, red oak, white birch and northern hardwood stands as secondary objectives to their active management. • Maintain aspen as a strong component across the landscape. Manage for a variety of stand sizes and ages. Look for opportunities to manage for larger stand sizes. Aspen would see gains from managing white birch stands and grassy openings filling in naturally. • Maintain and increase the red oak component of this area. Increase oak components in management of all stands and assure natural regeneration through harvest and site disturbance. • Maintain current levels of jack pine with active management activities. • Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack applying General Management Prescriptions.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area. This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions for each lake classification can be found in the Lake Management Zone section, pages 144-153.
Accomplishments 2007	*Established timber sales on 363 acres. Includes tracts, 14-07, and part of 24-07. No trees planted.*

Forest Production, Area 6, Oneida Sandy Plains

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain a mixed forest dominated by older red and white pine with aspen, red oak, white birch, and jack pine as important secondary species. • Maintain a diversity of forested and unforested wetlands. • Maintain white birch and expand the red oak type. • Maintain early successional forest types as a strong component of the landscape. • The age range of major tree species will be up to biological age for longed lived species and economic age on the short-lived species. **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Increase the presence and age of red and white pine on suitable sites across most of the mixed forest as opportunities present. Specifically, increase the acreage of stands that are dominated by red and white pine and in mixed stands where pines are not the dominant species, increase the average pine component. • Retain and increase pine components on aspen, red oak, white birch and northern hardwood stands as secondary objectives. • Maintain aspen component as a dominant community as well as maintain aspen as a secondary component in other stand types. Some aspen will convert to pine types with active management and by forced conversion to pine types. • Maintain white birch, jack pine, fir-spruce and hemlock hardwood types. • Manage for current levels of red oak and look for opportunities to expand the red oak type with active management on suitable soils. Increase red oak component in mixed stands. • Maintain forested wetlands with a representation of multiple age classes of black spruce and tamarack, applying General Management Prescriptions.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area. This Management Area may contain designated Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these lakes must be consistent with the management objectives and prescriptions for the respective lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at their objectives and prescriptions for each lake classification can be found in the Lake Management Zone section, pages 144-153.
Accomplishments 2007	*Established timber sales on 738 acres. Includes tracts, 15-07, 16-07, part of 19-07, 20-07, 21-07 and 26-07. Trees were planted on 127 acres.*

Habitat Management Classification, Area 7, Ruffed Grouse Demonstration Areas – Sherman Lake, Stone Lake

MASTER PLAN OBJECTIVES	**LONG-TERM MANAGEMENT OBJECTIVES (100 YEARS)** • Maintain it as a ruffed grouse habitat management demonstration area. Aspen would dominate the mixed forest in a variety of age classes and patch sizes. Other associated species would be managed along with the aspen, to the extent that they do not interfere with adequate aspen regeneration. • Patches of existing mature pine, northern hardwoods, hemlock-hardwoods, white birch and red oak would be maintained or managed for wildlife habitat along with the aspen. Representatives of these types would be present. • Maintain this area in early successional forest types that benefit wildlife and incorporate research, wildlife education, pulpwood production and provide excellent hunting opportunities. Most trees would reach economic maturity before harvesting for regeneration. **SHORT TERM MANAGEMENT OBJECTIVES (50 YEARS)** • Maintain current aspen dominance for ruffed grouse habitat across most of the mixed forest. Management strategy is to clear-cut aspen stands to regenerate them naturally. Frequent entries would be made to increase the number of age classes and maintain high stem densities needed by game birds. • Roads, trails and openings would be seeded with clover and grasses. • All forest covertypes other than aspen will be managed to retain the current acreage. However the age structure of the community types, especially aspen, will change over time. • Develop research in partnership with other staff or cooperators to document regeneration and development of high quality wildlife habitat. • Use monitoring information on changes in population from sampling to aid future management decisions.
Resource Management Prescriptions	Management within this area emphasizes the development of aspen communities using active techniques, and all appropriate management actions contained within the General Management Prescriptions are authorized. It is recognized that adaptations to manage for Ruffed Grouse habitat will result in high forest product utilization. Management prescriptions unique to this area are described in Chapter 2, page 48. This Area may contain Wilderness Lakes, Wild Lakes, and Scenic Lakes. The land management surrounding these Lakes must be consistent with the objectives and prescriptions of not only the Area but the objectives and prescriptions for the Lake designation. The list and map of Wilderness, Wild, and Scenic lakes as well at the objectives and prescriptions for each lake classification can be found in the Lake Management Zone section, pages 144-153.
Accomplishments 2007	*Timber harvest was established on 40 acres, Tract 19-09. No trees were planted.*

Native Community Management Classification, Area 8, Lake Laura Loamy Hills

MASTER PLAN OBJECTIVES	**LONG-TERM MANAGEMENT OBJECTIVES (100 YEARS)** • Develop a structural, compositional, and functional hemlock and northern hardwood forest with old-growth characteristics. Within the old-forest portion of the management area, retain trees to their biological age to maintain and enhance ecological functions. • Provide opportunities for research, education, and interpretation on the ecological reference zones and the managed old-growth restoration zone. • Provide old-growth wildlife viewing opportunities and sites where people can experience the inspirational aesthetic and philosophical values associated with an old-growth forest. **SHORT-TERM MANAGEMENT OBJECTIVES (50 YEARS)** • Maintain three passively managed ecological reference sites within the old-growth restoration zone– Lake Alva Birch-Hemlocks (314 acres, includes lake acres), Lake Laura Hardwoods (852 acres, includes lake acres), and Plum Lake Hemlocks (744 acres). • In the old-growth restoration zone and outside of the ecological reference sites, use limited active management to increase old-growth forest attributes (e.g. snags and coarse woody debris) and to enhance the composition of northern hardwoods (i.e. increase the amount of white pine, yellow birch, white cedar, and hemlock). • In the old-forest extended rotation zone, use active management to establish a mixed forest with abundant old-forest characteristics; particularly large, vigorous trees, and increased the dominance of white pine and other long-lived species throughout the zone. • Maintain the forested and unforested wetlands of the Ecological Reference Sites in a natural, unmanaged condition, except for invasive species control. In the actively managed zones manage forested wetlands to meet their individual zone objectives.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as limited or authorized by prescriptions described for, Ecological Reference Sites, Managed Old-growth Restoration Zone, Old-forest Extend Rotation Zone, Chapter 2, pgs. 54 & 55. All of Management Area • Conduct research to identify ways to manage for old-growth forest characteristics while producing some economic timber products. Use data from forest reconnaissance monitoring of vegetation to measure change in active and passive managed areas. Apply the information from this research to the adaptive management approach on the forest. • To the degree possible, use the existing trail network to provide public access for education and ecological interpretation.
Accomplishments 2007	*Established timber sales on 471 acres. Tracts 10-07 and 28-07. No trees planted.*

