Ohio Department of Natural Resources

Division of Forestry

Five Year
Forest Management Plan

For

Blue Rock
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, county 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 that 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, 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. 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: Much of the land presently composing Blue Rock State Forest initially came into public ownership under the Federal Land Utilization Program in the mid-1930s. Federal acquisition was completed in 1939 and the land was transferred to the State of Ohio in 1957. Subsequent acquisition has increased the forest land base to it present size of 4579 contiguous acres.

Past Land Management/Uses: As forests were originally cleared to support the farming industry, many subsistence farms began to develop in the area. Fields became unproductive or marginal at best; land resources would not support families and more new lands were cleared in hope for families to survive. Shortly after the State of Ohio acquired properties, abandoned and nutrient depleted farm fields were planted with a variety of conifer species including white and red pine. Modern forestry practices, both pre-commercial and commercial are evident throughout the forest. These projects have reduced tree competition; increase forest vigor, and improved overall forest health.

III. FOREST DESCRIPTION

A. General

Property Location Description: Blue Rock State Forest is located in the hill country of Muskingum County in Eastern Ohio just east of the Muskingum River near Duncan Falls, Ohio. The boundaries of Blue Rock State Forest are situated in Blue Rock and Salt Creek Township. The area is generally bounded on the east by McDonald Road and Sugargrove Roads, on the north by SR 146 near Chandlersville, on the south by Shaver and Buttermilk Roads, and on the west by Poverty Ridge Road. The Blue Rock State Forest Headquarters now is located in the center of forest land on Cutler Lake Road.

Soils: Blue Rock State Forest lies completely within the unglaciated portion of the Appalachian Plateau. Rock and surface materials have been derived from the Pennsylvania period rock strata. This formation contains coal beds and clay and shale deposits. Soils of the northern third of Blue Rock State Forest consist of the Gilpin-Zanesville-Keene Association. These are mostly well drained, moderately deep, to deep upland soils that range from sloping to steep. They are

underlain by siltstone and shale and a small amount of sandstone. The Gilpin-Upshur-Guernsey Association predominates the remainder of the forest. These soils are well drained, shallow to moderately deep upland soils ranging from sloping to steep. Gilpin soils formed over interbedded siltstone, gray shale and limestone. Upshur soils formed over red clay shale. Guernsey soils formed over limey and non-limey shales interbedded with siltstone and dolomitic limestone.

Water Resources: Blue Rock State Forest is entirely contained within the drainage area of the Muskingum River. In addition to contributing direct runoff into the Muskingum River, the Forest is drained by Manns Fork, Kent Run, and Buffalo Fork of the Salt Creek Watershed. The 15-acre Blue Rock State Park Cutler Lake lies within the State Forest and provides a variety of water-base and water-enhanced recreation experiences for park visitors.

Access Issues/Transportation Numerous county and township roads dissect Blue Rock State Forest. Most county roads are asphalt paved and are easily passable with any vehicle. Township roads for the most part have been chipped and sealed or are a limestone base material. Forest Road 1 is of a limestone base and cannot be traveled by large trucks due to tight curves. Forest Road 8 has been asphalt paved but truck travel is limited due to steepness of slope and switch back curves in road.

There are many miles of forest access roads passable by four-wheel drive vehicles and are maintained for the purpose of fire control and timber management. Annual maintenance on these roads is mostly limited to mowing, clearing, and some drainage maintenance. These roads are restricted to official use only for vehicular travel.

Potential Productivity: There are multiple ways to measure forest productivity within a defined land area, such as Blue Rock State Forest. The site index value is a 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 soil type, aspect, and available moisture. Due to its broad growth range in association with multiple tree species, Black Oak is often used to get a general site index value. The average site index value of Black Oak (base age 50) is 65. The most productive sites are in north and east facing slopes.

Overstory: The Forest is part of the overall Central Hardwood Region. The main forest type present is oak-hickory. Pine plantations of white and red pine are also a significant component.

