

Ohio Department of Natural Resources

Division of Forestry

Five Year Forest Management Plan

For

Zaleski State Forest



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Note: This plan covers the time period of Fiscal Year 2011 – Fiscal Year 2015 and will be updated in Fiscal Year 2016.

OHIO DIVISION OF FORESTRY

I. **STRATEGIC PLAN** *(Effective 2008)*

Our Vision: Ohio's state forests will be the best managed forest lands in the country, and will be widely recognized as such.

To fulfill this vision, the Ohio Division of Forestry commits to meeting five objectives.

We will:

- Manage forests to ensure the health and sustainability of forest systems
- Produce high-quality forest products that contribute to local communities
- Provide recreational opportunities that require a large forest land base
- Provide unique forestry education sites and promote outreach and long-term research
- Maintain a highly trained and well equipped work force

To fulfill these objectives, the Division of Forestry will develop and implement strategies and plans that allow us to accomplish the following goals by 2011:

- Manage forests to ensure the health and sustainability of forest systems
 - *Implement a proven, verifiable approach to sustainable management*
 - *Manage for site-appropriate, native forest systems and species*
 - *Maintain long-term forest productivity through conservation of soil, water, and forest resources*
 - *Retain or promote stand- and landscape-level wildlife habitat*
 - *Assess the distribution and impact of non-native invasive species*
- Produce high-quality forest products that contribute to local communities
 - *Base State Forest harvest volumes on the goals and guidelines for each forest system, current stand and forest-wide inventories, and science-based silviculture*
 - *Develop marketing strategies to capture the maximum value of forest products*
- Provide recreational opportunities that are compatible with sustainable forest management
 - *Develop a comprehensive recreation plan for the state forest system*
 - *Build recognition for unique and varied recreation opportunities on state forests*
- Provide unique forestry education sites and promote outreach and long-term research
 - *Support forest research with an emphasis on sustainable forest management (silviculture, prescribed fire, native systems, etc.)*
 - *Develop opportunities to showcase forest management practices to the general public, private landowners, and forest industry*
- Maintain a highly trained and well equipped work force
 - *Develop a training, continuing education, and/or certification standard for all division staff*
 - *Inventory and evaluate equipment and facilities and develop maintenance and replacement schedules*
 - *Develop equipment and facilities budgets based on current and projected needs*
 - *Ensure all staff have appropriate health and safety training*

The Division of Forestry, complying with Governor Ted Strickland's Directive dated October 25, 2007, desires to achieve certification to the principles and criteria of The Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI). Upon the completion of this certification process the forest will then have met its requirements for being recognized as a forest properly managed for sustainability.

Divided into compartments, a 20-year schedule is used to monitor the health and sustainability of the forest. After cruising prescriptions have been written, recommendations follow requiring some silvicultural action be taken to maintain the health of the forest. Wood products are derived from the recommended management actions that support the local economy as monies from the sale of the products are returned to the local school districts, counties and townships. By maintaining a healthy, sustainable forest these wood products will continue to be available and managed appropriately, the results will be a quality-produced product.

In this era of forest management producing a quality wood product is not enough. The forest is a renewable resource, which provides food and cover for wildlife, protection of soil and water values, aesthetics, and an environment for both outdoor recreation and learning opportunities. Providing interpretive sites, trails, and diverse habitats are all part of the overall forest plan in meeting a multitude of uses.

Improving employee's knowledge, skills and abilities is a priority objective within the Division of Forestry. The Division recognizes a knowledgeable work force translates into one that works more effectively and efficiently. Today this is even more important as the Division has seen its work force reduced greatly from years past. Training and educational opportunities are offered and made available to each employee annually.

II. **FOREST HISTORY**

Land Acquisition: Prior to the 1800's, dense forest of oak-hickory and associated species covered Vinton County. Then in the early 1800's, the refinement of native iron ore in charcoal furnaces became a flourishing industry. Between 1818 and 1873, 69 furnaces were built in this region, one of which was a furnace financed by a French nobleman named Count Zaleski. In 1862, an agent from Cincinnati interested in producing iron came to Zaleski to look for land adequately endowed with limestone, timber and iron ore (the materials necessary for the production of iron). Although he located appropriate land in Vinton County, he lacked the finances to establish a facility. Through personal ties and concerted endeavors, he located the funds in Europe. The Zaleski Land Company, which initially purchased 393 acres in the Northeastern portion of the county and erected a furnace, was established through the financial backing of Count Zaleski. Production at this furnace, as at other furnaces in the area, proceeded unrestricted for a number of years because of the proximity of resources. However, as timber reserves and other resources were depleted, transportation costs for raw materials forced the furnaces to close. As the furnaces became abandoned, much of the timber-exhausted land was put into cultivation and pasture. But the characteristic steep terrain and the thin residual soils of the area proved agriculturally unproductive. By 1910, erosion and depleted fertility made the land not conducive to farming and agriculture. With no feasible alternative employment, tax delinquency increased and a population exodus occurred (1880-1930).

In 1935, under the direction of the US Department of Agriculture and the Ohio Division of Forestry, the Zaleski Land Utilization Project was established. This 46,000-acre project in Vinton County was part of 2,000,000 acres in Southeastern Ohio that was designated an economic problem area by the Federal Government. The objective of the Zaleski Project was to return the land to its most productive capacity by generating a forest community, aiding flood control and preventing soil erosion and by so doing, establishing an economic base to maintain a rural population.

In 1931, the State of Ohio acquired 3,400 acres of the Strong Estate, which included land previously owned by the Zaleski Company. The Federal Government, through the Resettlement Administration, acquired 19,000 acres of land within the Zaleski Land Utilization Project and transferred its administration to the Ohio Division of Forestry. This included control of an area south of U.S. 50 known as Raccoon Forest. In all, the Division administered 22,000 acres of forest-recreation area.

Through the effort of the Works Progress Administration (WPA), many developments and improvements were accomplished. Over 14,250 acres received timber stand improvement in the form of salvage cutting, thinnings and weed tree and vine removals. An 125-acre dam and lake, now known as Lake Hope was constructed, 14 vacation cabins were built, 35 miles of roads and trails and 21 miles of fire breaks were completed, a fire tower was erected, wildlife habitat improvements were initiated, a game refuge was established and numerous waterholes were built.

Since this time, various land acquisitions, transfers and exchanges have occurred. Ownership of the land acquired by the Resettlement Administration was transferred to the Soil Conservation Service, then to the Forest Service and finally, in January of 1958, to the State of Ohio. Further land acquisition and exchanges, including an exchange involving Raccoon Forest to Mead Corporation for a similar holding in Zaleski State Forest, has brought Zaleski to become the second largest state forest in Ohio.

Future acquisitions will be dependent upon funding. Non-traditional sources of funding are becoming available with the advent of the Carbon Sequestration Markets. Land acquisition priorities will be three and four sided in-holdings. Adjacent properties to the current land base will also be a higher priority than disjointed tracts of land.

Past Land Management/Uses: Before and around the turn of the century, this area was extensively mined for coal, iron ore, farmed and cut for charcoal for the iron ore furnaces. In response to the degraded shape the land was left, during the 1930's, a mass reforestation project lead by the Civilian Conservation Corps (CCC) and WPA planted thousands of trees on Zaleski and other state forests for erosion control. Other past uses of the land include the site of two former CCC Camps (Light and Zaleski). Some abandoned mine reclamation work has been done on the forest most notably at Carbondale (the site of a lime doser and at Hope Schoolhouse the site of re-grading and tree planting). The 447-acre Waterloo Forest, located west of S.R. 356 south of Mineral included the first state forest acquisition. It is now incorporated into the Zaleski State Forest and contains some of the largest eastern white pine in the state. Management efforts will be directed toward maintaining the stately white pine along S.R. 356 through their life span. The Carbondale Forest was a portion of the land included in an exchange with the Mead Corporation in 1969. Planting of the forest, also known as the Doolittle, Enderlin, or York Forest, was begun in 1906 and by 1926, about 250,000 trees have been planted on a 200-acre tract. Presently, 60-acres remain, containing mixed conifers and deciduous plantings that have developed in an unmanaged state. The remnant of the original stand will continue in an unmanaged condition.

III. FOREST DESCRIPTION

A. General

Property Location Description: Zaleski State Forest is located in the Hill Country of Central and Southeastern Ohio, six miles northeast of McArthur and twenty miles west of Athens. This area is referred to as the "Southern Unglaciaded Allegheny Plateau Section of the Eastern Broadleaf Forest Province, which is characterized as a maturely dissected plateau of high hills, sharp ridges and narrow valleys "(McNab and Avers 1994). The 28,000-acre forest covers portions of Brown, Elk, Knox, Madison, Clinton, and Swan Townships in Vinton County and portions of Waterloo and York Townships in Athens County. The forest is generally bounded by State Route 56 and US 50 on the north and south respectively, and by State Routes 356 and 328 on the east and west respectively. State Route 278 provides the primary access route for the forest, bisecting the main forest area from US 50 to SR 56. Refer to Exhibit A for the general location of the forest. The forest headquarters is located on the northern edge of the town of Zaleski.

