
PART 2-STRATEGY

INTRODUCTION

This document is the second of the three parts of the LRMP for the OSFNFs and describes the strategy to be used over the next three to five years to realize the desired conditions described in Part 1 (the Vision) of the LRMP. This part includes a description of a prospectus describing past performance history, anticipated performance over the next three to five years, and the suitable uses for each of the land use zones.

PROSPECTUS

The prospectus describes recent trends and expectations regarding the levels of experiences, goods and services, or other outcomes that are supplied by the Forests as well as anticipated resource improvements planned over the next three to five years. The prospectus indicates the future course or direction of change in programs, rough estimates of the magnitude of change, and the timeframes surrounding such change.

Past performance is generally a good indicator of what is expected in the near future. Annual monitoring and evaluation of trends in performance indicators determine if there is a need to shift program emphasis to more effectively move toward the desired conditions. Annually, the OSFNFs review and evaluate programs and projects to determine if these activities meet the Forest Plan direction. The annual Monitoring and Evaluation (M&E) Report also includes, if necessary, recommendations for remedial action to make management activities and their effects consistent with the Forest Plan.

Trends in past performance are evaluated for the past five years using performance history and budget history.

RESOURCE PROGRAMS

The management of the OSFNFs is guided by the expertise of the people working in all of its program areas. To achieve the vision of a healthy forest, the required funding must be available and directed toward the correct tasks. Table 2-1 shows the actual expenditures for the past five years. Funding information is compiled annually in the Ozark-St. Francis National Forests' Monitoring and Evaluation Report. The Forests fund the following program areas:

Resource Management: The mission of the Forest Service is to "sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of

present and future generations." The resource management function is responsible for the long term health and sustainability of the forest, providing goods and services from the land, the quality of the water running on and under the land, air quality above the land, habitat for wildlife, and protecting species of plants and animals from extinction. These programs also include the geographical information databases and monitoring and inventorying databases that allow forest personnel to analyze and store all data collected as a part of program activities. The primary resource management functions include:

- ▶ Recreation
- ▶ Vegetation Management
- ▶ Wildlife/Fish/Proposed, Endangered, Threatened, and Sensitive Species (PETS)
- ▶ Soil/Water/Air

Engineering: The OSFNFs have a high road density. There are over 5,900 miles of FS roads and 900 miles of state and county roads. Maintaining the Forests' road system requires cooperation between the State of Arkansas and the 18 counties that lie within the boundaries of the Forests. The engineering function is also responsible for the capital improvements and maintenance of the facilities on the Forests. This ranges from restroom facilities at campgrounds to administrative facilities.

Recreation/Scenery Management/Heritage: This functional area includes the management of the developed and dispersed recreation areas, heritage resources, and scenery management. Developed recreation includes trash collection, cleaning, monitoring of water systems, and other associated activities to keep campgrounds and picnic areas clean, safe, and in good repair. Dispersed activities include maintaining over 700 miles of trail, 66,000 acres of wilderness, 180 miles of wild and scenic rivers, and Blanchard Springs Caverns. Scenery Management is the art and science of planning and designing landscape attributes relative to the appearance of places and expanses in outdoor settings. Scenery Management involves administering the use of National Forest System lands within the context of multiple-use ecosystem management to ensure high quality scenery for the overall well-being and psychological welfare of society and future generations. Heritage resource strives to protect significant resources found on the Forests that tie us to the past, to share their values with the American people, and to contribute relevant information and perspectives to natural resource management.

Range: While many forests in the National Forest System have large grazing programs, the OSFNFs focus more on maintaining existing pastures. There are no large-scale grazing operations on the Forests at this time.

Fire and Aviation Management: Fire and aviation management includes all activities involved with wildland fire preparedness, suppression, safety, training, wildland fire use as it is developed, planning, prescribed fire, and hazard reduction in the wildland urban interface (WUI). This program includes on-forest and national wildfire/emergency incident response. Current emphasis of the fire program is to support

prescribed burning for ecosystem restoration goals, improve condition class, and implement the healthy forest initiative including the Healthy Forest Restoration Act.

Lands: The Lands program is responsible for maintaining the Forests' property records, completing lands transactions, and surveying and protecting the boundaries. In addition, this functional management program takes advantage of opportunities to purchase private lands to further protect critical forest resources, and investigate encroachment by private landowners that degrades the quality of forestlands.

Minerals: Forest Service policy regarding minerals management includes ensuring "the integration of mineral resource programs and activities with the planning and management of renewable resources through the land and resource management planning process, recognizing that mineral development may occur concurrently or sequentially with other resource uses." Further information can be found at: (http://www.fs.fed.us/geology/minerals_policy.html). Consistent with federal law, including the U.S. Mining Laws Act of May 10, 1872, and the Mining and Minerals Policy Act of 1970, Forest Plans *do not* make decisions to withdraw National Forest System lands from mineral exploration or development.

The Forest Plan includes recommendations for making or removing withdrawals, based on an evaluation of the compatibility of mineral development with the objectives of individual management areas. The Withdrawal Review for the Ozark-St. Francis National Forest is in Appendix H.

Ecosystem Inventory, Monitoring, and Planning: This program includes expenditures for forest-wide monitoring of soil, water, air, ecosystems, wildlife, range, recreation, and land management planning.

Management and Administration (Cost Pools): The management and administration program includes forest leadership, management, and administrative support activities, communications, external affairs, planning, human resources, information technology, and financial management. The LRMP primarily affects two of these programs, general and district management.

- ▶ **General Management:** Vision, leadership, performance reporting, legislative contacts, and priority setting are the tasks of the Supervisor and the immediate support staff. From the Supervisor's Office in Russellville, Arkansas, human resources, engineering, recreation, resources, public relations, information technology, and other staff functions provide technical and administrative support to the districts.
- ▶ **District Management:** The Ozark St.-Francis National Forests are divided into six ranger districts on the Ozark National Forest (Bayou, Boston Mountain, Buffalo, Mt. Magazine, Pleasant Hill, Sylamore) and the St. Francis National Forest. Each district ranger and staff is directly responsible for developing, conserving, and using the natural resources of the Forests and the associated land of the ranger district, while maintaining relationships with local communities and organizations.