The main hardwood species include scarlet, chestnut, white, post, black and northern red oaks, yellow poplar, pignut, shagbark and mockernut hickories, white ash, and sassafras. Native conifers include pitch and Virginia pines.

Understory: Sugar maple, red maple, blackgum, and ash make up the majority of the understory depending on aspect. Red maple is prevalent on the more xeric sites while sugar maple is more prevalent on more mesic sites. The dominance of maple species in the understory will have an increasing influence on the species composition of large-diameter trees. Without active management activities the existing oak-hickory stands will evolve into a more northern hardwood cover type.

Herbaceous Layer: As with the overstory and understory, many factors will determine the types of species found in the herbaceous layer. This layer is often the most diverse and includes many different species of forbs and grasses. The forest management and past history of land uses also contributes to a further diversifying of the herbaceous layer.

Wildlife Populations and Habitat Components: Forest management increases our ability to create and maintain a high level of diversity and interspersion of 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.

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.

Proper BMP's can significantly benefit wildlife. All TSA's shall follow BMP recommendations when sale activities are occurring.

The forest wildlife management objectives for this 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. To compensate for mostly mature forest habitat, maintain an early successional habitat focus area on the northwest portion of the forest. 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.

Historically, specific wildlife management practices on the 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.

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, single tree selection and group tree selection harvest methods, timber stand improvement projects, and other types of thinnings.

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: Ailanthus altissima (Tree of Heaven), autumn olive, and multiflora rose are the biggest invasive concerns at Blue Rock State Forest. Timber stand improvement projects in this area have been limited in the past but will need to be increased to reduce this pressure in future stands. Recently the Division of Forestry received a grant from the U.S. Forest Service to develop an Ohio Woodland Job Corps for the control of invasive plants within the State Forests System. From this grant five people will be employed, temporarily, to work on invasive plant control and

timber stand improvement while receiving job-training skills. This crew is responsible for addressing invasive species problems at Blue Rock State Forest. Division staff will identify areas to control throughout the year by utilizing the project proposal process.

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. This project produced an inventory of approximately 156,000 acres or 84% of the entire acreage of state forest land. The remaining 16% of state forest land was not part of this project.

The acreage of state forest land that was not inventoried totals roughly 30,000 acres. These acres are located on 12 separate, relatively small state forests. While the Division of Forestry desires an inventory on these smaller state forests, a lack of resources to perform such an inventory was not possible at the current time. The Division does forest inventory work in the form of compartment prescription cruising on these state forests. This approach has been useful for our management of the forest, however, it does not provide for the data needed to maintain an inventory database or to calculate growth using a growth and yield model.

Despite the limitations of our data on the 30,000 acres of smaller state forests, the Division feels that it is reasonable to use US Forest Service Forest Inventory and Analysis (FIA) data to make estimates of the inventory and growth of the timber volume on those forests. These data were estimated for 12 different state forests and are summarized in the table below.

For each state forest, the inventory and the net growth rates were estimated based on data from FIA and applied to the entire state forest. This estimate 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 estimate 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.

Also provided in the table is the average harvest volume over the last 10 years. The purpose of these estimates is to provide evidence that the harvest and removal of forest products from state forests are sustainable and well within the estimated growth of the forest. Also provided in the table below is the average harvest level over the last ten years for comparison.

Blue Rock

Total Inventory (board feet)	Productive Acres	Total Growth Bd Ft / Yr	Zone 3B and Zone 3C Acres Only	"Constrained" Growth Bd F / Yr	Average Harvest - Last 10 Years	Harvest as % of Growth
29,060,880	4,560	1,002,106	4,272	938,815	176,091	19%

C. Landscape Level Information

Adjacent Forests: Much of the adjacent private land is in small farms, and is expected to remain in this condition. The State Forest surrounds Blue Rock State Park. Other nearby state parks includes Muskingum River Parkway, Dillon, Wolf Run, Buckeye Lake, and Salt Fork State Parks. Nearby state forests include Perry and Gifford State Forest. The Athens Unit of the Wayne National Forest is located to the south. American Electric Power owns a significant amount of

property in the proximity of Blue Rock State Forest. Much of this land is forested and open to the public for recreation.