Soils: Zaleski falls within three soil regions: the Shelocta-Brownsville-Latham-Steinsburg; the Coshocton Berks-Westmoreland; and Gilpin-Upshur-Lowell-Guensey as shown on soil regions of Ohio map. The most common soil association found at Zaleski State Forest is the Steinsburg-Gilpin Association. This soil is characterized as 55% Steinsburg and 20% Gilpin with 25% other components. This soil is fairly shallow with an average of 22" to bedrock and 40-70% slopes.

Water Resources: Zaleski State Forest is contained within the Scioto-Hocking Watershed Region, and lies totally within the Raccoon Creek Watershed. The south and central portion of the forest is directly drained by Raccoon Creek, while Two Mile Run, Sandy Run and Hewitt Fork, which enter Raccoon Creek, drain the northern portion of the forest. The only major stable water body within the Zaleski State Forest is Lake Hope, located adjacent to S.R. 278, in Lake Hope State Park.

Access Issues/Transportation: Zaleski State Forest is traversed by numerous county, township and forest roads (refer to Exhibit D). State Route 278 is the primary access corridor, running north and south through the central part of the forest from S.R. 56 to U.S. 50. Mine hollow, north of the Service Center, Wheelabout Road, going east from S.R. 278, and Penny Hollow east from S.R. 278 past the Zaleski Training Academy, are the only hard surfaced roads in the forest. However, numerous well-maintained county and township roads provide access to nearly all parts of the forest.

There are a total of 51.1 miles of forest roads, consisting of one mile of Class I (improved blacktop), 34.3 miles of Class II (high standard limestone), and 15.8 miles of Class III (dirt or sod) roads. All forest roads, except Forest Management Access Roads, are maintained for vehicular travel. Public traffic on Forest Management Access Roads is prohibited.

More than a dozen unmaintained township rights-of-way exist on Zaleski State Forest. These rights-of-way remain on the township records and are legally passable by the public, who use off-road vehicles on the old roads.

Potential Productivity: There are multiple ways to measure forest productivity. The Site Index Value is a common measurement of how well a certain tree species grows in the place where it is found, thus defining productivity of the tree species. It is highly correlated to available moisture and soil type. Site indices vary at Zaleski from 90+ Black Oak (base age 50) to <50 Black Oak. A broad average for the entire forest is approximately 75. According to timber surveys performed in 1951 by E. Conway, the average annual volume growth for Zaleski was 145 board feet per acre.

Overstory: Zaleski State Forest lies within the oak-history forest type, and contains a heterogeneous composition of forest species referred to as the Central Upland Hardwoods. Mixed oak species are located on upper slopes and ridges, with mixed mesophytic trees of more tolerant and later climax species located in the hollows and low areas. Principal species include red, white and black oak, red and sugar maple, various hickories, beech, yellow poplar and ash, with occasional walnut and scattered other species. Plantations of conifers are common throughout the forest. Principal species include white, red, and shortleaf pine.

Understory: The understory layer is often as diverse as the overstory with a large number of species occurring. These species may be site or aspect oriented and the current stage of succession can dictate which species will be present. However, it is often a plants tolerance for shade that dictates their ability to survive in the understory. Shade tolerant species such as maple, beech, hemlock, blackgum, and basswood may exist in the understory for many years. These species will strive for a position in the overstory once an opening in the canopy occurs. Other understory species such as flowering dogwood, spicebush, redbud, witch hazel, pawpaw, hawthorns, and others remain in the understory.

Herbaceous Layer: The herbaceous layer at Zaleski is typical of Upland Central Hardwoods. Black cohosh, ginseng, various orchids and native wildflowers grow in fertile cove areas. On drier sites, grasses, forbs and some wildflowers are common.

Habitat Components and Wildlife Populations: Forest management increases our ability to create and maintain a high level of diversity and interspersed habitats necessary for the maintenance of a great variety of native fish and wildlife, including non-game, as well as game species. One of the goals of State Forest Multiple Use Management is to provide a variety of vegetative covers (both in species and age classes). This should provide as great a variety of native flora and fauna as practical and produce levels of native fish and wildlife that are compatible with the environment and other forest uses.

This quote taken from the Division of Wildlife about Waterloo Wildlife area sums up the wildlife resources at Zaleski as well: "Abundant native game species include the gray squirrel, wild turkey, and white-tailed deer. Lesser numbers of fox squirrel and ruffed grouse are found on the area. Cottontail rabbits occur in small numbers in the reverting fields. All of the furbearers common to Southeastern Ohio are found on the area. Approximately 80 species of birds can be seen or heard on the area in a year's time. Included are cedar waxwing, white-eyed vireo, red-eyed vireo, blue-winged warbler, prairie warbler, yellow warbler, hooded warbler, indigo bunting, Northern mockingbird, wood thrush, Acadian flycatcher, mourning dove, and red-tailed hawk."

On State Forests, Habitat Management Objectives shall be accomplished through normal silvicultural practices. In relation to other forest practices, wildlife management should receive the same emphasis

given to, soil, water, recreation, aesthetics, and timber.

The Forest Wildlife Management Objectives for Zaleski State Forest are:

1. To develop and maintain abundant and diverse wildlife resource representative of the Central Hardwood Forest. This will be accomplished through the application of sound Silvicultural Practices and, to a lesser extent, through the use of Specialized Wildlife Habitat Practices.
2. Sustain and improve populations of federal and state threatened and endangered species. Use the best science and consultation available to accomplish this goal.
3. To provide quality wildlife-related recreational experiences in the forest consistent with wildlife resource needs by maintaining public hunting access and partnership with the ODNR-Division of Wildlife.
4. Continue management of Habitat Focus Areas. The Turkey Management Area (5,100 acres) is adjacent to Waterloo Wildlife Area and managed by a cooperative agreement between the Division of Forestry and the Division of Wildlife. This area is designed to maintain mast-producing trees and provide limited vehicular access to increase hunting opportunities. The Ruffed Grouse Management Area (1,100 acres) is managed via a cooperative agreement between the Division of Forestry, Division of Wildlife, and the Ruffed Grouse Society. This area will be harvested on a shortened rotation age (80 years) balanced to provide a sustainable flow of early successional habitat. This will help maintain viable populations of species that depend upon these habitats, namely ruffed grouse. This area is in its third cutting cycle (out of eight).

Historically, specific Wildlife Management Practices on Zaleski State forest have been associated with the following areas:

1. Old field plantations of conifers.
2. T.S.I. work on the forest including that on select and regeneration cuts.
3. Waterhole construction from the mid 1950's through the early 1960's.

Each silvicultural system has an impact on wildlife. Management strategies that favor site-appropriate, native species shall be favored. Specifically, silviculture that promotes the regeneration and maintenance of Oak/Hickory native associations shall be favored.

All silvicultural practices applicable to the forest types should be employed to provide for a mosaic of habitat types. This should include zoning variability to provide for differing management strategies, regeneration harvests (clear cuts and shelter woods), single tree selection and group tree selection harvest methods, timber stand improvement projects, and other types of thinning.

The intent in forest cover manipulation on state forests is not to control or manipulate wildlife. Rather, the intention is to manage primarily for multiple benefits and maximize biological diversity.

Invasive Concerns: Invasive species found on the forest include Autumn and Russian Olive, Ailanthus, Japanese stilt grass, Japanese honeysuckle and purple loosestrife.

In the fall of FY 2010, temporary employees were hired to focus specifically on Invasive Species Control and Timber Stand Improvement activities (Ohio Woodland Job Corps). Invasive Species Projects are currently being identified and approved through the Project Proposal Process. Approved projects may be addressed through several means including chemical and mechanical treatments.

One other interesting invasive is the wild boar. This problem is being regulated through hunting, but signs of serious damage will be reported to the Division of Wildlife for further investigation of the problem.

B. Sustained Yield and Forest Level Growth

In 2009, the Division of Forestry procured the services of LandMark Systems to provide a comprehensive inventory of the 8 largest state forests (Brush Creek, Hocking, Pike, Richland Furnace, Scioto Trail, Shawnee, Tar Hollow, and Zaleski). The purpose of this project was to provide decision support for forest management activities, to update our current inventory database, and provide forest inventory information for the public. To meet these requirements, a stratified forest inventory was conducted in the spring of

2009. The inventory used proprietary techniques to extrapolate a field sample consisting of 2,209 plots across all the acres of the project area. This approach provided a forest-level inventory estimate within the allowable budget and statistics.

While the Division of Forestry desires a stand-level inventory, lack of resources to perform such a detailed inventory was not possible at the current time. LandMark Systems proposed to leverage a number of remotely acquired data sources (imagery, etc) to arrive at a level of detail that is more refined than a regular stratified-level inventory. The result was an inventory data set that is between a stratified-level and a stand-level approach. For this project, LandMark Systems provided color-infrared imagery and other data sets that were used to model certain stand characteristics based on the data produced from the 2,209 plots.