Budget Trends

Appropriations for the OSFNFs reached their highest in FY 2003. Recreation budgets have remained flat overtime and declined significantly in FY 2003. Other budgets that have changed little over time include range, wildlife/fish/PETS, soil, water, air, and minerals. Table 2-1 provides the actual expenditure for fiscal years 1999-2003 by functional areas.

Table 2-1: Expenditures of Appropriated Dollars by Fiscal Year 1999-2003.

Functional Area	Actual Expenditures of Appropriated Dollars by Fiscal Year (1,000s of dollars)				
	1999	2000	2001	2002	2003
Timber	4,220	4,261	4,452	5,253	4,621
Wildlife/Fish/PETS Species	707	678	971	884	674
Soil/Water/Air	135	107	267	160	204
Recreation/Wilderness/Heritage	1,622	2,471	2,231	2,376	1,247
Fire	1,424	1,439	2,167	1,973	2,071
Lands	352	404	475	565	536
Minerals	195	209	306	272	226
Engineering	1,685	3,423	3,502	3,199	*5,456
Range	168	118	180	138	69
Ecosystem Inventory, Monitoring, Planning	811	961	1,363	1,555	1,010
Cost Pools	1,598	1,363	472	4,225	4,137
Total	12,984	15,494	16,482	20,718	20,751

Source: Annual Monitoring & Evaluation Report.

***Also includes recreation construction (CMFC and CMII).**

PERFORMANCE HISTORY

Table 2.2 displays the performance history for fiscal years 1997-2003. It includes annual objectives of the current plan to the actual accomplished objectives. Accomplishment trends are evaluated periodically to determine if the Forests need to shift program strategies. These data are reported in the annual Monitoring and Evaluation Report as part of the Forests' implementation monitoring efforts.

Table 2-2: Performance History for Fiscal Years 1997-2003.

Activities	Units	LRMP Objective	FY 97	FY 98	FY 99	FY 2000	FY 2001	FY 2002	FY 2003
Timber									
Timber Volume Offered	MCF	96	100	82	71	70	82	113	114
Timber Volume Sold	MCF	96	82	103	66	48	54	105	112
Pine Reforestation	acres	3,150	2,727	2,946	2,769	3,379	2,243	2,101	1,773
Hardwood Reforestation	acres	2,200	1,028	1,086	1,712	132	485	1,201	1,675
Pre-Commercial Hardwood Timber Stand Improvement	acres	1,600	869	1,146	1,425	1,171	1,468	1,580	1,426
Pre-Commercial Pine Timber Stand Improvement	acres	5,000	1,943	1,253	1,073	1,951	1,807	1,877	1,748
Thinning	acres	6,200	7,011	6,026	4,784	5,974	4,647	3,673	5,502
Wildlife /Fish/PETS									
Prescribed Burning	acres	1,110	1,738	3,583	5,860	7,579	225	2,883	2,789
Wildlife Opening Maintenance	acres	290	78	320	384	240	665	500	920
Food Plot Maintenance	acres	33	308	60	538	520	1,012	800	989
Wildlife Opening Development	acres	36	34	38	59	0	12	80	90
Food Plot Development	acres	8	61	21	7	22	0	27	25
Wildlife Stand Improvement	acres	150	225	447	812	553	228	124	363
Seeding and Planting	acres	28	1,661	170	461	122	265	261	182
Pond Construction	structures	45	30	18	25	6	47	14	35
Fish Cover Development	structures	14	7	12	15	25	0	40	110
Pond Fertilization	acres	167	30	200	375	911	0	220	240

Source: Annual Forest Monitoring and Evaluation Reports.

***Fee demo program began in 1998.**

Table 2-2: Performance History for Fiscal Years 1997-2003. (Continued)

Activities	Units	LRMP Objective	FY 97	FY 98	FY 99	FY 2000	FY 2001	FY 2002	FY 2003
Soil/Water/Air									
Watershed Improvement	acres		20	27	48	30	42	21	53
Engineering									
Road Construction & Reconstruction	miles		62	38	37	11	33	48	30
Recreation/Wilderness/Heritage									
*Fee Demo Program	dollars/thousands			689	643	741	692	689	748
Trail Construction & Reconstruction	miles	12	10	2	4	4	4	9	14
Cultural Resource Inventory	acres	186,080	20,384	25,464	19,722	19,722	19,722	38,835	40,901
Range									
Prescribed Burning	acres	2,800	66	30	295	0	0	0	0
Brush Hog Pastures	acres	2,800	800	160	500	2,000	690	1,340	713
Fertilization	acres	1,400	800	0	500	1,500	490	1,390	925
Seeding	acres	1,400	20	40	65	80	105	0	0
Pond Construction	structures	14	0	7	3	2	0	5	0
Fuel Treatment									
Prescribed Burning	acres	7,000	8,025	11,123	20,266	22,583	27,786	35,454	46,871
Lands									
Land Exchange	acres	600	334	143	1,074	329	0	0	0
Land Acquisition	acres	1,100	557	769	1,361	529	60	80	2,240
Minerals									
Mineral Leases	leases	360	60	31	42	32	10	24	22

Source: Annual Forest Monitoring and Evaluation Reports.

***Fee demo program began in 1998.**

The OSFNFs participated in the first round of the National Visitor Use Monitoring surveys in 2001 (Table 2-3). Recreation use on the Forests for FY 2001 at the 80 percent confidence level was 2.7 million national forest visits plus or minus (+/-) 17 percent. There were 2.87 million site visits, an average of 1.1 site visits per national forest visit. Included in the site visit estimate are 4,359 wilderness visits.

Table 2-3: Ozark-St. Francis National Forest Annual Recreation Use Estimate, 2001.