Native Community, Area 9, Hemlock / Northern Hardwood

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES (100 YEARS)** • Maintain multiple sites across the NH-AL landscape that supports old-growth hemlock hardwood communities. These sites support very old trees, complex old-growth forest dynamics and provide habitat for those species that do best in these ecological conditions. • Use these sites as ecological reference areas and also for research, education, and interpretation. • Provide old-growth wildlife viewing opportunities and sites where people can experience the inspirational aesthetic and philosophical values associated with an old-growth hemlock forest. **SHORT-TERM MANAGEMENT OBJECTIVES (50 YEARS)** • Increase the age diversity, composition, and the patch size of stands within the forested area, emphasizing hemlock, white pine, sugar maple, yellow birch and basswood. • Increase the extent of white pine. • Establish and maintain large amounts of coarse woody debris, numerous standing dead snags, and an age diversity of trees. • Maintain four passively managed ecological reference sites; part of Catherine Lake (867 acres, includes lake and private acres), part of North Bass Lake West (213 acres), part of Sweeney Lake (60 acres), and Tomahawk Lake Hemlocks (226 acres). • Maintain small acres of red oak, white birch, and aspen in the actively managed zones. • Maintain existing levels of public use and access. Management in the Hemlock Northern Hardwoods Management Area relies on both passive and active techniques to develop old-growth hemlock/northern hardwood forest communities.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as limited or additionally authorized by prescriptions described in Chapter 2, page 58.
Accomplishments 2007	*Timber sale tract 5-07 was established for 30 acres in Area 9.*

Native Community, Area 10, Peatland / Wetlands

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain a high quality series of sites that support oldgrowth white cedar, black spruce, tamarack, and swamp hardwoods. These sites would also support other high quality peatland communities, such as open bog, muskeg, boreal rich fen, sedge meadows, and open water communities. Interspersed in the lowlands are uplands old-growth communities of northern hardwood, hemlock-hardwood, white pine, red pine, and fir-spruce. • Protect ecological, water quality and rare species habitat values. • Use the sites for research, education, and ecological interpretation as well as demonstration areas of peatlands management. **SHORT-TERM OBJECTIVES** **(50 YEARS)** Maintain seven passively managed ecological reference sites; DuPage Lake (2,992 acres, includes lake acres), Toy Lake (2,815 acres, includes lake and private acres), Rice Creek (495 acres, includes stream and private acres), Aurora Lake (834 acres, includes lake acres), Trout Lake Conifer Swamp (22 acres), Rainbow Wetlands (2,323 acres) and Big Swamp (2,513 acres, includes lake acres). These passively managed ecological reference sites harbor the highest concentrations of rare species and least disturbed examples of peatland/ wetlands. • Outside of the ecological reference sites, use active management to increase the age, diversify the composition, and patches. Maintain aspen and white birch in accessible areas in the active management zone. On suitable sites increase the abundance of northern hardwood, hemlock hardwood, fir-spruce, red and white pine through active management. • Maintain limited low-impact pubic access and provide opportunities for education and interpretation of these natural communities and habitats. • Provide for research, ecological interpretation, and education, including demonstrations of peatlands management.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as limited or additionally authorized by prescriptions described in Chapter 2, pgs. 66 & 67.
Accomplishments 2007	*Established timber sales on 170 acres. This includes part of tracts, 5-07 and 2-07.*

Native Community, Area 11, Red and White Pine

MASTER PLAN OBJECTIVES	**LONG-TERM MANAGEMENT OBJECTIVES (100 YEAR)** • Develop and maintain sites across the NH-AL landscape that represent old-growth red and white pine characteristics. • Develop and maintain sites that have open woodland (savanna) structure containing large conifers, few understory deciduous trees and numerous grasses, heaths, and flowers in the understory. • Provide opportunities on these sites for research, education, and ecological interpretation using demonstrations of old-growth red and white pine management. • Maintain the high quality of the forested and unforested wetlands interspersed throughout these sites. **SHORT-TERM MANAGEMENT OBJECTIVES (50 YEARS)** • Develop a mixed pine forest having a greater abundance of pine that is dominated by old trees, large amounts of coarse woody debris, numerous standing dead snags, and a wide age diversity of trees. • Maintain three passively managed ecological reference sites. They are the 211 acre Camp Lake and Pines (includes lake acres), a 306 acre part of Swanson Lake and Pines (includes 36 lake acres), and the 199 acre Stone Lake Pines site. These sites serve as ecological reference areas for adaptive old-growth management activities elsewhere in the pine management area. Use monitoring information from these existing old-growth reference stands on changes in composition and structure over time to aid in future management decisions. • Develop two actively managed ecological reference sites for pine woodland community at Papoose Creek Pines (approximately 533 acres) and at Swanson Lake and Pines (approximately 32 acres).
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, <u>except as limited or additionally authorized by prescriptions described in Chapter 2, pgs. 76 & 77.</u> On all of the management area, including the ecological reference sites: • Develop research in partnership with other staff or cooperators to document regeneration and development of old growth characteristics. Using the ecological reference sites as controls, manipulate the other areas to test the management methods. • Salvage trees damaged by wind, ice, fire, and insects after consultation with managers from affected Department programs.
Accomplishments 2007	*Established timber sale on 54 acres. This was on part of tract 15-07.*

Native Community, Area 12, Mixed Forest

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES (100 YEAR)** • Maintain sites across the NH-AL landscape with oldgrowth pine, oak and mixed hardwood characteristics and variable patch sizes, including some patches that are not limited to stand boundaries (i.e. may include all or portions of several forest stands). The mix of forest types reflects the diversity of the topography and site conditions across the landscape. • Provide opportunities for research, education, and ecological interpretation as well as demonstration of oldgrowth mixed forest management. **SHORT-TERM OBJECTIVES (50 YEAR)** • Enhance the development of a mixed forest dominated by old trees, large amounts of coarse woody debris, numerous standing dead snags, and an age diversity of trees. • Maintain mid-tolerant tree species composition while incorporating variable patch sizes, and increase the overall age of the forest. • Maintain three passively managed ecological reference sites – Lost Canoe (1,136 acres, includes 269 lake and spring acres), Allequash Lake and Pines (398 acres, includes 133 lake acres), and Two Lakes Oak-Pine Forest (112 acres). Use these three sites as an ecological reference for adaptive old-growth management activities elsewhere in the mixed forest management area.
Resource Management Prescriptions	Management actions in this area follow the General Management Prescriptions, with emphasis on development of old growth pine and mixed forest communities using both passive and active techniques. Management prescriptions unique to this area are described in Chapter 2, pages 86 & 87.
Accomplishments 2007	*Established timber sales on 760 acres. Includes tracts, part of 8-07, part of 11-07part of 24-07 and part of 29-07.*