The inventory results were then modeled for growth & yield using the Forest Vegetation Simulator (FVS) Northeast Area TWIGS variant. FVS is a publicly available growth and yield model produced by the US Forest Service. For over 400 different stands that contained plot data, growth rates were established according to site conditions. Net growth rates incorporated in-growth and mortality and were evaluated for a 10-year period. Net growth rates were summarized and averaged for each stratum that occurred on the state forest project area.

For each state forest, the inventory and the net growth rates were calculated based on the data output from the FVS model and applied to the entire state forest. This calculation is noted in the table below as the "Total" growth rate. However, each state forest has a system of management zones that define the management options for those areas. Several zones provide for limited or restricted management. Therefore, the calculation of growth & yield is also provided for only zones 3B and 3C where forest management is active. This calculation is noted in the table below as the "Constrained" growth rate.

For further comparison, average growth rates for counties where state forest occur was calculated using the Forest Inventory and Analysis (FIA) data set compiled by the US Forest Service. The FIA data set is a statewide inventory data set that is maintained long-term and provides baseline data for the current and historic conditions of Ohio's forests.

The purpose of these calculations is to provide evidence that the harvest and removal of forest products from state forests are sustainable and well within the calculated growth of the forest. Also provided in the table below is the average harvest level over the last ten years for comparison.

Zaleski State Forest

Total Inventory (board feet)	Productive Acres	Total Growth Bd Ft / Yr	Zone 3B and Zone 3C Acres Only	"Constrained" Growth Bd F / Yr	FIA Data Average Growth Bd Ft / Yr (for comparison)	Average Harvest - Last 10 Years	Harvest as % of Growth
319,366,663	27,313	7,369,785	19,844	5,295,709	4,360,917	1,207,982	23%

C. Landscape Level Information

Adjacent Forests: Zaleski State Forest is located in Vinton and Athens County. Vinton and Athens Counties are 70% forested. Together both counties average approximately 6,800 board-feet per-acre according to the most recent FIA data. The current forest inventory for Zaleski indicates an average volume of approximately 11,675 board feet per acre, more than 71% greater than the county average. These statistics indicate that Zaleski provides significantly more late successional habitat than the surrounding forests.

Nearby publicly owned forestlands include Lake Hope State Park, Waterloo Wildlife Area, and Wayne National Forest. A significant forestland under private ownership is the Raccoon Ecological Management Area (>15,500 acres). This property is scheduled to be acquired by the State of Ohio within the next calendar year. Nearby state forests include Hocking, Tar Hollow, Richland Furnace and Shade River.

Local Social and Economic Conditions: Currently it is estimated that the Wood Products Industry in Ohio is a 15 billion dollar per year industry. This industry is dependent on sustainably managed forestlands throughout the state. State Forests provide an important function of demonstration for long-term

sustainable management that can be applied to private lands. This is an indirect economic benefit to all forests in the state. Indirect benefits also result from the sale of approximately 2-3 million board feet per year at Zaleski State Forest that contributes to the local wood products community. Direct economic benefits are created when the proceeds from the sale of stumpage through the Timber Sale Program are shared with the State of Ohio General Revenue Fund, as well as counties, townships, and school districts where the sales are located. Between \$100,000 and \$450,000 has been returned to the local level in the each of the past 5 years.

The Forest and its staff also provide many informational and educational opportunities. Forest employees often lead local students, interested forest visitors, and other clubs and groups on informational tours. There are also many Special Use Permits issued each year for independent research projects and recreational uses. The Zaleski Horseman's Camp, hunting within the forest, and other activities taking place within the forest often draw out of town and out of state visitors. When these forest visitors utilize the resources available at Zaleski State Forest, they are also contributing to the community both economically and socially.

According to 2000 US Census Bureau Data, the population of Vinton County is 12,806, which is the lowest population in any county in the State of Ohio. The median household income was \$29,465, which ranks Vinton County as one of the poorest counties in the state.

Statewide Social and Economic Impact Evaluation and Monitoring: The evaluation, incorporation, and monitoring of social and economic impacts of forest management is conducted by the Division in several ways. Data used in our evaluation of social and economic impacts comes from sources including the Ohio Statewide Forest Resource Assessment and Strategy (FRAS) and a suite of particular programs and efforts specific to state forest management.

A. FRAS

The Food, Conservation, and Energy Act of 2008 (the 2008 Federal Farm Bill) requires each state to complete a *Statewide Forest Resource Assessment and Statewide Forest Resource Strategy* to continue to receive funds under the Cooperative Forestry Assistance Act. The Division completed a document titled "Ohio's Statewide Forest Resource Assessment and Strategy" (FRAS). The purpose of the FRAS document is to provide a basis upon which future strategic directions and actions can be evaluated and selected. It is to be used by the Division of Forestry as well as existing and potential partners to marshal limited resources towards addressing identified forest issues and threats. One of the criteria used in the FRAS, Criterion 6, is the Maintenance and Enhancement of Long-Term Multiple Socioeconomic Benefits to Meet the Needs of Societies. *The results of the FRAS and the associated strategies to deal with the identified threats is a significant source for state forest managers on our understanding and incorporation of social and economic impacts of state forest management.*

The 2010 Statewide Forest Resource Strategy for Ohio is a strategic planning document that will guide all state forestry activities by the Division of Forestry, including programs with funding from USDA Forest Service State and Private Forestry grants. The State Strategy is framed around the key issues identified in the FRAS, as well as the important benefits and services that Ohio forests provide. Stakeholder input was a critical component of the assessment process and, in particular, the identification of key threats and opportunities for Ohio's forests.

An important role for all stakeholders is to increase public awareness of the benefits forests provide and the role that all Ohioans play in sustaining those benefits. This has been identified as one of the major issues facing Ohio's forests. The Division has several programs, including state forest management, which are listed and committed to accomplishing this goal. Public outreach and educational efforts are identified in each state forest Annual Work Plan.

B. State Forest Efforts - evaluation and monitoring of Social and Economic Impacts

A suite of particular programs and efforts specific to state forest management contribute to our evaluation and monitoring of social and economic impacts. These activities happen at a local or regional level.

- *Civic Activities* – Division staff are members of and associated with various clubs, organizations and civic groups. This is an important way, especially for local forest managers, to stay in touch with their community.
- *Indigenous Peoples Consultation and Cooperation* - The Division works closely with the Hopewell National Historic Park and the OSU-Newark Earthworks Center on training for staff on the significance and protection of cultural resources. Further, the Division extends an offer of cooperation to tribal contacts who may have an interest on providing input into our management.
- *Forest Industries Program* – This program works cooperatively with government agencies and industrial associations to enhance Ohio’s domestic and international wood products marketing opportunities.
- *State Forest Timber Sale Revenue Distribution to Local Governments* - Through the “Trees to Textbooks” program, administered by the Ohio Department of Natural Resources (ODNR) Division of Forestry, a percentage of the revenues generated from state forest management activities go to the county, township, and school district in which the activity took place. Over \$21 million has been distributed since 1983 to some of the most economically disadvantaged counties in Ohio.
- *State Fire Assistance* – The Division has multiple programs to educate local communities on wildfire risks and to provide necessary training, equipment, and suppression assistance to rural volunteer fire departments.
- *Recreation Program* - The recreation program administers all of the recreation facilities, grants, and special uses of our state forests. The division collaborates with a number of not-for-profit recreation organizations on special projects that are compatible with the division’s mission. All state forests are open to public recreation.
- *Public Participation and Consultation* – The Division has several means by which citizens’ may have a voice to our management of the forests. There is an appointed Forest Advisory Council, annual open houses, public meetings, an open records law, and a friendly open door policy.
- *Other working groups and partnerships* – The Division is involved in a host of working groups, committees, and partnerships that focus on a variety of issues from forest health, Emerald Ash Borer, Logger Training, and many others.

C. Plan for Evaluation and Monitoring over the next 5 years.

The FRAS is a document that is updated every 5 years with new information. The FRAS serves as one type of monitoring since it incorporates social as well as economic data sets in the results. The Division’s plan for the incorporation of the FRAS data into our management is as follows:

1. *Training* – The FRAS is an assessment of present and future forest conditions and trends on all ownerships in the state and a strategy document to deal with identified threats. All relevant state forest staff will receive training on the assessment and associated strategies and these strategies will be incorporated into our annual work plans for each forest.
2. *Commitment to Participation in the Strategies* – The FRAS identifies 6 key issues with associated objectives and strategies to mitigate those issues. For each issue, agencies and programs are identified as being key factors towards mitigation. State Forests will commit to playing a key role in the Division’s efforts to mitigate the threats and capitalize in the opportunities identified through FRAS. These efforts, identified in the FRAS strategies include:
 - a. Implementation of the Division’s strategic communications plan
 - b. Public awareness campaigns reaching citizens living in the wildland-urban interface and the small family forest owners.
 - c. Maintaining a supply of quality forest products and forest services from State Forest indefinitely into the future.
 - d. Provide diverse recreational opportunities.
 - e. Enhance Ohio’s diverse markets for forest products and services.
 - f. Improve the quality of urban life through proper urban forest resource management.
3. *Commitment to Participation in the monitoring and update of the FRAS* – State Forest will play a key role in the update and monitoring of the items of the FRAS assessment.