National Forest Visits	Site Visits	Wilderness Visits
2,700,794	2,874,907	4,359

Another reflection of recreation use of the Forests is the fees collected at our fee sites under the Fee Demonstration Program initiated by Congress in 1997. All of the developed recreation sites on the Forests were submitted as one project under this program. Table 2-4 shows the fees collected by districts for the years 1998-2004. Note that the collections on the Sylamore Ranger District/St. Francis NF are elevated due to Blanchard Caverns, which has many visitors each year. Ninety-five percent of the fees collected are used for maintenance at the site where they are collected. The fees collected forest-wide from 1998-2003 are included in Table 2-4.

Table 2-4: Collections from the Fee Demo Program from 1998-2004.

Districts	FY 98	FY 99	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
	Unit of Measurement-Dollars/Thousands						
Sylamore/ St. Francis	632	578	504	494	495	532	488
Buffalo/ Bayou	17	25	21	18	35	33	30
Pleasant Hill	17	16	12	12	15	15	13
Boston Mtn./ Magazine	24	23	52	29	25	27	17
*Pool	129	120	111	104	107	115	102

***Pool is a forest-wide account from fee demo program for use on special projects related to fee sites.**

PROGRAM PRIORITIES AND OBJECTIVES

The following sections list program priorities and objectives for achieving the desired conditions set forth in Part 1 of the Revised Forest Plan.

Many variables that influence the degree to which objectives are achieved cannot be fully assessed when a plan is revised or amended. Legal mandates, congressional intent as expressed in annual budgets, natural disturbance events, and other issues or factors over which the Forest Supervisor has little or no control all influence performance. The actual mix and level of activities to be conducted will be determined each year, utilizing every opportunity to move toward the desired conditions and to contribute to the Forest Service's national strategic goals.

Based on expected management priorities, the Forest Service will emphasize the following program emphases, objectives, and strategies in each program area over the planning period. Management area emphases and desired conditions are also described in this section.

LAND MANAGEMENT PLANNING

Forest Plan Monitoring and Evaluation

Priorities

- ▶ Amend the land and resource management plan as necessary in response to monitoring and evaluation.
- ▶ Publish a monitoring and evaluation report annually that evaluates progress in meeting Forest Plan direction and makes recommendations to redirect budget or management direction to meeting changed conditions.
- ▶ The comprehensive evaluation reports called for by the 2005 NFMA planning rule (36 CFR 219) will be prepared every five years.

Objectives

OBJ.1 Complete an Environmental Management System (EMS) within the first five years of the planning cycle. **Performance Indicator:** Completed EMS.

Forest-Wide Inventories

Priorities

- ▶ Develop the capacity to use all Forest Service corporate databases for the purposes of project planning, forest-wide monitoring and evaluation, and responding to regional and national reporting requests.
- ▶ Adjust vegetation inventory protocols to meet national and regional standards, and to reflect vegetation types and conditions used for forest planning including rare and special communities.
- ▶ Work with appropriate agencies and academic sources to identify natural resource research needs. Implement research as opportunities occur.
- ▶ Complete invasive non-native plant and animal inventories based on national and regional protocols in the planning cycle.
- ▶ Develop a schedule for conducting watershed assessments at the scale appropriate to need in the planning cycle.
- ▶ Inventory the habitat of federally listed and Forest Service sensitive species, update all maps and databases as information is obtained.
- ▶ Complete and inventory of old growth in MA 3.F to determine old growth conditions.
- ▶ Maintain an inventory of the soils with highly erosive hazards across the Forests.

Research

Priorities

- ▶ Continue to seek and promote research opportunities that are consistent with identified information needs.
- ▶ Identify research needs and opportunities for research programs for qualified persons or groups by developing cooperative agreements.
- ▶ Benefit from research information by maintaining a close, continuous relationship with scientists from the Southern Research Station, and other universities and colleges conducting research on the OSFNFs.

COOPERATIVE RELATIONS

Local Communities

Priorities

- ▶ Promote area economic well-being by using the Forests' resources to generate revenues for local counties and to provide direct or indirect employment opportunities.
- ▶ Recognize the socio-economic effects of natural resource management planning and activities on other federal, state, and local governments; private landowners; and various community organizations.
- ▶ Reduce risk of catastrophic wildland fire around communities at risk by decreasing hazardous fuel conditions.
- ▶ Within this planning cycle, manage the Forests' timber, recreational, and scenic resources in a manner that enables local communities to capitalize on the potential of these resources to contribute to economic well-being.
- ▶ Within this planning cycle, provide or facilitate technical and financial assistance to rural communities that are dependent on forest-generated commerce and natural resources.
- ▶ Within this planning cycle, provide opportunities for use of Forests' resources by disadvantaged persons.
- ▶ Use human resource programs to provide employment, skills, training, work experience, and education for young and elderly citizens.
- ▶ Maintain steady flow of goods and services to prevent changes in local social and economic conditions.
- ▶ Provide full and timely information regarding impending Forests' decisions and to give ample opportunities for the public and cooperating agencies to be involved in the Forest decision-making process.

Governmental Agencies

Priorities

- ▶ Support agreement with Arkansas Tech University to provide wildland fire training to students in the natural resources fields and Federal Emergency Management program. The objectives are to provide additional resources to assist the Forests in both wildland fire suppression and prescribed fire, and to enhance the students' employment opportunities with agencies that have wildland and/or prescribed fire programs.
- ▶ Maintain cooperative training efforts with state and federal agencies.
- ▶ Maintain cooperative agreements with state and federal agencies for aid and detection of wildland or prescribed fires, and in dispatching of suppression resource.

VEGETATION AND FOREST HEALTH

Major Forest Communities

Priorities

- ▶ Manage major forest communities to achieve desired conditions and sustained flows of goods and services.
- ▶ Restore oak and pine woodland conditions using growing season fire where possible, especially on lands where commercial timber sales are not feasible.
- ▶ Apply appropriate silviculture prescriptions to convert loblolly pine plantations to native forest types when loblolly pine stands reach rotation age.