Native Community, Area 13, Special Aquatic

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES (100 YEARS)** • Maintain a high quality series of sites across the NH-AL for their ecological, water quality, and rare species habitat values. Natural processes shape these sites with coarse woody debris in the water, numerous stand dead snags along the shore, open sedge meadows and bogs, muskeg vegetation, and scenic waters. • Provide opportunities for research, education, and ecological interpretation as well as demonstration areas of old-growth forest management on shorelines. **SHORT-TERM OBJECTIVES (50 YEARS)** • Maintain all aquatic and unforested wetlands in an undisturbed condition through passive management. • Provide a diversity of uplands management that complements the aquatic features associated with each site while maintaining water and scenic quality. • Improve the forest composition on upland sites by accelerating or enhancing the long-lived tree species component. • The increase of longer lived species is part of maintaining BMPs for water quality and enhancing aesthetic values. Increase in northern hardwood and red oak will be at the conversion of white birch stands through mortality in passive management zones.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as specified by prescriptions described in Chapter 2, pages 94 & 95.
Accomplishments 2007	*No timber sales established.*

Native Community, Area 14, Johnson Lake Barrens

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES (100 YEAR)** • Maintain an early successional, harvest driven older jack pine community in the upland portion of Johnson Creek and Pines site. • Maintain an early successional, fire driven barrens in the upland portion of Johnson lake and Barrens sites. • Maintain water quality and native species composition of the springs streams and wetlands. • Provide sites for research, education, and ecological interpretation as well as demonstration areas of barrens and old jack pine forest management. **SHORT-TERM OBJECTIVES (50 YEAR)** • Maintain open barrens. • Maintain jack pine stands. • Continue to protect the springs, steams, lakes and wetlands with passive management. • Accommodate recreational hiking use on logging roads and firebreaks.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area, with emphasis on creating and maintaining a site dominated by open barrens and jack pine. Some prescription elements unique to this area are described in Chapter 2, page 104.
Accomplishments 2007	*No timber sales established.*

Scenic Resource Management, Area 15, Manitowish River

MASTER PLAN OBJECTIVES	**LONG-TERM AND SHORT-TERM OBJECTIVES (100 TO 50 TO YEARS)** • Maintain and enhance the natural appearing, undeveloped, and highly scenic Manitowish River corridor between Benson Lake to State Highway 47. • Provide opportunities for high quality, non-motorized recreation and education in a generally undeveloped river setting. Maintain an undeveloped shoreline, except for primitive canoe campsites that are harmonious with the surrounding landscape and have minimal negative impact upon scenic values.
Resource Management Prescriptions	Management prescription elements are described in Chapter 2, page 110 of the NH-AL Master Plan.
Accomplishments 2007	*No timber sales established.*

Scenic Resource, Area 16, Rustic Road

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES (100 YEAR)** • In cooperation with Vilas County, protect and enhance the aesthetic and scenic beauty of the rustic road corridor. • Maintain a mix of forest types but generally favor longerlived species of red and white pines or other long-lived tree species. **SHORT-TERM OBJECTIVES (50 YEAR)** • Maintain the Department managed lands along the road corridor in a natural appearing condition. • Maintain a healthy, forested condition and a broad mix of forest types, with an emphasis on longer-lived tree species. In areas of predominantly shorter-lived, evenaged tree species, convert to longer-lived species as quickly as possible while retaining the high visual quality of the area. • Maintain or create scenic vistas that enhance the visual variety and quality of the landscape. • Eliminate visual impacts and safety concerns created by dead or declining trees and broken or leaning trees. • Minimize the visual and audible impacts of management activities, including impacts from slash, forest roads, and log landings.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, except as limited or additionally authorized by prescriptions described in Chapter 2, page 114.
Accomplishments 2007	*No timber sales established.*

Wild Resource, Area 17, Manitowish River Wilderness

MASTER PLAN OBJECTIVES	**LONG AND SHORT-TERM OBJECTIVES (100 AND 50 YEAR)** • Through passive management, develop and maintain a red pine and white pine forest with gradual transition (>100 years) to maple/ hemlock forest, swamp conifer and lowland brush with old-growth characteristics. • Protect Frog Lake, an ultrasoft water lake, for its biotic community and scenic values. • Provide remote, quiet, non-motorized recreation in a setting with limited access and low signs of human activity. Provide primitive canoe camping opportunities and limited trail access into the area.
Resource Management Prescriptions	Only the management activities as outlined in the master plan may be conducted within this management area. Complete prescriptions are described in Chapter 2, page 120 of the NH-AL Master Plan.
Accomplishments 2007	*No timber management allowed.*

Special Management, Area 18, Trout Lake Forestry Headquarters

MASTER PLAN OBJECTIVES	**LONG AND SHORT-TERM MANAGEMENT OBJECTIVES** • Provide general visitor information and support services as well as compatible educational opportunities. • Provide facilities for state forest administrative and staff support functions, such as staff offices, customer service, and equipment storage and maintenance. • Manage the forest across the management area primarily for long-term aesthetics. Maintain the scenic, old-forest characteristics of the Trout Lake Peninsula, including stands of large pines. In the other forest stands, manage to establish large trees with old-forest characteristics.
Resource Management Prescriptions	Facility Management This master plan does not control the specific operations or development of facilities within this area. Administrative and operational facilities are managed under separate state administrative processes. Vegetation Management The General Timber Type Management Prescriptions and all of their associated management activities (described at the beginning of the Land Management Section of the Master Plan) apply, except as limited by the prescriptions described in Chapter 2, page 126.
Accomplishments 2007	*No timber harvests established.*

Special Management, Area 19, Woodruff Administrative and Fish Hatchery

MASTER PLAN OBJECTIVES	**LONG AND SHORT-TERM MANAGEMENT OBJECTIVES** • Provide facilities for NH-AL, a variety of customer services or programs, administrative offices, and equipment storage and maintenance. • Provides facilities for fish rearing and related activities.
Resource Management Prescriptions	Facility Management This master plan does not control the specific operations or development of facilities within this area. Administrative and operational facilities are managed under separate state administrative processes. The day-to-day operations of this management area is under the direction of the fisheries program. Vegetation Management is specified in Chapter 2, page 128.
Accomplishments 2007	*No timber harvests established.*

Recreation Management, Area 20, Crystal Lake

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain the area as an attractive and safe setting for intensive and non-intensive types of recreational use, such as camping, picnicking, water sports, trail activities, and nature interpretation. • Maintain a mixed forest dominated by older red and white pine and red oak with aspen, white birch, and jack pine as important secondary species. Maintain red oak on sites with slightly richer soils. • Maintain and protect open wetlands. • Within the Firefly Lake old-growth site maintain oldgrowth pine, oak and mixed hardwoods. **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Provide opportunities for high quality, modern, intensive recreational uses featuring modern camping and day uses and nature interpretation/education in an attractive outdoor setting. • Increase red and white pine and red oak dominance across most of the mixed forest stands as opportunities arise. • Retain and increase red and white pine in aspen, red oak, white birch and jack pine stands. • Maintain a diversity of the early forest succession types over the area with a slight decrease in their relative abundance over time. • Maintain the northern hardwood community type. • Maintain and enhance red oak on suitable sites. • Within the Firefly Lake old growth site encourage the development of a mixed pine forest dominated by old trees, large amounts of coarse woody debris, numerous standing dead snags, and an age diversity of trees.
Resource Management Prescriptions	General Management Prescriptions apply as described in the NH-AL State Forest Master Plan for this management area. All management activities are authorized for this area, <u>except as limited by the prescriptions described in Chapter 2, page 134.</u>
Accomplishments 2007	*No timber harvests established.*