Blue Rock State Forest is located entirely within Muskingum County. The landscape in this county is 52% forested. The county averages approximately 6373 board-feet per-acre according to the most recent FIA data. There is no recent comprehensive inventory for Blue Rock State Forest. However compartment level data indicates a much higher average for the forest. Therefore Blue Rock contributes more late successional habitat than the surrounding private forests.

Local Socio-Economic: Blue Rock State Forest is located in Muskingum County, Ohio and similar to most Southeastern counties, have seen wide ranges of ecological and economical changes in its history. The boom time has probably passed since its major resource, coal, was removed. Recreational opportunities have held constant or have slightly declined since budget constraints has led to cuts at surrounding Blue Rock State Park. Increased hunting pressure has also contributed to the local economies. Many truck patch farms still are in production along the Muskingum River, with the sweet corn remains the dominant crop. Gravel yards along the Muskingum River are also a key component to the local industry.

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 several 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. <u>FRAS</u>

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. <u>State Forest Efforts - evaluation and monitoring of Social and Economic Impacts</u>

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 NPS and the OSU-Newark Earthwork 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. <u>Plan for Evaluation and Monitoring over the next 5 years.</u>

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 Muskingum County area is 54°F with seasonal averages of 73°F in the summer, 55°F in the fall, 33°F in the winter, and 52°F in the spring. Annual precipitation averages 40 inches with over 1/2 falling in the spring and summer seasons. Annual snowfall averages 20 inches with minimal accumulation.

Geology: Blue Rock State Forest lies completely within the unglaciated portion of the Appalachian Plateau. Rock and surface materials have been derived from the Pennsylvania period rock strata. This formation contains coal beds and clay and shale deposits. Oil and gas are also important resources of the area. The terrain of the forest varies from rolling to rugged to previously mined, ranging from approximately 700 feet above sea level to approximately 1100 feet.

Cultural, Historical, & Archeological: Native Americans used Blue Rock and surrounding lands for millennia prior to European settlement. However no significant archeological sites are known within the Forest. Various home sites that have been abandoned still remain and are considered cultural and historical in nature. Agriculture is still evident around Hocking with many family farms still in production. Old mining sites, gob piles, and hand dug water wells are historic and show past history of the development of Blue Rock State Forest. Old fences, plow furrows, and rock piles from agricultural development dot the forest surface. Many small cemeteries are scattered throughout the area including many 3 and 4 gravesites.

IV. MANAGEMENT OBJECTIVES

Zoning and Special Areas

Forest Zoning: Forest management objectives are guided by designated 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 1 contains the current zone map for Blue Rock State Forest. Exhibit 2 lists acreages for each zone class in the forest.

Research Areas: No significant research projects have been conducted at Blue Rock. However there are many possible opportunities in the forest. All requests for research are reviewed through the Special Use Permit process.

Cultural Areas: These are primarily 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: Both visually and environmentally sensitive areas are present at Blue Rock 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 350 to 700 acres are cruised per year.

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 publicly 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 1. 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 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.

Special Concerns: Forest zoning is designed to identify areas of special concern.

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. There are several areas designated in this zone at Blue Rock, notably the floodplains of Mann's Fork, Salt Creek, and Kent Run.

Zone III-B, is designated as an Aesthetic Area. This zone encompasses areas that may be adjacent to developed forest recreation areas, State Parks, or areas affected by high-density public use. Management in these areas is primarily directed toward maintaining healthy viable 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. The impact of Emerald Ash borer will be particularly felt at Blue Rock State Forest due to the high population of white ash.
Movement of firewood around the state has the potential to spread invasive forest pests, such as 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 citizen's 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, Blue Rock 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 Desire 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 1937, the Blue Rock fire tower, the tallest tower in Ohio at 100 feet, was constructed. This tower is one of only six towers that are still standing on State Forest land. 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 (VFDs). Many of these departments are located within the Blue Rock State Forest Fire Protection Area.