For local or regional Division and State Forest efforts, the Division will attempt to gather data for evaluation and continue monitoring efforts. Specifically, the following activities will be planned for the next five years.

1. Timely reporting for programs or efforts listed above relating to social and economic impacts.

2. Voluntary user registration will be maintained and enhanced. Data from voluntary registration will be summarized for determining trends in use. These trends will be incorporated into the activities identified in the annual work plan.
3. Catalogue public comments are received at public meetings and open houses
4. Catalogue disputes and records requests.
5. Commit to participate in civic activities at each unit location.
6. Commit to the partnership efforts important to state forests and report as needed.
7. Continue to strengthen outreach and education programs.
8. Broaden the scope of our consultation efforts.

All of these monitoring efforts are reviewed at least once per year by the Integration Committee for the Division. The Integration Committee determines the responses and/or actions that need to be taken to address the results of the monitoring. Recommended actions or adjustments to policies or procedures will be considered for inclusion into our policy documents. The results of monitoring will be incorporated in our strategic plan, 5-year management plans, and annual work plans.

Climate: Most of Ohio lies within a climatic region classified as Humid Continental, warm summer phase, with predictable general changes. The mean annual temperature for the Vinton County area is 54° F, with season averages of 71° F in summer and 32° F in the winter. Annual precipitation averages 40.3 inches of total precipitation with 59% of precipitation falling from April to September. The average snowfall is 21 inches.

Within Zaleski State Forest, many microclimates exist, each producing its own combination of vegetation and wildlife. Wind, solar radiation, and soil moisture vary between ridges and slopes and hollows, resulting in a variety of flora and fauna. Annual localized floods are common. During the spring rains, highways and forest roads are frequently blocked because of high water conditions.

Geology: Zaleski State Forest lies entirely within the un-glaciated portion of the Appalachian Plateau. Topography of the forest ranges from rolling hills, found in central Vinton County to steep hills found in the western and eastern portions of the county. Streams and valleys penetrate the forest, which is typified by narrow ridges, steep valley slopes and level valley floors.

Surface strata are composed of residual soils formed by the weathering of bedrock and are composed predominantly of calcareous sandstone and shales, except for a small portion formed on limestone and limey shale. Most soil is generally light colored and well drained due to the steep, sloping relief. The deepest, richest soils are located within the valley bottoms. However, most of the soil is low in natural fertility and organic matter.

Numerous gas and oil wells are located throughout the county and provide supplementary incomes to landowners. There are currently no active wells at Zaleski State Forest although the federal government owns a controlling share of the oil and gas rights for the majority of the property. Sites could become active in the future. There is also potentially mineable coal under Zaleski State Forest. The Division of Forestry controls the majority of the Coal Mineral Rights. No mining is planned in the future.

Cultural, Historical, & Archeological: Zaleski State Forest has a rich history of Native American use. The most noticeable use was by the Adena group, 1500 to 2500 years before present. Indian mounds from this time period are found throughout the forest, one of which is located adjacent to the Ranger Station. The mounds, ranging in height up to 20 feet, were used for burial and signaling purposes. Similar mounds can be found scattered throughout Southeastern Ohio. The use of the forest in this period is likely connected to an ancient trail passing from present day Marietta to Chillicothe. This road continued to be used through the European settlement period. Parts of the road are still visible and presently make up portions of the Zaleski Backpack Trail.

The remains of building foundations can be found at the site of old mining towns. Ingham Station was one such town, located east of the Moonville Tunnel. The entrance to the Ingham Mine is still present and can be viewed from the backpack trail. Through other areas of the forest, such as Coalmont Hollow and Keeton Hollow (now Lake Hope), railroad lines were operated to haul coal and timber from the area.

IV. MANAGEMENT OBJECTIVES

Zoning and Special Areas

Forest Zoning: Forest Management Objectives are guided and designated by Zone Classifications. The descriptions are described in detail in the Division's Land Management Manual. Currently the manual and all zone classifications are undergoing revision. Exhibit B contains the current Zone Map for Zaleski State Forest. Exhibit C lists acreages for each Zone Class in the forest.

Research Areas: Numerous research projects have been conducted and are on-going at Zaleski State Forest throughout its existence. Research collaborators with the Division include The Ohio State University, Ohio University, and the USDA – Forest Service Research. Topics of research are currently prescribed fire, oak regeneration, and invasive species management. Much of this research is long-term in nature such as the Fire and Fire Surrogate Sites that are part of a National Research Program. All requests for research are reviewed through the Special Use Permit Process.

Cultural Areas: These are primarily Adena Mounds, early settlement, and old homestead sites. These sites are designated for protection through forest zoning and/or a special sites zoning layer referenced prior to any forest management activities. As sites are found this layer is updated to reflect current knowledge.

Sensitive Areas: Visually and environmentally sensitive areas are present at Zaleski State Forest. Visual management is guided both by forest zoning and aesthetic forest management guidelines. Environmentally sensitive areas are managed through BMP's for forest management operations, forest zoning, and streamside management zones.

Forest Services

In developing this 5-year forest management plan, the Division recognizes the important public benefits and services that our State Forests provide. These services include but are not limited to soil and water resources, municipal watersheds, aquatic life, wildlife, carbon storage, and recreation and tourism. These services are considered in our management of state forest and the development of our management plans. It is the intent of the Division to maintain and/or enhance these services through proper forest management.

Soil Quality: The Ohio Statewide Forest Resource Assessment and Strategies, 2010 (FRAS) include criteria and strategies dealing with soil quality for Ohio's forests. The FRAS report includes data from FIA and other soil data that show that the Soil Quality Index (SQI) for Ohio's forest soils is superior to that of neighboring states. The higher SQI is attributed to greater cation exchange capacity and a more desirable calcium-aluminum ratio. Low calcium-aluminum ratios are indicators of acid deposition. The average amount of soil carbon in the top 20 cm of mineral soil is 22 tons per acre and similar to neighboring states indicating the importance of protecting the top 20 cm of mineral soil. Certain forest management practices can increase carbon sequestration. The FRAS assessment cites that although Ohio's forests are maturing, the amount of carbon stored per unit area has changed little over the past 6 years. Over the next 5 years the Division will take the following actions to maintain or enhance soil quality on state forests:

- Continue to require and promote the use of Best Management Practices for logging practices to control erosion.
- Develop guidelines for acceptable working conditions for logging during times wet weather to prevent sedimentation and minimize rutting.
- Develop guidelines for the retention of biomass in the forest including live tree and snag retention.
- Promote carbon sequestration tree plantings on state forests.
- Conduct training for all relevant state forest staff on BMP's and biomass retention.
- Commit to the strategies outlined in the FRAS strategies document.

Water Quality: The Ohio Statewide Forest Resource Assessment and Strategies, 2010 (FRAS) include criteria and strategies dealing with water quality in Ohio's forests. This assessment cites that the amount of forest within a watershed is a very important factor on infiltration rates and timing of surface

runoff that reaches a stream. The Ohio EPA data shows that despite this fact the water quality of the most heavily forested watersheds in Ohio varies. These data show that the principle cause of impairment of Ohio's forested watersheds is related to landscape modifications from agriculture and urban development. Specifically, the pollutants that enter streams in these impaired watersheds are from 1) human or livestock sewage, and agriculture chemicals, and 2) sediment from agriculture or urban development. Acid mine drainage is also cited as a factor. The Ohio EPA has also designated many Superior High Quality Waters and Outstanding State Waters based on a number of factors including aquatic life. Several of these streams are located on Ohio's State Forests. Over the next 5 years the Division will take the following actions to maintain or enhance water quality on state forests:

- Continue to require and promote the use of Best Management Practices for logging practices to control erosion.
- Develop and analyze our pesticide use policy on state forests with the intent of limiting pesticide use to only directed applications mostly for invasive species control.
- Continue to implement a "Streamside Management Zone" (SMZ) policy on all harvests.
- Review our current state forest zones and Ohio EPA high quality water locations for possible gaps with the intent to maintain and protect the current high quality status of those streams.
- Conduct training for all relevant state forest staff on BMP's, SMZ's, and EPA water quality data.
- Commit to the strategies outlined in the FRAS strategies document.

Public Recreation and Tourism: Forests are an important aspect of outdoor recreation in Ohio. All State Forests managed by the Division of Forestry are open to public recreation and the Division maintains a Recreation program to administer those recreational uses of the forest. The ODNR 2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) shows that there are 3,638 forest-based recreational sites in Ohio. It further shows that Ohio ranks low nationally for per capita outdoor recreation acreage. The SCORP shows that forest-based recreational sites are the most popular; including camping, niche recreation, and trail-based recreation. The Division maintains a large network of trails for horse riding, hiking, biking, and ATV riding. Over the next 5 years the Division will take the following actions to maintain or enhance public recreation on state forests:

- Maintain our backcountry recreation resources for all state forests.
- Build recognition for unique and varied recreation opportunities on state forests.
- Develop trail standards for maintenance and seek funding for activities.
- Build partnerships with recreational user groups.