Recreation Management, Area 21, Bittersweet

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES (100 YEARS)** • Develop and maintain a hemlock hardwood, northern hardwood, red pine, and white pine forest with oldgrowth characteristics across the management area. • Maintain four ultra-soft water lakes for their biotic community and scenic values. • Maintain opportunities for low density/low impact, and primarily non-motor recreation in a somewhat remote and natural appearing setting. **SHORT-TERM OBJECTIVES (50 YEARS)** • Maintain a core 1,136 acre passively managed ecological reference area surrounding the lakes that captures the oldest stands of hemlock, red pine and white pine known on the NH-AL. (The acreage figure includes 288 lake acres.) • Outside of the core ecological reference site restore oldgrowth red and white pine and hemlock hardwood cover types wherever possible, and on dry, sandy sites maintain and enhance red oak, aspen, and white birch. • Maintain water quality and species diversity of the aquatic areas. • Provide an undeveloped, natural appearing setting on and around the lakes offering opportunities for solitude and primitive types of non-motorized, low-density recreation, including fishing, canoeing, hiking, and primitive camping.
Resource Management Prescriptions	The General Timber Type Management Prescriptions and all of their associated management activities apply, except as limited by the prescriptions described in Chapter 2, pages 138 & 139.
Accomplishments 2007	*No timber harvests established.*

Recreation Management, Area 22, Clear Lake

MASTER PLAN OBJECTIVES	**LONG-TERM OBJECTIVES** **(100 YEARS)** • Maintain the area as an attractive and safe setting for intensive and non-intensive types of outdoor recreational use, such as camping, picnicking, water sports, trail activities, and nature interpretation. • Develop a complex of mesic hemlock hardwoods, northern hardwoods and dry-mesic white pine-red pine and red oak forest with old growth characteristics. Secondarily, maintain limited amounts of aspen and other minor early successional types. • Maintain and enhance the hemlock hardwood and pine types and maximize their old growth characteristics through a variety of active and passive management techniques. • Maintain open and forested wetlands. **SHORT-TERM OBJECTIVES** **(50 YEARS)** • Increase white pine-red pine as opportunities allow with a corresponding small reduction of red oak and aspen. • Maintain red oak on the most suitable sites. • Maintain the northern hardwoods, • Maintain pine plantations with regular silvicultural techniques (thinning) to promote health, vigor, and large tree size. • Provide opportunities for high quality, modern, intensive recreational uses featuring modern camping and day uses and nature interpretation/education. Provide for non-motorized trail uses. • In the area around Hemlock Lake, located west of Raven nature trail, maintain and enhance the hemlock hardwood and pine types to maximize old growth characteristics.
Resource Management Prescriptions	The General Timber Type Management Prescriptions and all of their associated management activities apply, except as limited by the prescriptions described in Chapter 2, pages 142 & 143.
Accomplishments 2007	*Established timber harvests on 555 acres. Tracts, 7-07 and 27-07.*

Overlay Zone, Wilderness Lakes

MASTER PLAN OBJECTIVES	**LONG AND SHORT-TERM OBJECTIVES** **(100 AND 50 YEAR)** • Maintain the lakes in an undeveloped condition and without significant signs of human influence for recreational, ecological, and habitat values. • Provide for remote, quiet, non-motorized, low-impact recreation in a wild setting with limited, non-motorized access. Provide primitive canoe camping opportunities as appropriate.
Management Prescriptions	Specific management prescriptions are described in Chapter 2, page 146.
Accomplishments 2007	

Overlay Zone, Wild Lakes

MASTER PLAN OBJECTIVES	**LONG AND SHORT-TERM OBJECTIVES (100 AND 50 YEARS)** • Maintain the lakes in an undeveloped condition without conspicuous signs of human influence for recreational, and ecological, and habitat values. • Provide a primarily non-motorized recreational setting for low-impact activities such as boating, canoeing, or fishing and, where appropriate, primitive camping.
Management Prescriptions	Specific management prescriptions are described in Chapter 2, page 148 & 150.
Accomplishments 2007	

Overlay Zone, Scenic Lakes

MASTER PLAN OBJECTIVES	**LONG AND SHORT-TERM OBJECTIVES (100 AND 50 YEARS)** • Maintain and enhance the natural appearing and generally undeveloped landscape of each lake. • Maintain the existing level and type of public access and use of the lake and adjacent shoreline.
Management Prescriptions	Specific management prescriptions are described in Chapter 2, page 152.
Accomplishments 2007	

Non-Designated Lakes and Streams

MASTER PLAN OBJECTIVES	Aesthetic management considerations predominate along all lake and stream shorelines. Develop and maintain the environment on the state-managed shorelands to the greatest scenic potential for public enjoyment.
Management Prescriptions	Specific management prescriptions are described in Chapter 2, page 154.
Accomplishments 2007	

Wildlife Management

MASTER PLAN OBJECTIVES	The wildlife management program on the NH-AL focuses on maintaining and enhancing habitat and assessing the population status of the important game, non-game, and listed species. The abundant wildlife on the NH-AL requires diverse forest habitats in all the various successional stages from very young through old growth. Diverse and healthy wildlife populations will be maintained by managing the composition and structure of forest habitats integrated with the management objectives and activities outlined for each land management area in the Land Management Section of this plan. Wildlife habitat values are further assured by the wildlife biologists working with foresters on timber sales in order to maximize tree species diversity and improve vegetative structure, consistent with the management objectives for the area.
Management Prescriptions	This wildlife management plan has been integrated into the management prescriptions for the individual management areas. Management elements include: Wildlife Population Monitoring, Wildlife Population Management, and Research. Specific management is prescribed for Forested Habitats, Non-forested wetlands, Ruffed Grouse Management Areas, Wildlife Flowages, Aquatic Habitats, and Endangered, Threatened and Special Concern Species in Chapter 2, pages 155 – 157.
Accomplishments 20007	Wildlife Population Monitoring • All bald eagle, osprey, and Great blue heron nest sites were flown and activity recorded. • The annual ruffed grouse census at the Stone Lake Demonstration Area was completed. • All routine wildlife surveys in Vilas, Oneida, and Iron Counties were completed including: ruffed grouse drumming, woodcock peenting, frog survey routes, bear bait stations, furbearer track counts, winter deer distribution, whip-poor-will surveys, American marten surveys, waterfowl surveys, and trumpeter swan surveys. • Common loon research continues via Research Scientist Mike Meyer and cooperating universities. • Aerial checks of trumpeter swan nests and nest searches were conducted (4 pairs of swans nest on the NHAL). • Aerial checks of radio-collared wolves and wolf track counts were conducted by Endangered Resources Staff and DNR pilots. • Jim Woodford advised staff on management recommendations for northern goshawk nest territories. Wildlife Population Management • Hunting season dates, quotas, and bag limits were set for the major forest game and waterfowl seasons. Public information meetings were held. • In cooperation with USDA Wildlife Services damage and nuisances causes by wildlife were addressed. Ruffed Grouse Management Areas • Timber sales in the Ruffed Grouse Demonstration Areas were reviewed. Wildlife Flowages • Maintained and operated the wildlife flowages. • Mann Creek Flowage was managed to optimize wild rice. Aquatic Habitats • The 21 wild rice beds on the NHAL were checked and inventoried by ground and aircraft. • USDA Wildlife Services controlled beaver on Allequash, Partridge, Nixon, and Round Lakes.