Objectives

OBJ.2 Follow silviculture allocation direction for management areas outlined in Appendix F of this LRMP. **Performance Indicator:** Through FACTS, annually report the acres allocated by management area and silviculture prescription.

OBJ.3 Across all community types, maintain more than 50 percent of the total forest and woodland acreage in a mature condition. Over time, develop old growth conditions on approximately 20 percent of forested acres. **Performance Indicator:** Percent of mature forest and old growth forest.

OBJ.4 Restore and maintain at least 22,000 acres of oak woodland over the first decade, with a long-term objective of 110,000 acres of oak woodland. **Performance Indicator:** Acres of oak woodland restored annually.

OBJ.5 Restore at least 20,000 acres of pine woodland over the first decade, with a long-term objective of 100,000 acres of pine woodland. **Performance Indicator:** Acres of pine woodland restored annually.

OBJ.6 Across all community types, maintain a range of 3.8 to 6.8 percent of the total forest and woodland acreage in regenerating forest conditions (0 to 10 years old). **Performance Indicator:** Percentage of forest in regenerating conditions.

OBJ.7 Across all community types, annually burn an average of 120,000 acres under prescribed burn conditions. Burn approximately one-third of this acreage within the growing season (April 1 through October 15) **Performance Indicator:** Acres burned under prescription per year, and acres burned within the growing season.

Rare and Special Communities

Priorities

- ▶ Protect, maintain, and restore the composition, structure, and function of rare communities found on National Forest System lands.
- ▶ Inventory and map rare communities. Identify and prioritize restoration and maintenance needs.

Caves, Mines, and Karst

Priorities

- ▶ Allow for the continuation of natural karst processes. Maintain the productivity of the karst landscape while providing protection of sensitive karst resources.
- ▶ Manage lands in a manner that protects significant caves and their associated resources.

Old Growth

Priorities

- ▶ A variety of large, medium, and small old growth patches will be managed (through restoration, protection, or maintenance activities) to meet biological and social needs. These patches could include stands of either "existing old growth" or "future old growth."

Insect and Disease Management

Priorities

- ▶ Protect the natural resource values at risk due to insect or disease loss at levels outside of the desired range of variability or where needed to improve habitat. Reduce the susceptibility (risk) to insect and disease losses on the Forests.

- ▶ Continue to work toward a balanced age class distribution in hardwood and pine stands.
- ▶ Take steps to improve forest health by reducing the likelihood of insect infestations, disease outbreaks, and establishment of non-native, invasive species on National Forest System lands.
- ▶ Use an integrated pest management approach to prevent or reduce damage to forest resources from pest organisms including non-native, invasive species.
- ▶ Streamline coordination among partners and landowners to provide optimal early detection and treatment of pest outbreaks.

Objectives

OBJ.8 Reduce the risk of oak and pine mortality events by thinning and regenerating at least 150,000 acres within the first decade. **Performance Indicator:** Acres thinned and regenerated annually.

Non-Native Invasive Species

Priorities

- ▶ Follow the direction set forth in the *Regional Strategy for Non-Native Invasive Species*. Develop protocols for survey, detection, evaluation, suppression, and prevention of infestations of non-native invasive species.
- ▶ Coordinate with Arkansas Heritage Commission and other state and federal agencies on prevention, suppression, and eradication efforts.

Objectives

OBJ.9 Treat at least 200 acres per year for reduction or elimination of non-native, invasive species. **Performance Indicator:** Acres treated.

FISH AND WILDLIFE

Demand Species

Priorities

- ▶ Provide for an optimal, sustained yield of game animals by perpetuating a mix of early-, mid-, and late-successional forest and woodland conditions.
- ▶ Provide additional boat ramps on the OSFNFs.
- ▶ Provide additional handicapped accessible opportunities to lakes and ponds on the OSFNFs.
- ▶ Provide for an optimal, sustained yield of sport fish populations through structural and nonstructural habitat improvements.
- ▶ Develop lake-fishery management plans on major lakes in cooperation with the Arkansas Game and Fish Commission.

Objectives

OBJ.10 Improve and then maintain bobwhite quail habitat on 5,000 acres per year for the first decade. **Performance Indicator:** Acres improved through oak or pine woodland restoration, or acres in early seral stages.

OBJ.11 Improve and then maintain habitat for whitetail deer on 10,000 acres per year for the first decade. **Performance Indicator:** Acres improved annually.

OBJ.12 Improve and then maintain habitat for eastern wild turkey on 10,000 acres per year for the first decade. **Performance Indicator:** Acres improved annually.

OBJ.13 Improve and then maintain habitat for black bear on 8,000 acres per year for the first decade. **Performance Indicator:** Acres improved annually.

OBJ.14 Improve winter forage grounds and maintain high grass and forb plant communities for elk on 480 acres over the first decade. **Performance Indicator:** Acres improved.

OBJ.15 Maintain habitat at 2004 levels for largemouth and smallmouth bass during the next 3 to 5 years. **Performance Indicator:** Acres maintained.

OBJ.16 Increase the amount of fish structures in large lakes by 100 acres over the first decade. **Performance Indicator:** Acres of structural improvement annually.

Threatened, Endangered, and Sensitive Species

Priorities

- ▶ Provide diverse habitats that will support viable populations of all native and desirable nonnative species.
- ▶ Work with the U.S. Fish and Wildlife Service (USFWS) to develop recovery plans for federally listed species. Implement Forest Service actions as recommended in recovery plans for federally listed species. In the absence of an approved recovery plan, implement interim Forest Service objectives.
- ▶ Manage habitat to move species toward recovery and de-listing. Prevent the listing of proposed and sensitive species. Coordinate with partners to implement measures to resolve conflicts with all threatened and endangered species and habitats.
- ▶ Develop monitoring plans to evaluate the effectiveness of canopy density control treatments in primary and secondary Indiana bat zones. Use adaptive management in making adjustments based on results of monitoring.