V. LAND MANAGEMENT GOALS

A more complete description of the land management practices and processes on state forests can be found in the Division of Forestry's Land Management Manual. Silviculture is the art of cultivating stands of trees, including their establishment, tending, perpetuation and harvest to produce a forest of distinctive form. Systems of silviculture are broadly classified according to methods of harvest cutting employed in reproducing a stand of trees. A multitude of silvicultural applications, both pre-commercial and commercial are utilized to accomplish the above management objectives. The Division policy and forest zoning generally govern the application of the various methods and practices. Foresters weigh these factors with current stand conditions to determine the appropriate silvicultural practice for a given site.

Inventory Goals: In order to determine if an area should be harvested and to also determine what type of harvest should take place, Land Management Foresters conduct an inventory and analysis of the forest stands in questions. These inventories are scheduled on a rotation in which each compartment (a geographic block of forest) is visited every 20 years. This inventory is commonly referred to as a "cruise". During these cruises, the trees are statistically sampled to give the foresters numerical data that assists in detailing the prescription for that particular area. Tree health, forest health, wildlife and aesthetic values, and tree reproduction are just some of the other important assessments that are made during the cruise. Other areas may be cruised on an as-needed basis to respond to changing forest conditions. On average 1500 to 2000 acres are cruised per year across the state.

Currently the Division is analyzing data from the forest inventory that will be used to develop a new inventory system based on a growth and yield model. This will change the historic 20-year schedule sometime in the near future.

Once the forested stand has been cruised, analyzed, and prescriptions are written, the areas to be harvested are then prepared for the actual harvest operation. This entails painting boundaries around the sale, flagging trails and roads that will be utilized, and depending on the type of sale, individual trees may be painted as either leave trees or harvest trees. These preparations will guide the loggers in performing the harvest according to the prescription.

Once the area has been cruised, appropriate prescriptions have been written, timber volumes have been estimated and the trees have been marked, the sale is publically advertised and sold based on a competitive bid process.

Harvest Restrictions: Harvest restrictions are generally determined by the zoning within the state forest. For more information please refer to the Land Management Manual and Exhibit B. Examples of restrictions include Streamside Management Zones and visually sensitive areas. Any method of logging other than by means of animals, motor trucks, farm or crawler tractors, hydraulic tree shears and rubber tired four-wheel-drive skidders may be employed only with the advance approval of the Timber Sale Administrator in charge of the harvest. Tracked cut-to-length harvesters and forwarders are commonly used, and may be contractually required, for pine harvests. More specialized equipment or techniques may be necessary to limit harvesting impacts. In such a case this will be identified on the marking transmittal and will become part of the timber sale contract.

A Wet Weather Logging Policy has been designed to protect water quality, public infrastructure, and soil productivity during the harvesting of Zaleski State Forest timber sales. This policy restricts logging during various states of wet weather conditions to allow for better resource protection.

In all cases, BMPs shall be followed as listed in [BMPs For Erosion Control on Logging Roads in Ohio](#), ODNR - Division of Forestry.

Harvest Amounts: As a result of harvest and growth analysis the Division will create a harvest target based upon 40% of growth. The growth is calculated from only those acres zoned III-B and III-C, which comprise the bulk of harvesting on state forests. A synopsis of the analysis performed is located in a table in section III, subsection B. The target is conservative and will continue to be evaluated throughout the period of this plan as better information is available.

Special Concerns: Forest zoning is designed to identify areas of special concern. Zones I-A and I-B are designed to protect high value conservation forests due to natural features and historical values respectively. There are a few areas designated Zone I-A in Zaleski State Forest, primarily to protect wetland areas. Several areas are designated Zone I-B to protect historical sites and are spread throughout the forest.

Zone III-A is designated as a Resource Protection Area. This area is intended to offer protection to soil, water, and other natural resources that may suffer significant damage by inappropriate management or use. The goal of this area is to protect the major natural resource elements of the land to which irreparable damage could be done.

Zone III-B is designated as an Aesthetic Area. This zone encompasses areas that may be adjacent to developed forest recreation areas, or State Parks, or areas affected by high-density public use. Management in these areas is primarily directed toward maintaining healthy trees.

For zone descriptions and more detailed information for the special management considerations for each zone, please see the full narrative in the Division of Forestry's Land Management Manual.

Future defoliation events caused by the gypsy moth caterpillar and the potential arrival of sudden oak death in the Eastern United States are of particular concern to the oak resource in Ohio. Emerald Ash Borer, a lethal pest found in Ohio, will increase ash mortality in both urban and forested landscapes. It will likely cause significant financial cost to municipalities, property owners, and the forest products industries as it spreads through the state.

Movement of firewood around the state has the potential to spread invasive forest pests, such as the Emerald Ash Borer and Gypsy moth and also could spread other agents, such as the Asian Longhorned beetle.

Threatened/Endangered Species: The identification, conservation and enhancement of rare, threatened, and endangered species is of the utmost importance to the Division of Forestry. The Division has a legal obligation to comply with laws of this country and state and a moral obligation to use the tools at our disposal for the conservation of these species. The Division of Forestry employs several mechanisms to aid in the identification, conservation, and enhancement of rare, threatened, and endangered species on State Forest land that are discussed below.

Pre-Activity Assessment

Prior to any site-disturbing activities, the Division conducts an assessment using the most up-to-date relevant data sources available. These data sources include the Ohio Biodiversity Database, formally known as the Natural Heritage Database, administered by the Ohio DNR – Division of Wildlife, Biodiversity Program. This data is used to plot the actual suspected or known locations of rare, threatened, and endangered species. The Division seeks to review all compartments, harvests, and prescribed fires using this data. Over the next five years, the Division is expected to review dozens of compartments using this data. Further, the results of our reviews can be used by the Biodiversity Program to update the data set.

These reviews are used to map locations of species or sites and used as a planning tool for the layout of activities. The Division of Wildlife staff offers recommendations on the life history of the species found as well as mitigation efforts to be considered.

Review by Relevant Specialists

Prior to any site-disturbing activities, all reviews that note a positive “hit” of a possible sensitive species is offered to a relevant specialist for a ground survey. A botanist or a biologist is asked to review the site on the ground for their recommendation or concerns. Mitigation and recommendations are communicated in the pre-activity assessment documents.

Commitment and Partnerships

Ohio has several Conservation Plans that the Division of Forestry references in our management of the state forests. These plans are put together by various partnerships that the Division is active in one form or another. The relevant conservation plans are listed below

- The Conservation Plan for the Karner Blue Butterfly
- The Conservation Plan for the American Burying Beetle
- The Strategic Plan for the Management of Ohio’s Black Bear Population
- The Conservation Plan for the Timber Rattlesnake
- The ODNR Indiana Bat Management Strategy

These plans outline specific objectives, goals and strategies for the recovery, management, and habitat requirements for these species. The Division is committed to complying with the recommendations of these plans. Further, over the next five years the Division will:

- Ensure all relevant state forest personnel are trained and have an understanding of these plans and strategies.
- Maintain an active role as a partner in the composition and review of these plans.
- Commit to restoration efforts on state forests as budgets allows.
- Commit to the review of our activities by various partners of these plans.
- Promote and enhance our educational efforts for the protection of rare, threatened, and endangered species through landowner education, brochures, trade shows, and public website.
- Achieve and maintain forest certification

Consultation with Other Experts and Interested Citizen’s

The Division actively solicits the input of various experts from academia, NGO’s and other partners. Their input on the identification and conservation of the sensitive species is valuable to our work. The

Division promotes our Pathway's to Participation program whereby citizens can have a voice, through and open house process and various public meetings, on items that we should consider in our management. For the next five years, the Division will:

- Commit to continued solicitation of comments and input from local experts
- Commit to enhancing and refining our Pathway's to Participation program
- Commit to annual open houses
- Commit to public meetings for new efforts

Desired Future Conditions(s): Through past, current, and future management activities, Zaleski State Forest looks forward to maintaining and improving a healthy forested environment composed of mixed species stands and of containing exemplary specimens of representative forest types. Through proper long-term management strategies, the forest will become less susceptible to catastrophic fire and should have a reduce probability of insect infestation and pathogen infection. The forest will also provide adequate cover, forage, and habitat for the various species of wildlife associated with the area. Along with sustaining viable populations of wildlife, the forested areas will be maintained in a manner that continues the aesthetic quality and environmental integrity of the property. Improving the health of these forests will better promote vigorous vegetation, provide wonderful wildlife viewing opportunities, create healthier watersheds, and will produce an enjoyable place for public recreation.