	Listed Wildlife Species • NHAL forestry staff conducted Natural Heritage Inventory reviews of all timber sales and, in consultation with Endangered Resource and Wildlife Staff, set up timber sales to benefit listed species. Wildlife Openings Maintenance • No progress. No staff. No funding. Timber Sales • Reviewed all NHAL timber sale proposals and field checked most sales. • Major Concerns per Master Plan: o Regeneration of red oak and maintenance of mature stands o Snag and den tree management. o Maintaining tree species diversity. o Managing for old growth characteristics in Managed Old Growth Areas.

Fisheries Management, Cool Water Lakes

MASTER PLAN OBJECTIVES	• Provide a quality harvest as well as trophy opportunities. • Rehabilitate historic lake trout populations to provide increased future lake trout fishing opportunities. • Stock muskellunge and walleye on waters suited to these species but have recruitment problems. (The vast majority of the cool water lakes have adequate natural reproduction of the major game species.) • Maintain brook and/or brown trout fishing opportunities on several small cool water lakes. • Regularly assess the health of these waters and their fishery
Management Activities	Management Activities are described in Chapter 2, page 158 & 159.
Accomplishments 2007	Population assessment of lake trout continued in Trout Lake. Fyke nets were set in late October to capture and mark adult fish. Density estimates were calculated and compared to previous year's data. A discussion also took place to secure a plan for monitoring recent lake trout introductions in Clear Lake and Big Carr Lake. Sampling will occur in the 2008 and 2009 seasons to evaluate stocking success. Maintenance stocking occurred on many NHAL cool-water lakes in 2007 – see attached spreadsheet. Trout fishing on these lakes continues to be extremely popular. Dozens of calls were taken this spring by anglers wanting to know which lakes were stocked, and with what species and numbers.

Fisheries Management, Warm Water Lakes

MASTER PLAN OBJECTIVES	• Provide a quality harvest as well as trophy opportunities. • Provide more catch and release fishing opportunities. • As few of these waters have naturally reproducing walleye or muskellunge, use stocking to provide panfish control and additional angling opportunities. • Regularly assess the health of these waters and their fishery
Management Activities	Management Activities are described in Chapter 2, page 158 & 159.
Accomplishments 2007	A synopsis of specific management activities includes: Manitowish Chain – forage fish and cisco sampling; Camp Lake – clean up of cement blocks around littoral zone that were used in past U.W. habitat study; Dead Pike Lake – population estimates conducted for walleye and muskellunge, and general fishery health; Sherman Lake – creel survey of fishery began in cooperation with DNR Fish Research; Sparkling Lake – evaluations of "extended growth" walleye fingerlings continued…past evaluations showed an average of 48% survival, which help rehabilitate the walleye fishery and hopefully force a decline in the exotic smelt; Big Arbor Vitae Lake – conducted walleye and muskellunge population estimates; Ballard, Irving, White Birch Lake – assisted with the set-up and operation of aerator, with dissolved oxygen readings taken periodically during winter months, and providing a written report to lake association; Prong, Bittersweet, Oberlin, and Smith Lakes – complaints by the public of poor fish health, plan developed to assess fishery during 2008 season and determine status.

Fisheries Management, Cold Water Streams

MASTER PLAN OBJECTIVES	• Maintain and enhance a self-sustaining trout fishery. Improve the food supply, provide cover, and improve spawning substrates. • Provide a quality harvest as well as trophy opportunities. • Regularly assess the health of these waters and their fishery.
Management Activities	Management Activities are described in Chapter 2, pages 158 & 159.
Accomplishments 2007	Completed habitat restoration and maintenance project on Plum Creek. Approximately 1500' of stream was worked on during 2006. Some minor brushing and re-seeding of banks occurred in 2007. A trout population assessment project is planned for this segment, as well as historical stations in 2008. Investigations were also conducted on Trout Springs and Salsich Springs to determine potential for spring pond dredging. Trout Springs appears to be the best candidate at this time and dredge project is scheduled for implementation in the 2009 season. Sampling crew surveyed approximately 15 sites on NHAL streams to assess potential for trout management. All appeared to be marginal due to high summer water temperatures therefore, no active management planned in the future.

Fisheries Management, Cool Water Streams

MASTER PLAN OBJECTIVES	• Regularly assess the health of these waters and their fishery. • Rehabilitate the sturgeon fishery of the Manitowish River system.
Management Activities	Management Activities are described in Chapter 2, page 159.
Accomplishments 2007	An electrofishing crew sampled approximately 20 stream segments within NHAL to determine their potential for improved fishery management. The majority of these streams have never had a survey conducted before.

Recreation Management

MASTER PLAN OBJECTIVES	• Provide varied and high quality recreational opportunities through well-designed and maintained facilities in a highly attractive outdoor environment. • In harmony with the Forest's land management program, maintain the general level and variety of recreational uses and experiences the NH-AL has offered in the past, and expand opportunities for camping, hiking and snowshoeing, backpacking, biking, and interpretation/education. In addition, provide new the opportunity for future ATV riding. • Maintain abundant opportunities for hunting, boating, fishing, trapping, hiking, nature study, and remote, non motorized recreation.
Management Activities	Comprehensive descriptions of management activities are described in the Chapter 2, pages 161-170, for the following recreational activities: • Modern Family Campgrounds • Rustic Family Campgrounds • Group Campgrounds • Primitive Camping • Canoe Camping • Rustic Backpack Camping • Backpack Camping • Deer Hunter Camping • Equestrian Campground • Day-use or Picnic Areas • Non-Motorized Trails • Road Bike Trails • Mountain Bike Trails • Hiking and Backpacking • Ski Trails • Snowshoe Trails • Horseback Riding • Motorized Trails • Swimming • Boating, Canoeing Access, and Canoe Trails • Fishing • Hunting and Trapping • Education and Interpretation

	• Recreation Land Use Agreements • Remote and Non-motorized Recreation • Manitowish Wild Resources Area • Bittersweet Lake Recreation Area • Frank Lake and Partridge-Nixon Lake "Semi-remote Areas" • Wilderness Lakes • Wild Lakes • Public Non-Motor Lakes • Electric-Motor Lakes
Accomplishments 2007	*There has been a considerable amount of work done on the mountain bike trail on Raven trail this year. With the aid of volunteers we have been able to create about 1.4 miles of bypass areas and rework 3 miles of existing trail on the McNaughton trail. We have also been working on a skills area to the West of the parking lot that includes teeter totters and other challenges. Clear Ranger Station is being built and will be competed by the spring of 2008. The 5 wilderness sites have been completed in the Bittersweet Recreation Area. A new handicap accessible floating fishing pier has been constructed at the Clear Picnic Area. All other general maintenance and inspections were completed in a timely fashion.*