- ▶ When opportunities arise in the secondary Indiana bat zones to thin inclusions or stand size areas where shagbark hickory is the dominant species, the objectives of this thinning will be to enhance health and longevity of the residual trees. The target residual basal area for these areas is site index minus 10. Designated leave trees should be the largest stems with the greatest potential for crown development and longevity.
- ▶ Encourage reintroduction of extirpated or declining native species when technologically feasible. Develop partnerships with universities, groups, and other agencies to facilitate reintroduction of native species.

Objectives

OBJ.17 Improve roosting and foraging conditions in secondary buffers around Indiana Bat hibernacula on 750 acres per year for the first decade. **Performance Indicator:** Acres improved annually.

SOIL, WATER, AND AIR

The Forest Services utilizes Arkansas' Best Management Practices (BMPs) as tools for ensuring the maintenance of proper watershed functioning and for complying with the Clean Water Act. In particular, the use of streamside management zones limits erosion and sedimentation from upland management activities from entering the streams and watercourses of the Forests. Streamside management zones (SMZs) are defined for all the stream courses and surface waters found on the Forests.

Priorities

- ▶ Control and reduce smoke to protect human health, improve safety, and to moderate or eliminate environmental impacts. Incorporate visibility and smoke management requirements into fire management plans.
- ▶ Prevent exceeding the regulatory particulate matter (PM_{2.5}) standards through monitoring prescribed burning. Plan for resource management emissions to fall within the current state implementation plan (SIP). SIP inventories establish levels of air pollution that meet the long-term federal air quality attainment goals of the permitting Air Pollution Control District.
- ▶ Meet federal and state standards concerning air and water quality (e.g., National Ambient Air Quality Standard [NAAQS], Environmental Protection Agency [EPA], and state water quality standards).
- ▶ Minimize air pollution impacts to the Air Quality Related Values (AQRV) of the Class I Area, Upper Buffalo Wilderness, through a cooperative working relationship with agencies managing air quality.
- ▶ Ensure that smoke is not adversely affecting Indiana bats by not permitting active combustion and smoldering phase smoke from prescribed burns to enter hibernacula. Develop monitoring plans to evaluate residual smoldering phase and drift smoke entry into primary and secondary zones. Consider all weather perimeters, intra-cave airflow dynamics, burn duration, elevation, and topography in developing burn prescriptions.

- ▶ Protect, maintain, and restore natural watershed functions including slope processes, surface water, groundwater flow, retention, and riparian area sustainability. Restore, maintain, and improve watershed conditions. Ensure that approved and funded rehabilitation and emergency watershed treatments are implemented in an effective and timely manner.
- ▶ Contribute to meeting designated beneficial uses of water by providing water of appropriate quality and quantity.
- ▶ Protect municipal and other potable water supplies and ensure that management activities do not cause permanent deterioration in water quality or quantity.
- ▶ Include erosion and sediment control measures in all ground-disturbing project plans.
- ▶ Identify roads and trails that should be reconstructed or decommissioned to reduce sediment and improve watershed condition.
- ▶ Monitor compliance with Forest Plan design criteria intended to protect soil, air, and water quality.
- ▶ Utilize a landscape-level watershed assessment process for assisting in the project level planning process, forest level monitoring, and organizing resource information.
- ▶ Maintain an inventory of the highly erodible soils across the Forests.
- ▶ Manage groundwater and surface water to maintain or improve water quantity and quality.
- ▶ Assess impacts of existing and proposed groundwater extractions to ensure that developments will not adversely affect aquatic, riparian, or upland ecosystems and other uses, resources, or rights.
- ▶ Protect and improve water quality by implementing Arkansas BMPs and other project-specific water quality protection measures for all Forest Service and authorized activities.
- ▶ Conserve and protect high quality water sources in quantities adequate to meet National Forest needs.
- ▶ Comply with State water quality standards. Take corrective actions when necessary to eliminate the conditions leading to State of Arkansas listing of 303 (d) impaired waters on National Forest System land. For those waters off National Forest System land, ensure that Forest Service management does not contribute to listed water quality degradation.
- ▶ Cooperate with federal, tribal, state, and local governments and private entities to secure the in-stream flow needed to maintain, recover, and restore riparian-dependent resources, channel conditions, and aquatic habitat.

Objectives

OBJ.18 Protect and improve the Air Quality Related Values of the Class I Area (Upper Buffalo Wilderness). **Performance Indicator:** Number of AQRV monitoring sites, number of PSD (air quality- Prevention of Significant Deterioration) permits reviewed, and number of regional air quality planning committees participated in.

OBJ.19 Conduct watershed improvements on 20 acres per year. **Performance Indicator:** Acres treated.

OBJ.20 Fence out livestock from SMZs and riparian areas as identified. **Performance Indicator:** Miles of SMZ fenced.

OBJ.21 Maintain or restore between 30 to 70 percent of the total perennial stream/river surface area of the NHD (National Hydrography Dataset) reaches as pool habitat in the first decade. **Performance Indicator:** Percentage of NHD stream pool habitat.

OBJ.22 Maintain or restore LWD (Large Woody Debris) levels in perennial streams/ivers at 75 to 200 pieces/mile for all LWD larger than 3.3 feet long and 3.9 inches in diameter in the first decade. **Performance Indicator:** LWD composition in perennial streams after 10 years.

OBJ.23 Maintain or restore LWD levels in perennial streams/ivers at 8 to 20 pieces/mile for all LWD larger than 16.4 feet long and 19.7 inches in diameter in the 1 first decade. **Performance Indicator:** LWD composition in perennial streams after 10 years.

Hazardous Materials

Priorities

- ▶ Manage known hazardous materials risks.
- ▶ Coordinate with federal, tribal, state, city, and county agencies and local landowners to develop emergency response guidelines for hazardous spills on National Forest System land or on adjacent land with potential to affect Threatened, Endangered, or Sensitive (TES) species habitat.
- ▶ Develop a hazardous materials response plan that addresses risk and standard cleanup procedures.
- ▶ In the event of hazardous material spills in known TES habitat on National Forest System land, the Forest Service will contact the USFWS within 24 hours. The Forest Service will quickly contact resource personnel and use them as consultants to minimize impacts to habitat and to initiate emergency consultation with the USFWS, if necessary.