The Forest Inventory and Analysis program of the U.S. Forest Service provides current condition of Ohio's forests. Through this program, Ohio's forests are inventoried annually, and every 10-15 years the data are summarized in a comprehensive report. The newest report was published in 2009, and in addition to describing the current state of our forests, it also describes how the forests have changed during the 15 years since the last report was released. From these data, several trends have been identified:

- Forest land in private ownership is being subdivided at an alarming rate. Compared to the early 1990s, Ohio has 500,000 fewer acres in parcels between 50 and 500 acres and 30,000 more landowners who hold less than 10 acres of forest.
- Oak-hickory forest types make up the majority of Ohio's forests, but the proportion of oaks in small and intermediate size classes has declined since the early 1990s. In the current inventory, oaks represent more than one-third of the trees 20 inches and larger in diameter, but only 5 percent of trees in the 2- and 4-inch diameter classes.
- Ohio's forests are maturing, and there are fewer early successional, or young, forests on the landscape today than in the early 1990s. Only 10% of the forests in the state are less than 20 years old.
- Forests where the overstory trees are greater than 100 year old are a small proportion of Ohio's forests, making up 5% of the total acreage. Oaks are the dominant canopy species in the larger and older size classes.

Further, the Division of Forestry's current inventory data for State Forest's show the following current condition:

- 75% of State Forest stands are classified as Oak/Hickory.
- 76% of State Forest are in the sawtimber or large sawtimber size class.
- Less than 10% of State Forest acres are under 20 years old; 90% of State Forest acres are between 20 and 80 years old.
- 82% of State Forest acres are between 76% - 100% crown closure.
- Approximately 16,000 acres of State Forest have been identified as High Conservation Value Forests. These areas not managed for resource extraction.

The conservation of biological diversity is a critical component of the sustainable management of state forests. The management of state forests is consistent with the biodiversity goals and strategies outlined in the statewide Forest Resources Assessment and Strategies 2010 (FRAS). The three goals outlined below, based on part of the FRAS 2010 project, are specific to some of the key threats to biological diversity in Ohio's state forests. These biodiversity goals and strategies were developed from consultation with a host of partners and finalized with the input of stakeholders and the public at-large. The biodiversity goals are the results of the analysis of the key threats in Ohio as determined by the FIA project, Wildland-Urban Interface data, the Division of Wildlife, The Nature Conservancy, NatureServe, Landfire, 2007 State of

Birds Report, the Ohio Bird Conservation Initiative, and the Appalachian Mountains Joint Venture to name a few.

Guided by these trends, and in a manner consistent with our commitment to sustainability, the Division of Forestry has adopted the following Desired Future Condition objectives:

1. Maintain and promote regeneration of oak-hickory forests

- Enhance oak regeneration in appropriate forest types in zone 3.
- Favor oak and hickory in precommercial treatments
- At a minimum, preserve an oak component in oak-hickory stands where oak regeneration is unlikely.

2. Protect Ohio's unique or rare forest plant species and biological communities

- Protect high conservation value forests by either prohibiting extraction or by restoration efforts.
- Assess potential impacts to unique or rare forest plant species and communities for each forest management activity and mitigate as necessary.

3. Maintain habitat for a diversity of forest-associated wildlife

- Manage for a diversity of forest wildlife by maintaining a sustainable distribution of successional stages.
- Increase the area of early-successional forest habitat (age class < 20 years old in zone 3) and old forests (over 100 years old in High Conservation Value Forests)
- Ensure that critical habitat requirements for rare forest wildlife species are being met

These objectives are consistent with the Statewide Forest Resources Assessment completed by the Division of Forestry in 2010. The strategies that will be employed to accomplish the Desired Future Condition objectives outlined above include:

- Timber harvesting levels will be at sustainable rates and substantially less than the current annual growth as determined by appropriate inventory data.
- Intermediate treatments shall focus on improving forest health and timber quality.
- Rotation ages in managed zones will be between 80 and 120 years, except for pine stands.
- Regeneration harvests will be based on sound silvicultural science and employ regeneration techniques to promote oak regeneration. Prescribed fire and /or herbicide treatments will be employed where possible to promote oak regeneration.
- Impact assessments will be completed and mitigation opportunities will be identified prior to any activity in managed zones.
- As a general rule, High Conservation Value Forests will not be managed for resource extraction and will be allowed to develop through natural succession.
- A percentage of High Conservation Value Forests may receive timber harvesting and/or prescribed fire activities with the purpose of restoration.

VI. FIRE MANAGEMENT

History: Wildfire protection in Ohio had its origins in Southern Ohio in the early 1920s. Division of Forestry Fire Wardens had the responsibility to reorganize fire crews, keep hand tools and equipment ready, and enforce burning regulations. In this period, the Atkinson Ridge Fire Tower was constructed on Atkinson Ridge Rd. This tower is one of only six towers that remain on state forests today. Most towers, when closed in the late 1970's, were dismantled and sold for scrap metal.

When a wildfire occurs today, its suppression falls mostly to the local fire department. Within the Forest Fire Protection District of the state, the ODNR Division of Forestry has cooperative agreements with over 300 rural volunteer fire departments (VFD's). These VFD's receive a nominal payment in return for providing a wildfire report to the Division.

The Division also offers training to firefighters ranging from basic wildfire instruction to specialized courses to improve skills necessary in the complex and dangerous business of wildland firefighting. The Division maintains some larger specialized equipment such as bulldozers to assist in suppression efforts. A limited

number of vehicles and equipment are also loaned as available to cooperating VFD's through the Federal Excess Personal Property Program.

Most of the fires in the vicinity of Zaleski State Forest occur in Vinton and Meigs counties. A portion of Athens County is part of US Forest Service fire control, so fewer fires are reported to Zaleski State Forest due to the Forest Service control of that area.

Fire Suppression Objectives: The Division of Forestry has the statutory authority for fire suppression and protection within the designated forest fire protection area of the state. Zaleski State Forest is responsible for these duties in Vinton, Meigs, and a portion of Athens Counties. Division employees serve as initial attack resources within the forest boundaries and assist VFD's outside the forest boundaries, when requested. Most requests involve the use of heavy equipment. Zaleski State Forest averages around 100-150 fire reports per year. Most of these fires occur on privately owned lands. The forest staff responds to around five fires per year on average.

Prescribed Fire: Zaleski has had many prescribed burns in the past. Most of these burns were targeted for fuel reduction around populated areas as well as oak/hickory regeneration. Recently burns have been conducted as part of the Fire and Fire Surrogates Study as well as other research projects such as the Ohio State University project located on Mizner Ridge.

Future burning will target oak/hickory shelterwood cuts as well as shortleaf and pitch pine plantations or natural stands to aid in regeneration. Oak/hickory stands benefit from the use of fire by reducing the competition from thin barked tree species such as red and sugar maple and yellow poplar. Shortleaf/pitch pine stands need a seedbed preparation by exposing the mineral soil. These trees also benefit from fire by having cones opened from the heat of the fire due to the amount of pitch in the cones (serotinous cones).

The amount of acres to be burned each year will vary based on previous management and will be dependent upon the size of the regeneration present. 100-200 acres per year may be an average burn year. Some years may be less and other times significantly more. Until the shelterwood and burn regime is applied more frequently, the amount of area burned will likely not increase

Fire Prevention: Each fire season, the majority of wildfires are human caused and the most common cause is from debris burning. In order to promote wildfire prevention and awareness the Forest Manager will work with the District Forest Manager and Columbus staff to coordinate media activities such as interviews with the local press for television and newspaper articles. Timing critical releases with high danger fire weather will be critical in increasing public awareness.

Other Fire Program Issues: (FEPP, FFP, Training, etc.) Zaleski employees are encouraged to participate in Ohio's Interagency Fire Crew. This program gives the personnel and the Division additional experience and training opportunities that broaden their overall wildland fire suppression knowledge. Zaleski State Forest normally has crewmembers that qualify for the Inter-Agency Fire Crew.

Classroom training will be offered to all Volunteer Fire Departments as requested. Staff training will be available through the Fire Management Program.

Visits are made to each Fire Association a minimum of once per fire season. The Forest Officer will visit each fire department, update the Fire Department Information Sheet, document the visit and file a report to the Forest Manager once per year. All Federal Excess Property will be inspected at least once per year.

VII. RECREATION

History: Recreation at Zaleski State Forest has a long history beginning in the 1940's with Lake Hope State Park development. Over the years many trails have been developed and maintained. The Division has long focused on dispersed recreational opportunities that require a large land base.

Strategic Goals/Opportunities: Provide recreational opportunities that are compatible with and highlight sustainable forest management. This will be done by implementing the comprehensive recreation plan for the state forest system and building recognition for unique and varied recreation opportunities on state forests.

Horseman's Camp and Bridle Trails: Zaleski's Horse Camp contains 16 campsites, pit latrines and water suitable for horses. There is also a Group Camp area that has 16 sites. Re-evaluating the Group Camp Area may be explored in the future to accommodate more members of the general public. This will likely require a grant to build permanent latrine facilities. The State Forest has a total of 50 miles of bridle trails that are accessed through the camp.

Backpack Trails: Zaleski State Forest contains one of two backpack trail systems that exist on State Forest property. The 23-mile trail has two loops and three camps. The parking area is located on the State Park property but the vast majority of the trail is on Zaleski State Forest. In addition the entire forest is open to hiking, including bridle trails, access roads, and all forest roads.