Road Management

MASTER PLAN OBJECTIVES	There are several types of road classifications outlined in NR44.07(3). The classifications reflect a range of development and maintenance standards. The road classifications include primitive, lightly-developed, moderately developed, and fully developed. Each Department managed road will be assigned a development classification as part of a road inventory project described in the master plan. Management of lands along the roads with in the NH-AL will reflect the management specifications for the underlying area classifications. Roads will also consider and be managed using the Aesthetic Management Prescriptions. Also, all road right-of-ways (66 ft.) will continue to be controlled and maintained by their current operator (Federal, State, County, or Town). <u>Class A Roads – highest level of aesthetic management</u> Travel routes with heavy to medium use or roads where the use is for the specific purpose of enjoying scenery. All Federal, State, and County roads located (with the exception of County Highway "K", a designated Rustic Road that is covered separately) are classified as "A" type roads. <u>Management objective</u> • Aesthetic management considerations predominate along Class A roads. These areas should be developed and maintained in the forest environment to the greatest scenic potential for public enjoyment. All management activities will follow guidelines according to the Silviculture and Forest Aesthetics Handbook (WDNR 1995). <u>Class B and C Roads</u> – These roads are characterized as having no moderate to low levels of aesthetic management. Because the aesthetic management needs are highly dependent on site specific conditions the NH-AL. Superintendent will determine the classification (B or C) of roadways that do not fall into Class A. Class B Roads serve a variety of uses where the public traffic load is generally light to medium. Scenic attractiveness is of equal importance to other land management objectives. <u>Management objective</u> • Maintain scenic attractiveness in balance with other management objectives for adjacent lands. • The appropriate scenic management treatments for each Class B roadway will be determined by the NH-AL Superintendent on a case-by-case basis as management activities are scheduled. All management activities will follow

	the appropriate guidelines according to the Silviculture and Forest Aesthetics Handbook (WDNR 1995) to meet the scenic objective. Class C Roads are primarily used for management access and public use does not occur or it is infrequent or it is primarily for activities such as hunting, fishing, or berry picking. Aesthetics are considered in the management along these roadways; however, they are secondary to the prescribed land management activities for the area. Management objective • The specific aesthetic management objective and the appropriate scenic management treatments for each Class C roadway will be determined by the NH-AL Superintendent on a case-by-case basis as management activities are scheduled. All management activities will follow the appropriate guidelines according to the Silviculture and Forest Aesthetics Handbook (WDNR 1995) to meet the scenic objective.
Management Practices	Management practices and policies for the following is described in Chapter 2, pages 172 & 173. • Best Management Practices (BMPs) • County and Township Roads • Aesthetic Management for Roadways
Accomplishments 2007	*The property hosted a DNR workshop on timber sale aesthetics.*

Non-Metallic Mining

MASTER PLAN OBJECTIVES	Topics related to mining in the NH-AL – policy and statutes, gravel pits, and import geological features – are discussed in Chapter 2, page 174.
Actions 2007	*The Wisconsin Valley Improvement Company, when they sold land within the Rainbow Flowage Project, retained permission to extract gravel east of the Rainbow Dam, north of County Highway D for a specific dike reinforcement project. They mined gravel during 2007 and will be reclaiming the site in 2008 or 2009. The pit is being used for a DOT project in 2008.*

Real Estate Management

MASTER PLAN OBJECTIVES	The master plan describes goals, polices and actions for the following real estate activities in Chapter 2, pages 175 & 176: • Forest Boundary Expansion • Real Estate Acquisition Policies • Aides in Lieu of Taxes • Acquisition Near Municipal Areas • Additional Inclusion of State Lands in Manitowish Waters • Future Boundary Adjustment Process • Easements, Access Permits and Land Use Agreements
Actions 2007	*2007 land purchases:* • *Plum Creek Timberlands – 120 acres* • *Piesens – 35 acres* • *Jacobsen – 20 acres* • *Goeldner – 1.26 acres* • *Chada - .76 acres* • *Exchanged .3 acres with the Town of Winchester to clear up survey errors* • *WVIC – 3,000 acres +/-* *Annual Billings for Leases/Land Use Agreements:* • *American Legion Department of WI – Camp American Legion Lease* • *North Lakeland Discovery Center – Lease* • *Air Communications of Central WI – Tower Agreement* • *Century Tel – LUA* • *Claudia Russell Trust – LUA* • *Excel Energy – LUA* • *Riverside Raceway – LUA* • *WE Energies - LUA* *Utility Easements* • *WPS – Underground Power Line off Rainbow Lake Road* *Highway Easements* • *Town of Lake Tomahawk – Lyannis Rd. Reroute* • *Town of Newbold – Ridgeway Rd. Reroute* *Executed Land Use Agreements:* • *Fort Wilderness* • *Town of Boulder Junction – Boulder Lake Landing* *Shooting Range Improvements* • *Town of Boulder Junction* *Access Easements*

- *Gary Crapp*
- *DNR Easement through Carl Grulkowski's Property*
- *Potlatch – Relocation Easement*

Boat Mooring Permits
- *Schauss Woodworks*
- *Errington Resort*

Request Approval to Appraise Property
- *Dunham*
- *Tillman*

Major Trespass Settlement
- *Dreyfus Case in Town of Plum Lake*

Minor Trespass Settlement
- *Septic System in Lake Tomahawk*
- *Septic System & mowing in Arbor Vitae*
- *4 Bill Boards*
- *Misc. Signs & No Trespassing Signs*
- *Pier – Town of Mercer*
- *Pier Release – Town of Newbold*
- *Planters*
- *Cedar Fence & Landscape Rocks*
- *Animal Box Traps*
- *Gate*
- *Wood Pile*

Miscellaneous
- *Organized Land Control Files*
- *Reciprocal Roadway Easement – Emilwood Farms/Papoose Hunt Club*
- *Geocache Notification Approvals*
- *Camp American Legion – Assessable Path Request*
- *Special Event – Distance Ride in Boulder Junction*
- *Volunteer Agreement – NL Discovery Center*
- *Town of Presque Isle Lakes Committee – Kiosk Requests*
- *WVIC Purchase – Compliance with FERC Regulations and Recreation Plan*
- *Gifting of Land Research for Private Landowner in MFL Program*