LANDS AND SPECIAL USES

Acquisition

Priorities

- ▶ Consolidate forestland ownership to facilitate management efficiency, reduce fragmentation, enhance public benefits, and meet resource management needs through acquisition.

- ▶ Consolidate the National Forest System land base to support resource management objectives, improve management effectiveness, enhance public benefits, and/or to improve habitat condition and linkage.
- ▶ Acquire lands or interest in lands by purchasing, receiving donations, exchanging, acquiring rights-of-way, transferring, interchanging, or adjusting boundaries to address the issues associated with complex ownership patterns including urban interface fire protection and occupancy trespass.
- ▶ Work with land conservancies, local government, and others to secure long-term habitat linkages.
- ▶ Actively participate with local government, developers, and other entities to protect forest values in the urban interface zones.
- ▶ Continue to work with the Bear Creek Lake Home Owners Association on the proposed land exchange on the St. Francis National Forest. The St. Francis National Forest has 52 recreation "summer" home residences under land use authorizations within its boundaries. The Bear Creek Lake Homeowner's Association has proposed a land exchange with the St. Francis National Forest where they would acquire the peninsula where their recreation residences are located. The non-federal tracts they have offered to date do not satisfy the criteria or values for land exchange. The forest service owns all the property surrounding Bear Creek Lake. Site specific analysis of any proposal would be required which shows whether or not it would meet the laws and regulations governing such a conveyance, and that the exchange would clearly be in the public's interest.

Administrative Access

Priorities

- ▶ Ensure that legal access is secured for National Forest System lands for present and future resource management needs.
- ▶ Acquire land or rights-of-way for road and trail access to support appropriate National Forest activities and public needs.

Boundary Corners and Lines

Priorities

- ▶ Re-establish the Public Land Survey System (PLSS) in the most cost effective manner possible (to the extent that funding is available) in order to provide for NF boundary lines needed for management of the National Forest System lands. This work shall be done in accordance with (1) Bureau of Land Management (BLM) survey procedures as stated in the most current *BLM Manual of Surveying Instructions* and (2) Arkansas State boundary survey standards as per the handbook for Arkansas Land Surveyors and the Arkansas Minimum Standards for property boundary surveys.

Objectives

OBJ.24 Maintain existing known survey corner monuments. **Performance Indicator:** Number of known survey corners maintained.

OBJ.25 Survey and monument lost/obliterated or found corners on a township basis (the basic PLSS unit that is also the most cost effective). **Performance Indicator:** Number of lost/obliterated or found survey corners monumented and/or restored.

OBJ.26 Establish new (heretofore not marked to FS standard) on-the-ground boundary lines to the extent funding is available. **Performance Indicator:** Number of new boundary lines established.

OBJ.27 Maintain existing (heretofore marked to FS standard) on-the-ground boundary line to the extent funding is available. **Performance Indicator:** Miles of line maintained.

RECREATION

Developed Recreation

Priorities

- ▶ Maintain and protect existing and potential recreation sites consistent with public demand through operation, maintenance, and rehabilitation activities.
- ▶ Improve the cost effectiveness of operating recreational facilities by decommissioning underused sites, using concessionaire agreements, entering into management partnerships, and other measures.
- ▶ Make financial investment decisions by utilizing a "business-principles-based" process, which analyzes strengths, weaknesses, opportunities, threats, cost vs. use, alignment action plan, and five-year development plans for the districts and the Forests.

Dispersed Recreation

Priorities

- ▶ Provide a range and amount of dispersed recreation opportunities that are consistent with public demand for a variety of activities and settings.
- ▶ Provide abundant and diverse opportunities for enjoying scenery, streams, lakes, rivers, heritage sites, geological features, and wildlife.
- ▶ Emphasize water-related day-use, scenic and wildlife viewing, and trail activities such as hiking, biking, horseback riding, and OHV riding. Overnight facilities will only be developed in support of the niche activities.
- ▶ Utilize dispersed recreation programs that support minimal impacts to help prevent and mitigate resource damage. ("Leave No Trace" and MIST).

- ▶ Employ "Pack it in - Pack it out" policy for solid waste, except where disposal facilities are available.

Trails

Priorities

- ▶ Maintain a network of hiking, biking, equestrian, and multiple-use trails in good condition, relying on partnerships as much as possible.
- ▶ Construct and maintain the trail network to levels appropriate with management area objectives, sustainable resource conditions, and the type and level of use.
- ▶ Consider opportunities to construct or join trails that link Maintenance Level 1 Roads (closed roads) and other roads that meet the need for trail-based recreation to lengthen the trail systems.
- ▶ Maintain and/or develop access points and connecting trails linked to the surrounding communities to create opportunities for non-motorized trips of short duration.
- ▶ Develop and operate a system of OHV routes that satisfies some public demands for motorized recreation and protects environmental quality.
- ▶ Work with organized horse enthusiasts to maintain existing trails, and develop additional trails.
- ▶ Convert ecologically sustainable Maintenance Level 1 Roads (closed roads) and other roads that meet the need for trail-based recreation.

Objectives

OBJ.28 In conjunction with designating low-maintenance, standard roads develop a system of motorized trails that addresses the needs of OHV enthusiasts. **Performance Indicator:** Miles of new motorized trails.

OBJ.29 Within the first five years of the planning period, provide maps that show OHV route systems using designated roads. **Performance Indicator:** Number of maps completed.

OBJ.30 Conduct maintenance on at least 100 miles of trails (non-motorized use) per year. **Performance Indicator:** Annually, the miles of trail maintained to standard.