The three overnight camp areas include latrines, cleared area for tents and fires and drinking water provided nearby in underground storage reservoirs with gravity fed hydrants.

A possible re-location of the backpack trailhead to the Hope Schoolhouse is planned and is the scoping phase. A possible relocation of trails and camps to accommodate the new trailhead is also being explored.

Hunting, Fishing, and Rifle range: The majority of Zaleski State Forest is open to public hunting under the direction of the Division of Wildlife's rules and regulations. One small area that is not open to hunting is a small area east of Irish Ridge Rd. adjacent to Lake Hope State Park. The forest provides hunters with a very large contiguous public hunting area with an abundance of many wildlife species. Common game species include whitetail deer, wild turkey, ruffed grouse, squirrel, and several other common species. In addition, appreciation of both game and non-game wildlife has been recognized as an important part of the forest visitor experience. While many individuals purposely take to the woods to see and/or photograph wildlife, many wildlife encounters are coincidental to driving the forest roads or hiking the trails. In either case, contact with wildlife is essential to either fulfill or enhance the forest visit. The following are planned:

- A. A diverse and abundant wildlife resource will be maintained following as much as feasible, the guidelines provided by the DOW, to maximize both consumptive and appreciative opportunities.
- B. Hunter parking areas will be provided where needed as part of the Timber Management Program by addressing and defining timber sale/operation entrance areas to accommodate several cars. Areas requiring frequent service access will not be developed for parking.
- C. Continue to maintain a hunter campground near Atkinson Ridge Fire Tower during deer and spring turkey season.

A rifle range is present north of the Forest Headquarters on State Route 278. This range will continue to be maintained to provide shooting opportunities. There are a few small ponds in the forest suitable for fishing. The DOW may stock these ponds in the future for public enjoyment.

Auto Touring: The road network at Zaleski State Forest provides for excellent auto touring. The many scenic vistas, numerous shady hollows, and the vast timbered ridges provide for quite and enjoyable aesthetic experience. This attracts both local and regional tourism.

Maintenance: Due to current staffing levels minimizing staff time on recreational projects is essential. Therefore in the future partnerships with external stakeholders will be an integral part for maintaining quality recreational experiences. In general no recreation expansion will be considered without funding and possibly maintenance provided by an external partner. Both mechanized equipment and hand tools will be utilized for maintenance of all trail systems. Trails will be maintained as needed throughout the year to ensure user safety.

VIII. PUBLIC AWARENESS

Strategic Goals: Public awareness is an important aspect of the Division's mission of informing the public and landowner's of sustainable forest management and opportunities. To further the Division's goals in public awareness several items will be emphasized at Zaleski State Forest:

- Increase signage at recreational sites, particularly the trail systems, about adjacent forest management activities
- Continue to maintain and update the Webb Hollow Driving Tour.

- Update and maintain an informational sign at Atkinson Fire Tower about the history of fire management in the state.
- Continue to partner with volunteer fire departments on wildfire danger awareness messages
- Use available opportunities with school systems to speak about Sustainable Forest Management
- Use available opportunities with local media to highlight Sustainable Forest Management

IX. LAW ENFORCEMENT

History: In 1967 legislation established the position of Forest Officer in the Division of Forestry. In 1974 rules and regulations governing state lands were adopted that Forest Officers were responsible for enforcing. In 1985, OPOTA Certification Law Enforcement Training became mandatory for all officers and weapons were issued to those commissioned.

State Forests currently have ten commissioned law enforcement officers and three commissioned managers. The purpose of the positions is to enforce the forest rules depicted in the Ohio Revised Code. One very important aspect of the program is resource protection. Forest Officers protect property boundaries from encroachment, recreation resources from undesignated uses, and guard against timber theft. Specific law enforcement policies and procedures are delineated in the Division's Law Enforcement Manual.

Program Expectations:

- Enforce all Forest Rules, Ohio Revised Code
- Priorities for patrol will be established utilizing the following criteria:
 - a. Responding to emergencies and help requests with jurisdiction
 - b. Protect and assist visitors through routine patrol of all facilities and incident investigation
 - c. Issue warnings and citations for violations
 - d. Assist in special projects with other forests and agencies
- Investigate wildfires in Vinton, Athens and Meigs counties. Prepare wildfire reports for violations.
- Maintain equipment, including patrol vehicles. Law Enforcement Officers are also responsible for communicating and collaborating with the Forest Manager pertaining to equipment and uniform necessities.
- Well-trained Forest Officers are necessary in order to effectively and safely perform their law enforcement duties. Officers will maintain current qualifications and will attend law enforcement trainings.
- Special Projects are scheduled as needed. Potential projects may be holiday horse camp security and trail patrol, and any illegal APV use detail.

Other Enforcement Issues:

Forest Officers will:

- Seek opportunities to increase public awareness and forest education through visitor assists and other information and education opportunities.
- Visit each county court system and prosecutors office annually
- Coordinate search and rescue missions as necessary
- Respond to user conflicts
- Investigate problems on forest property including:
 - Dumping (trash, methlabs)
 - Encroachments (Timber sales, boundary disputes)
 - Vandalism (state structures, state property)

-Theft (forest signs, timber, state property)

X. FACILITY MAINTENANCE AND INFRASTRUCTURE

Building/Infrastructure Maintenance: Buildings: The Zaleski State Forest Headquarters, just north of the town of Zaleski, houses all of the administrative support for the Unit, as well as maintenance services. The following is a list of all buildings and anticipated major maintenance.

Building	Anticipated Maintenance
Headquarters	Routine
Long Garage	Paint
Drying Shed	Paint roof and gable ends, replace gutters
Mill Shed	Paint
Warehouse	Replace lower boards on back side
Old Shop	Repair/replace/cover over windows
Wash House	Paint door
Gas House	Paint

Zaleski State Forest also maintains the old Civilian Conservation Camp located on Wheelabout Road. No maintenance is performed on the buildings except in the case of emergencies. Routine mowing and grounds maintenance is performed.

Roadway Maintenance: There are numerous old Township Roads that are in various stages of abandonment, maintained Township Roads, County Roads, and State Routes at Zaleski, and West Shade River. The Division of Forestry also maintains over 51 miles of forest access roads at Zaleski. This includes one mile of Class I roads (improved blacktop), 31 miles of Class II (high-standard limestone), and 16 miles of Class III (dirt roads). All of these roads, with the exception of the Class III roads are maintained for vehicular travel. All roads are graded, mowed and ditched, a minimum of one time a year. Roads are evaluated at a minimum of twice per year for deficiencies related to road surface, vegetation management and water drainage.

Forest Road Number	Forest Road Name	Mileage	Anticipated Maintenance
1	Will Tract	5	Routine; Needs ODOT culvert and headwall replacement; repair a few washed out culverts; will need re-stoned
3	Low Water Bridge	2	Routine; Needs ODOT culvert and headwall replacement; will need re-stoned
7	Webb Hollow	2.9	Routine; Needs ODOT culvert and headwall replacement; will need re-stoned
13	Coalmont Hollow	1.5	Routine; ODOT culvert and headwall replacement in planning stage; will need re-stoned (contract out work will begin soon)

14	Bolster Hollow	2.4	Routine; ODOT culvert and headwall replacement in planning stage; will need re-stoned (contract out work will begin soon)
15	Long Ridge	6.5	Routine; Needs ODOT culvert and headwall replacement; will need re-stoned
15	Irish Ridge	2.5	Routine; Needs ODOT culvert and headwall replacement; will need re-stoned
18	Hunt Hollow	1.5	Routine; will need re-stoned
19	East Raccoon	4.5	Routine; ODOT culvert and headwall replacement in planning stages; repair a few washed out culverts; will need re-stoned (contract out work will be soon)
N/A	Waterloo Forest Loop	2.2	Routine; will need re-stoned

Boundary Maintenance: Boundary maintenance is an important function in the management of the forest. Properly maintained boundaries prevent encroachment from neighboring properties and from state activities encroaching onto neighboring properties. To accomplish this task, Zaleski State Forest conforms to the Division's Boundary Maintenance Policies. One fourth of the entire forest boundary is inspected and/or repainted each year. West Shade River is completely painted every four years due to the small size. Any evidence of encroachment is reported to the Forest Manager who may assign the Forest Officer to investigate.

Signage: Wooden signs are replaced and re-painted as needed. Backpack and Bridle trail signs are also replaced when needed.

Residences: Zaleski has one residence at the Old CCC Camp. It is currently unoccupied.

XI. BUDGET/STAFFING

Maintenance: Zaleski State Forest receives an annual operating budget that fluctuates from fiscal year to fiscal year depending upon the funding and allocation of funds available to the Division of Forestry. The majority of this budget is devoted to payroll, but the maintenance and supply portion is equally as important. This line item is dedicated to purchases necessary for the completion of projects, such as purchase of supplies, repair and maintenance of equipment, and paying of utility bills and other services. With the state of current and past budgets, staff purchase from this fund only as necessity arises. The condition of the Forest Unit and its projects often suffer from the reduction in available funds and it is always a challenge to accomplish our strategic objectives at our current funding level. Reductions in staff and the inability to regain previous levels of staffing are also a stress to the human resource. However, the employees at Zaleski State Forest strive to find ways of being more efficient and productive with limited resources.