Administration and Operation Provisions

MASTER PLAN OBJECTIVES	The master plan describes polices and actions for the following Administration and Operation Provisions in Chapter 2, pages 177 & 178: • Funding Constraints • State Forest Road Access Policy • Facility management • Disabled Accessibility • Public Health and Safety • Emergency Action Plan • Authorized Response to Catastrophic Events • Fire Suppression • Refuse Management • Military Activities • Cooperation with Wisconsin Valley Improvement Company • Research
Actions 2007	*Budgets were adjusted to place the budget where there was the most accountability. For instance, the utility bills had been paid by the superintendent's budget. These bills, and the budget for them, were shifted to the managers with responsibility for the buildings.* *State forest roads that are opened for timber sales are kept open for two years following sale close-out. Each year in summer or early fall the superintendent and managers meet with tribal officials to discuss planned road closures. The tribe is also provide with the list of planned timber sales which would open roads.* *Heavy emphasis has been placed on facility maintenance, including painting and general repair. Efforts are underway to improve the energy efficiency of the facilities.* *The property has a policy for disabled access for hunting and considers requests as they come. All facilities that are built are ADA compliant.* *The Department of Health and Human Services inspects the property's campgrounds annually. Public water supplies are tested quarterly during use season for bacteria and annually for nitrates. The property makes twice a year inspection of all use areas for maintenance needs and safety.* *The property emergency action plan was revised for 2007.* *Refuse management was modified for 2007. Previously the recyclables were hauled and sorted by an LTE employee. In 2007 the property contracted with the general refuse hauler to place dumpsters for comingled recyclables, which the vendor emptied for a fee.* *The second phase of land transfers from WVIC to DNR occurred in November 2007.* *The property is a popular location for research. Some of the principle organizations involved with research are DNR, UW-Madison and UW-Stevens Point, USGS, Michigan State University, Northern Michigan, and Michigan Tech.*

Public Communication Plan

MASTER PLAN OBJECTIVES	The master plan describes how The public and other governments will be periodically informed and provided with opportunities for on-going involvement in the application of the master plan. Details are listed in Chapter 2, page 179. Communications The Forest Superintendent will maintain a list of persons, groups, and governments interested in receiving information about on-going management of the Forest • Annual reports • Public communications • Tribal consultation Contact Person The NH-AL Superintendent should be contacted regarding questions about the State Forest or the master plan. At the time of this publication, the NH-AL superintendent may be contacted at: WDNR Service Center 8770 Highway J Woodruff, WI 54568 715/358-9225
Actions 2007	*For 2007 the property developed an locally published newspaper, supported by advertising. This effort was repeated in 2008 and the desire is to refine it into a widely distributed annual report. For now its focus is on recreation. The property held its annual meeting in Boulder Junction in June with 7 citizens attending.* *During 2007 the property developed, with the help of a stakeholders group, a proposal to develop ATV trails on the property. The stakeholders report was shared with the public and the public comment summarized. The department then developed a report of the suitability and sustainability of ATV trails as proposed and reported to the Natural Resources Board for their decision. The decision, reached in April 2008, was that ATV trails should not be permitted on the property.* *During 2007 there were multiple consultations with the Lac du Flambeau tribe regarding the ATV trail, access to Divine Lake for wild rice gathering, road access, and Mann Flowage Wild Rice access. The superintendent periodically meets with tribal officials on other minor issues. A project was discussed in 2007 and implemented in 2008 to hire tribal youths to work for the DNR during the summer to expose them to a variety of DNR jobs they may consider for a career.*

GENERAL FOREST MANAGEMENT PRESCRIPTIONS – *BY PRIMARY FOREST TYPE*

For each forest-type there is a specific set of management techniques that favor the maintenance and regeneration of that type. The following describes the general management prescriptions to be used for each primary forest type on the NH-AL. Each prescription will be applied wherever management for that specific forest type is an objective, as stated in the individual management area plans later in this chapter. The individual management area plans may modify or limit these general prescriptions to fit the area.

ASPEN DOMINATED MIXED FOREST

This forest type is an early successional forest that requires disturbance and abundant sunlight to regenerate. It typically will be managed with clearcuts and modified clear cut harvests of various shapes and sizes occurring at intervals of 45-60 years to maintain this forest type.

General Management Prescriptions

Depending on whether the stand is pure aspen or a mixed aspen community, different management activities will be used to move the forest toward the future desired state.

• When planning individual management actions, consider the ecological values through a landscape view of aspen's role on the NH-AL. A variety of age classes and stand sizes across the landscape provide value to wildlife and aesthetics. Some considerations in landscape planning include the age classes and patch sizes across the landscape, the natural disturbance regime in the area, the surrounding cover types and management.

• Harvest and regenerate aspen naturally, primarily through clearcutting. In stands where the objective is to develop or maintain mixed species the primary management strategy to use "coppice with standards", which means to harvest aspen trees but retain individual red oak, red pine, and white pine trees within a stand. This allows the remaining oak and pine trees to provide seed to the area thus increasing the diversity of the stand.

• Harvest aspen, white birch, red maple and other shortlived species in the stand, leave red oak, red pine, white pine and individual trees of high value to wildlife, forest diversity and aesthetics.

• Research alternative regeneration techniques for the aspen cover type. Specifically, determine if selective harvest or disturbance may reduce aspen root-sprouting and encourage growth of remaining trees, and if such techniques will help convert some aspen stands to other desired species.

• In aspen stands along lake and stream borders, road aesthetic strips, or as islands in wetlands, as appropriate, modify the standard management practices or apply no management to meet the management objectives for these areas.

RED AND WHITE PINE DOMINATED MIXED FOREST

This forest type occurs in a wide range of current conditions that require a range of management intensities and a variety of techniques. Some soil disturbance is required for successful regeneration of these pine species.

General Management Prescriptions

Depending on the origin and composition of the red and white pines, several management activities will be used to manage pine forests toward future desired condition of increased pine composition and mixed species stands.

• Where red and white pine are of natural origin and the primary cover type, use selective to harvests maintain the health, vigor and growth of the pines. Remove selected individuals or small groups to maintain species diversity and structural diversity. At biological maturity (140-250 years red pine, 150- 350 years white pine) harvest pine and replant or naturally regenerate. Clearcutting, seed tree harvest and overstory release may be used depending on site conditions. Stand considerations, seed sources, and site prep needs will determine the appropriate management action to use.

• Plant red and white pine plantations as needed to maintain pine on sites or to convert other forest types to pine. Hand or machine plant nursery stock seedlings following site preparation by mechanical and herbicide application. Use hand or herbicide release following planting to maintain growth and vigor of planted pine trees and increase survival of planted trees.

• Thin pine plantations (red, white, possibly jack) on a recurring basis (8-20 year intervals), according to prescriptions outlined in the DNR Silviculture and Forest Aesthetics Handbook, to gradually create a structure similar to that of a naturally appearing pine stand.

• Mixed pine stands containing a large percentage of tree species other than pine may be treated with selection harvest, shelterwood harvest or overstory removal of other species to promote pine to dominate the future stand or increase the numbers of pine in natural regeneration after harvest. Several harvest entries may be required to bring pine to a dominant position.

• Where red and white pine is a viable understory component, use natural regeneration techniques. Plant pine if natural regeneration fails or is not possible.

• Leave scattered large red and white pine in many harvest areas if they are healthy and do not pose a risk to humans or forest health (Big Tree Silviculture).