Each year an average of 800 wildfires burn approximately 4500 acres of forest and grasslands within Ohio's Forest Fire Protection Area, which corresponds mostly to the state's unglaciated hill country. These fires are attributed primarily to the careless burning of debris and household litter and arson and result in untold damage to trees and landscape, water quality, improvements such as fences and outbuildings, and place people and their homes at significant risk.

The Division has also offered training to firefighters ranging from basic wildfire instruction to specialized courses to improve skills necessary in the complex and dangerous business of wildland firefighting.

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. Blue Rock State Forest is responsible for these duties in Licking, Muskingum, Guernsey, and Noble 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.

Prescribed Fire: Prescribed fire can be an excellent management tool and is practiced on the state forests on annual basis. Prescribed fire will be utilized as a management tool for oak regeneration while reducing fuels. To date only one prescribed burn has been accomplished in Blue Rock. In the future prescribed fire activity should increase as the Division strives to meet its oak regeneration goals. The actual number of fires per year will be dependent upon workloads and weather conditions.

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.) The Federal Excess Personal Property (FEPP) program is a program administered by the Division of Forestry which loans equipment to fire departments for their use in fire control. Division staff inspects this equipment a minimum of once each year. The Fundamentals of Wildland Fire course will be taught in each county at a minimum once per a year. The Forest Officer will attend at least one VFD Association meeting in the protection area each month. Annually the Officer will contact each department and update the Division's VFD contact information forms.

VII. RECREATION

History: Recreation at Blue Rock State Forest has a long history beginning in the 1940's with Blue Rock 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.

Bridle Trails: Blue Rock State has a total of 26 miles of bridle trails.

Hunting: The entirety of Blue Rock State Forest is open to public hunting under the direction of the Division of Wildlife's rules and regulations. This area 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 support and assistance of the annual Handicapped Wild Turkey Hunt at Blue Rock State Forest. This is event is held in conjunction with the Zanesville Y-bridge Wild Turkey Federation chapter. This guided event offers a unique opportunity for participants.

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. Mechanized equipment will be utilized for maintenance of all trail systems where feasible. 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.

- Increase signage at recreation sites about adjacent forest management activities
- Continue to foster educational outreach to primary and secondary educators
- 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:

  1. Responding to emergencies and help requests with jurisdiction
  2. Protect and assist visitors through routine patrol of all facilities and incident investigation
  3. Issue warnings and citations for violations
  4. Assist in special projects with other forests and agencies

- Investigate wildfires in Licking, Noble, Muskingum, and Guernsey 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 trail patrols and an illegal APV use details.

Other Enforcement Issues:

Forest Officers will:

- Seek opportunities to increase public awareness and forest education through visitor assists and other information and education opportunities.
- Issue verbal warnings and citations when needed.
- 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)
  -Illegal APV use

X. FACILITY MAINTENANCE AND INFRASTRUCTURE

Building/Infrastructure Maintenance: Blue Rock State Forest has the following Buildings or Structures:

1. Service Center
2. Equipment Garage
3. Fuel oil house with Bulk Diesel Fuel Container
4. Carpenter Garage with storage Bays
5. Blue Rock State Forest Fire Tower

6. Zanesville Nursery Building
7. Zanesville Nursery Office Building

The following maintenance items are planned, and of course dependent on Funding or resources. Blue Rock State Forest also handles building maintenance at Zanesville Nursery on 2 buildings. Much work will be needed to be completed in the winter months of FY10 and include:

1. Roofing of Building 5 and Seed Extractory
2. Metal siding placed on Building 5 and windows repaired
3. Metal Doors installed on Building 5
4. Outside Doors installed on Office Building