SFY 2010 Budget DNR150130 Zaleski Region

500	Payroll-Fund GRF		\$526,609
510	Personal Services- Fund 5090 25% per quarter		\$250
			\$250
520	Supplies & Maint- Fund 5090 25% per quarter		\$65,000
	General Operating		\$65,000
530	Equipment		\$0

550	Subsidies		\$0
570	Capital		\$0
590	Settlements & Bonds - Refunds		\$0
591	Debt Service		\$0
Total			\$591,859

Personnel: The following is a list of personnel at Zaleski State Forest

Forest Manager:	Thomas Shuman
Forest Officer:	Nicholas Appleman
Forester:	Danzil Walker
Forest Technician:	Ronald Collins
Forest Technician:	Christopher Kerr
Equipment Operator:	Clayton Acord
Equipment Operator:	Cory Kerr
Equipment Operator:	Eric Thomas
Maintenance Repair Worker:	Brian Porter

Equipment: The following is a list of all vehicles and heavy equipment at Zaleski State Forest.

Vehicle/Equipment Type	Used By	Anticipated Maintenance/Replacement
Pickup S15-163	Forest Technician	Routine; Replace within 2-3 years as funds allow
Pickup S15-270	Forest Officer	Routine; Replace within 2 years as funds allow
Pickup S15-330	Forest Manager	Possible replacement or trade; 100,000+ miles but good condition
Pickup S15-809	Forest Technician	Replacement due anytime
Semi-tractor S15-383	Crew	Routine; 10 year + replacement as funds allow
Log Truck S15-458	Crew	Routine; Hydraulic cylinders leaking, replace seals; 10 years possible replacement as funds allow
Dump Truck S15-829	Crew	Routine; 10 year + replacement as funds allow
Pickup S15-910	Crew	Routine; Replacement within 5 years as funds allow
Pickup S15-943	Crew	Routine; Replacement within 5 years as funds allow
Pickup S15-973	Forester	Routine; replacement within 5-10 years as funds allow
Pickup S15-978	Crew	Routine; 10 year + replacement as funds allow
291-S15 Lowboy Trailer	Crew	Routine; Brakes need checked and possible replacement; 2 new tires; No replacement for 10 years+
592-S15 14' Trailer	Crew	Routine; No replacement within 10 years anticipated
Honda 350 APV	All	Routine; New tires; Replace within 5-10 years as funds allow
Honda 300 APV	All	Routine; Replace within 5 years as funds allow

Honda 350 APV	All	Routine; New tires; Replace within 5-10 years as funds allow
Honda 500 APV	All	Routine; No replacement anticipated within 10 years
John Deere 450 H Bulldozer	Crew	Routine, 10 years possible replacement as funds allow
John Deere 350 B Bulldozer	Crew	Routine, Possible clutch work, blade lever linkage work. Replacement as funds allow, Dozer is 30 years old
Case 680 Backhoe	Crew	Routine; Fix windshield wipers, Hydraulic cylinders leaking, replace seals; Replace within 5-10 years as funds allow
Kubota Tractor and Mow-trim	Crew	Routine; New blades; Replace tractor 5-10 years as funds allow
Case 695 Tractor	Crew	Routine; New tires; fix air conditioning; No replacement anticipated within 10 years
John Deere 5300 Tractor	Crew	Routine; No replacement anticipated within 10 years
John Deere 770 Road Grader	Crew	Routine; New tires, back-up alarm replacement; No replacement anticipated within 10 years
Cat 910 Loader	Crew	Routine, Hydraulic cylinders leaking, replace seals; Possible replacement 5-10 years as funds allow
Taylor Forklift	Crew	Routine; Replacement anytime if comparable equipment is available through FEPP

XII. MONITORING AND ENVIRONMENTAL ASSESSMENTS

Monitoring and evaluation of activities is a continuous process.

The Forest Manager's Annual Performance Review will be tied in part to his effectiveness in implementing his forest plan. In addition all employees will be evaluated on their appropriate portions of the plan. Statistical reports will be completed monthly to track items accomplished.

District and Columbus staff reviews cruise reports and marking reports. The District Staff to ensure objectives are achieved and consistency throughout the District will conduct final timber sale inspections. Equipment and facilities will be reviewed for maintenance monthly and for potential replacement annually.

XIII. EXHIBITS

- Exhibit 1: Zaleski State Forest Overview
- Exhibit 2: Zaleski State Forest Map
- Exhibit 3: Zaleski State Forest Zones by Area

Exhibit 1
Zaleski Overview

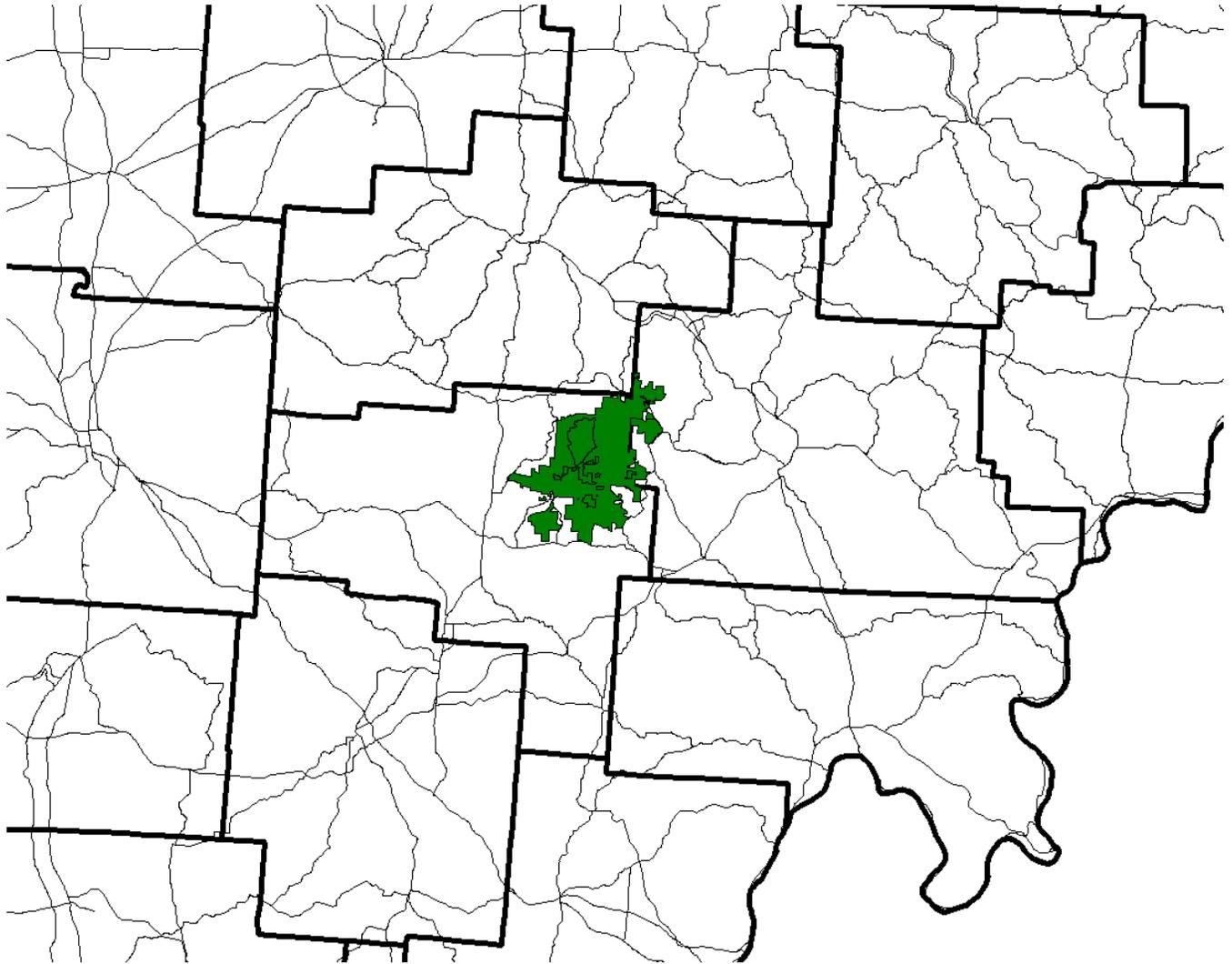


Exhibit 3

Zaleski State Forest

Zone	Acres
1A - HCVF Natural Area	1,585
1B - HCVF Cultural Historic	78
1C - Shawnee Wilderness	
1D - HCVF Restoration	
2 - Reserved Lands	9
3A - Resource Protection	987
3B - Aesthetic Area	1,250
3C - Timber Wildlife	24,569
4A - Intensive Recreation	29
4B - Admin Areas	90
Total Zoned	28,597