• Ground disturbance or prescribed fire may be used to promote regeneration of red or white pine where feasible and safe.

RED OAK DOMINATED MIXED FOREST

Oak forests historically developed or regenerated following a significant disturbance event such as fire or blow-down and fire. Much of the current red oak developed following the large scale cutover and wildfire era in the early 1900's. Red oak may be encouraged on sites with appropriate soil, slope and other conditions. This forest type has high value to a wide number of game and non-game wildlife species. Disturbance is required to regenerate existing stands and to maintain an oak component in mixed stands.

General Management Prescriptions

• Use thinnings to develop oak stands as they near biological maturity, and use shelterwood and selective cuts to regenerate this species. Regenerate red oak at 90-150 years of age, depending on site characteristics. Other management techniques that may be applied when needed to red oak stands include single tree selection, clear-cuts with reserves, scarification, hand-release and herbicide treatments to promote regeneration. A diverse stand is a good goal of regeneration. Oak is typically harvested through the shelterwood method. In a shelterwood harvest, about 30-40% of the mature trees are harvested, depending on site characteristics, to allow for sunlight and the regeneration of young oak trees. After the young oak trees have regenerated, about 10 to15 years later, the majority of the mature trees are harvested, while maintaining 5 to 10 old trees for age and structural diversity and wildlife.

• On mixed stands of red oak with white pine, northern hardwoods or other species manage to promote components of older long-lived trees and natural regeneration of these species and other secondary species.

• On nutrient poor droughty soils with scrub oak stands, use clearcutting to regenerate a component of oak along with aspen/white birch/jack pine. (Some individual management area prescriptions call for converting such sites to jack pine.)

JACK PINE DOMINATED FOREST

This is an early successional forest type that requires disturbance and full sunlight conditions to regenerate. Historically, jack pine stands regenerated following fire or insect infestation/fire events. Harvest and ground disturbance not only provide for good regeneration of jack pine but also support the development of a diverse mix of grasses, forbs and shrubs, which are important during successional stages of this forest community.

General Management Prescriptions

• On dry sites, clear-cut jack pine at biological maturity (50- 80 years) and use appropriate means to regenerate the stand. Clear-cutting and planting, mechanical scarification or fire may be used. Currently planting is the most effective method for maximum survival of Jack Pine because of the quality of the seedlings and an initial advantage over the competing vegetation. Establish Jack Pine plantations as necessary to maintain pine on sites or to convert other forest types to Jack pine. Prepare the site using mechanical and herbicide treatment, then follow-up with hand or machine planting of nursery stock seedlings. Use hand or herbicide release following planting to maintain seeding growth, vigor, and to increase the survival rate.

• On mixed stands of jack pine, aspen and white birch, clear-cut harvest to regenerate a mixed stand or planted to jack pine.

WHITE BIRCH FOREST

White birch was one of the top 3 species present on the NHAL prior to European settlement and was another early successional forest type that came in strongly following the fires of early 1900's. White birch requires mineral soil for a proper seedbed to germinate seed, and it is a highly drought sensitive species. Many of the white birch stands are mature and declining. To maintain this forest community in the landscape, harvest followed by active management is the most effective method. Harvest and ground disturbance provide for good regeneration of white birch as well as development of a diverse mix of grasses, forbs and shrubs important during successional stages of this forest community.

General Management Prescriptions

• Regenerate white birch by clearcutting stands, strip cutting, shelterwood harvest or by modified clear-cuts that open up stands. Typically use ground disturbance during harvest, mechanical scarification, or prescribed fire to prepare the forest floor for white birch seed germination.

• On mixed stands of white birch and other species use selection harvest, shelterwood harvest, and clear-cut harvest, as appropriate, for diverse natural regeneration. Harvest mature white birch in areas where another forest type is the primary objective.

• Where white birch is an associate in aspen stands, clear-cut harvest the birch along with aspen. (White birch can stump sprout from healthy cut trees and can methods along with the aspen regeneration.)

NORTHERN HARDWOODS FOREST

This forest type is managed as an all-aged forest stand. Most of the hardwoods will be managed to diversify tree ages, sizes and types of tree species in each stand as specified in the individual the management area plans.

General Management Prescriptions

• Use selection harvest as the primary management tool, and vary harvest intensity according to site specific conditions and needs. Plan harvests to maintain or increase species diversity in these stands.

• Depending on the objectives of a particular management area, more intensive silviculture systems such as shelterwood harvest, group selection, or gap creation may be used on some sites. These techniques may be applied to an entire stand or to parts of a stand in conjunction with a selection harvest.

• Manage mixed Pine-red oak-aspen-northern hardwood stands through a wide variety of active techniques, depending on site conditions and the management

objectives for the area.
• Where northern hardwoods are to be maintained, generally schedule management entries at intervals of every 15-20 years. To develop a northern hardwood stand with many age classes, evaluate the regeneration, spacing, density and other stands conditions. Harvests can take place at every interval but will be less intense than at the initial entry.

HEMLOCK - HARDWOOD FOREST

This forest community is represented by generally small, mostly older stands scattered throughout the NH-AL. Overall, these areas would be maintained as they exist and regeneration will be encouraged where appropriate. Most hemlock stands would not be actively managed but some may see selective harvest of other species in the stand to enhance existing hemlock and promote hemlock regeneration.

General Management Prescriptions

Because of the low acreage and scattered presence of the hemlock-hardwood forest, very little will be done to manage this community.
• Use passive management as the dominant management system on these stands. Where needed, selectively harvest competing species to remove them from mixed hemlock-hardwood stands. Retain hemlock in northern hardwood and other stands to promote diversity and maintain seed sources for potential natural regeneration.
• On a periodic cycle, monitor hemlock-hardwood stands for growth, regeneration and the presence of invasive plants.

FORESTED AND UNFORESTED WETLANDS

The forested wetland areas typically contain stands of swamp conifer (black spruce, tamarack, white cedar and associated tree species). They can be pure stands of individual species or combinations of two or more tree species. Also included in this category are swamp hardwood stands. Examples of these are black ash, red maple and other species that occupy a wet forest environment. The unforested wetlands are represented by large areas of sphagnum keg and open bogs as well as alder thickets and marshes.

General Management Prescriptions

• No management activities will be conducted within wetlands with small sized slow growing trees, lowland brush, or areas of open bog and marsh. (Note: these vegetation types make up most of the wetland acreage.) However, access across these stands on a frozen ground temporary road may be required.
• Productive stands of swamp hardwood, primarily black ash, may be regenerated by limited harvesting (create partial openings or use shelterwood cuts) following the guidelines in the DNR Silvicultural and Forest Aesthetics Handbook.
• Productive stands of tamarack and black spruce may be regenerated by limited harvesting of stands (clear-cut) following the guidelines in the DNR Silvicultural and Forest Aesthetics Handbook and in consultation with an integrated team of scientists.
• Conduct timber harvests on forested wetlands only under frozen ground conditions to prevent rutting and potential damage to organic soils.
• Retain all white cedar.