Recreation Special Uses

Priorities

- ▶ Incorporate the management and monitoring of all concession and recreational land use authorizations. The Forest Service manages 60 recreational special use authorizations including 4 concession campground complexes, 3 special use authorizations with Arkansas State Parks, 1 agreement with the University of Arkansas, and 52 summer homes.

- ▶ Screen land use authorizations using the 36 CFR 251 screening process before a decision is made to authorize the special use.
- ▶ Improve relationships with concessionaires, outfitters and guides, and other land use authorization holders to give customers fast and effective delivery of information and services.

Conservation Education

Priorities

- ▶ Build intellectual and personal connections between people and their natural and cultural heritage. The program focuses on public service information regarding recreational opportunities, stewardship responsibilities, and resource education.
- ▶ Emphasize partnership and volunteer programs to improve visitor services and to increase opportunities for interpretation and environmental education.
- ▶ Develop conservation education programs for major restoration sites during the planning cycle.

Objectives

OBJ.31 Increase partnerships by approximately 20 percent during the planning cycle. **Performance Indicator:** Percent increase in partnerships.

Scenery Management

Priorities

- ▶ Maintain or enhance the visual character of the Forests by using the Scenery Management System (SMS) to achieve scenic integrity objectives.
- ▶ Manage landscapes and build elements in order to achieve scenic integrity objectives.
- ▶ Promote the planning and improvement of infrastructure along scenic travel routes. Use the best environmental design practices to harmonize changes in the landscape and to advance environmentally sustainable design solutions.
- ▶ Restore landscapes to reduce visual effects of nonconforming features.
- ▶ Manage scenic restoration to be consistent with other management area objectives.
- ▶ Maintain the integrity of the expansive, natural landscapes, and traditional cultural features that provide the distinctive character of places. Maintain the character of key places in order to maintain their valued attributes.

Objectives

OBJ.32 Within three years, the Forests will map the existing scenic integrity levels to compare with the proposed scenic integrity objectives for each management area. **Performance Indicator:** Inventory of existing scenic integrity levels.

OBJ.33 Within one year, update the scenery treatment guide for the Forests.
Performance Indicator: Completion of an updated guide.

OBJ.34 Improve or maintain all designated scenic overlooks at least once per decade. **Performance Indicator:** Number of scenic overlooks improved or maintained per year; percent maintained or improved per decade.

Heritage Resources

Priorities

- ▶ Protect heritage resources for cultural and scientific value and public benefits.
- ▶ Use partnerships to implement site management plans for heritage resource sites, focusing on those sites with recognized significance or that are at risk from public or land use effects.
- ▶ Work with the local communities to understand, document, preserve, and interpret the forest history. Develop opportunities for partnerships with the public to maintain and re-use historic heritage resources.
- ▶ Increase knowledge of the occurrence, distribution, and diversity of site types for heritage resources on the Forests.
- ▶ Identify research needs and opportunities for research programs by qualified persons or groups by developing cooperative agreements.

Objectives

OBJ.35 Evaluate historic sites for appropriate management. Develop site management plans for noteworthy heritage resources wherever they occur.
Performance Indicator: Number of management plans developed.

OBJ.36 Provide public involvement programs with opportunities for people to partner in the stewardship of heritage resource sites. **Performance Indicator:** Number of implemented programs (PIT, AAS digs, etc.).

OBJ.37 Develop public involvement programs to foster partnership in heritage resource stewardship to aid in identifying and evaluating heritage sites.
Performance Indicator: Number of partnerships.

OBJ.38 Increase the heritage resource database by surveying non-project acreage. **Performance Indicator:** Acres of non-project surveys.

TRIBAL NATIVE AMERICAN RELATIONSHIPS

Priorities

- ▶ Emphasize developing relationships with tribal governments, working together to resolve issues, and facilitating continued traditional or cultural use of the

- Forests. Management intends to establish effective relationships with federally recognized tribes.
- ▶ Develop protocols to promote collaborative partnerships for managing heritage resources, ecosystem restoration, comprehensive fire planning, and recognizing historic Native American access rights to the Forests and resources.
 - ▶ Allow traditional use access to traditionally used areas as well as contemporary use and needs by tribal and other Native American interests.
 - ▶ Protect, conserve, and restore traditionally or temporarily used resources. Opportunities for traditional use of the Forests and forest resources are improved and provisions are made to offer access to sites with cultural significance. Use opportunities during project planning and implementation to identify, enhance, and protect traditionally or temporarily used resources.
 - ▶ Establish effective partnerships to address issues of mutual concern (plant material propagation, etc.)
 - ▶ Work collaboratively with tribes to determine appropriate locations and levels for gathering traditional plant materials.

Objectives

OBJ.39 Within this planning cycle, develop government-to-government programmatic agreements, which define protocols with all local recognized tribes and organized groups of interested Native Americans. **Performance Indicator:** Number of programmatic agreements developed.

OBJ.40 During the next three to five years, expand the Native American Wildland Firefighting Training program. **Performance Indicator:** Number of Native American fire fighters trained annually.

LAW ENFORCEMENT

Priorities

- ▶ Provide law enforcement services for safety and resource protection.
- ▶ Provide law enforcement services in relationship to available staffing levels, the number of incidents recorded annually, and the ability of the public to access forestlands.
- ▶ Conduct criminal and civil investigations in a timely manner.
- ▶ Develop, update, or revise Forest Orders to implement the orders applicable to specific needs of the Forests.
- ▶ Annually provide investigative services commensurate with available staffing levels, the degree of severity and impact of an incident, and the number of incidents recorded.

FACILITIES

Priorities

- ▶ Reduce the backlog of facilities that do not meet the desired condition or complement the recreation setting by replacing outdated substandard facilities with safe, efficient, durable, environmentally sensitive facilities.
- ▶ Reduce the facility maintenance backlog, giving priority to health and safety and accessibility compliance.
- ▶ Increase the operating efficiency of existing buildings.
- ▶ Upgrade site utilities for efficient operation. Remodel or construct new buildings to conform to approved facility master plans.
- ▶ Maintain all buildings to health and safety standards.