Other Building Maintenance for Blue Rock State Forest is planned as follows:

1. Fire Tower steps replaced in FY10
2. Equipment Building Roof painted and skylights removed in FY11
3. Carpenter Garage vinyl siding installed in FY12
4. Service Center Office painted in FY13
5. Fuel oil house painted and reroofed in FY14
6. New overhead door installed in Carpenter Garage in FY15

Roadway Maintenance: There are approximately six miles of paved roads and 18 miles of gravel roads. The majority of the road maintenance is conducted through the cooperative roadway maintenance fund from ODOT. Forest staff members are responsible for roadside mowing, grading, and drainage maintenance.
Boundary Maintenance: Blue Rock State Forest is encompassed by roughly 30-miles of boundary. Current rotation for boundary painting is four years. Roughly 7.5 miles of boundary is painted each year. The state boundary is blazed with yellow paint.

XI. BUDGET/STAFFING

Maintenance: A budget is appropriated on a Fiscal Year beginning July 1 through June 30. It includes money for personnel, equipment, supplies, tools and maintenance. Management of this unit will be located at Hocking State Forest while maintenance staff will be located on-site. Listed below is the unit budget for fiscal year 2010.

500	**Payroll**		**GRF**	**$173,158**
510	**Personal Services**		**Fund 5090**	**$250**
		Misc Prof Development		$250
520	**Supplies & Maint**		**Fund 5090**	**$35,000**
		Blue Rock		$25,000
		Zanesville		$10,000
		Vehicles		
		Utilities		
		Supplies		
530	**Equipment**		**Fund 5090**	**$0**
550	**Subsidies**			**$0**
570	**Capital**			**$0**
590	**Settlements & Bonds - Refunds**			**$0**
591	**Debt Service**			**$0**
			Total	**$208,408**

Personnel:

David Glass, Forest Manager – Located at Hocking State Forest
Charles Lee, Forester – Located at Hocking State Forest
Schaad Johnson, Forest Officer
Paul Abele, Equipment Operator
Doug Purdum, Conservation Aide

Equipment: Equipment housed at Blue Rock State Forest:

1. Ford Pick Up Truck—1997--Day to day operations
2. Dodge Pick Up Truck—Day to day operations
3. Ford Dump Truck—1999—Road maintenance
4. Ford Expedition—2004--Law enforcement
5. Dodge Crew Truck—2009—Crew transportation
6. John Deere 350 Dozer—1975--, Fire Protection
7. Lowboy trailer—1999—Fire Protection
8. Ford 5030 Tractor—2003—day to day operations
9. Ford 4630 Tractor—1997—day to day operations
10. Woods Brush Hog—1996—mowing of Trails
11. Dixie Chopper—2008—lawn maintenance
12. Chain Saws—1995 to 2008—maintenance
13. Weedeaters—1993 to 2008—maintenance
14. Polaris Ranger—2005—trail maintenance
15. Polaris 4 wheeler—2006—trail maintenance
16. Honda 4 wheeler—2003—law enforcement

Equipment will be replaced at scheduled intervals as budgets allow. All equipment is well maintained, but does have a limit on age. Routine maintenance will be performed on all equipment in accordance with Division and Department policies. Vehicles and equipment will be repaired and maintained in house unless it is beyond our scope of ability.

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: Blue Rock State Forest Zoning Map
Exhibit 2: Blue Rock State Zones by Area

Exhibit 2

Blue Rock State Forest

Zone	Acres
1A - HCVF Natural Area	
1B - HCVF Cultural Historic	
1C - Shawnee Wilderness	
1D - HCVF Restoration	
2 - Reserved Lands	2
3A - Resource Protection	251
3B - Aesthetic Area	7
3C - Timber Wildlife	4,265

4A - Intensive Recreation	26
4B - Admin Areas	9
Total Zoned	4,560