Objectives

OBJ.41 Identify and evaluate applicable property or buildings of potential historic value in support of the facility master plan. Remove the facilities that have been abandoned or no longer needed, and restore the sites to natural conditions. **Performance Indicator:** Number of facilities removed.

OBJ.42 Construct new facilities to accommodate supplementary fire employees and equipment. **Performance Indicator:** Number of facilities constructed.

OBJ.43 Eliminate two leased facilities by 2015. **Performance Indicator:** Number of leases eliminated by 2015.

OBJ.44 Eliminate 10 percent of other non-essential administrative facilities by 2015. **Performance Indicator:** Number of non-essential facilities remaining as a percentage of the FY 2005 baseline (to be determined).

OBJ.45 Upgrade all identified publicly accessible facilities to Architectural Barriers Act standards as appropriate. **Performance Indicator:** percentage of publicly accessible facilities upgraded.

OBJ.46 Complete energy efficiency upgrades on all administrative buildings and complete identified work on 10 percent of administrative buildings needing upgrades by 2015. **Performance Indicator:** Percentage of administrative buildings needing work with energy efficiency upgrades completed by 2015.

OBJ.47 Inspect all buildings to determine compliance with health and safety standards and address all identified health and safety issues. **Performance Indicator:** Percentage of inspected buildings that meet health and safety standards.

TRANSPORTATION AND PUBLIC ACCESS

Transportation System

Priorities

- ▶ Plan, design, construct, and maintain the road and trail system to meet those objectives established to implement the LRMP, to promote sustainable resource conditions, and to safely accommodate anticipated levels and types of use.
- ▶ Develop and operate the minimum road system, including all bridges and culverts, maintained to standards needed to meet requirements of proposed actions, protect the environment, and provide for reasonable public access.
- ▶ Strive to reduce roads to a density of three miles/square mile in sixth level watersheds based on watershed assessments, the roads analysis process (RAP), and budget constraints.
- ▶ Strive to reduce road density in SMZs based on watershed assessment and the roads analysis process (RAP).
- ▶ Use the completed forest-wide roads analysis process (RAP) to plan project level roads analysis during watershed assessments to provide safe, efficient routes for public and administrative access, and to determine if additional roads analysis is needed for small scale projects.
- ▶ Enhance user safety and offer adequate parking at popular destinations on high traffic passenger car roads while minimizing adverse resource effects.

Objectives

OBJ.48 Add unclassified roads to the Forest Service Road System when site-specific road analysis determines there is a need for the road. **Performance Indicator:** Number of roads added.

OBJ.49 Decommission roads and trails unnecessary for conversion to either the road or trail system through the roads analysis process (RAP). **Performance Indicator:** Number of roads decommissioned.

OBJ.50 Reduce the number of unnecessary or redundant unclassified roads. **Performance Indicator:** Number of roads removed from the Forest Service Road System.

OBJ.51 Identify by the first decade all system roads that should be obliterated. **Performance Indicator:** Miles of system roads decommissioned.

OBJ.52 Obliterate 15 percent of roads identified under the previous objective by the second decade. **Performance Indicator:** Miles of road obliterated.

OBJ.53 Reduce miles of road under Forest Service maintenance. **Performance Indicator:** Miles of system roads eliminated from road maintenance inventory per year.

OBJ.54 Improve aquatic organism passage on an average of no less than six stream crossings per year (where there are road-related barriers to passage). **Performance Indicator:** Number of stream crossings where aquatic organism passage is improved.

RANGE

Priorities

- ▶ Focus the livestock-grazing program on administering existing permits and allotments.
- ▶ Phase out existing woodland allotments as permits are terminated, or if range conditions dictate.
- ▶ Design new grazing allotments to prevent negative impacts from cattle grazing.

FIRE MANAGEMENT

Fire Prevention

Priorities

- ▶ Reduce the number of human-caused wildfires and associated human and environmental impacts.
- ▶ Continue with the annual environmental and fire prevention education effort, including presentations to local schools, communities, and civic groups in addition to the dissemination of fire prevention materials at Forest Service Offices.
- ▶ Cooperate and participate annually with local, state, tribal, and federal agencies in fire prevention programs such as Fire Wise. Demonstrate Fire Wise practices at the Forests' recreation areas, administrative sites, and other agency developments.

Community Protection

Priorities

- ▶ Prioritize vegetation treatments to reduce condition class (lowering the risk of damaging wildfires) near communities at risk, and in the wildland urban interface (WUI)/intermix area.

- ▶ Promote the removal of snags/dead trees and reduction of tree density adjacent to structures as the first step in reducing threats to human life and investments.

Objectives

OBJ.55 Improve condition class in all WUI areas within five years. **Performance Indicator:** Acres of improved condition class per year and cumulative percent of all WUI acres with improved condition class.

OBJ.56 Within 15 years, restore 15 to 20 percent of all ecological communities into Fire Regime Condition Class 1. **Performance Indicator:** Acres restored into Fire Regime Condition Class (FRCC) 1 annually.

OBJ.57 Annually complete 50,000 to 100,000 acres of hazardous fuel reduction. **Performance Indicator:** Acres burned, mechanically or chemically treated, for fuels reduction per year.

Fire Suppression

Priorities

- ▶ Suppress wildfire at a minimum cost consistent with resource management objectives. Consider firefighter and public safety as well as benefits and values to be protected when calculating the cost. All human-caused fires will be suppressed.
- ▶ Use a full range of wildland suppression tactics (from immediate suppression to monitoring) consistent with forest and resource management objectives and direction.
- ▶ Manage natural ignition to accomplish specific resource management objectives in predefined areas as outlined in the Fire Management Plan except in wilderness.

Prescribed Burning

Priorities

- ▶ Lower the risk of catastrophic fire and restore fire-adapted ecological communities through a combination of prescribed burning, mechanical, and chemical vegetation management treatments. Cooperate with partners to address needs across ownerships.
- ▶ Implement the Healthy Forest Initiative and utilizing authorities in the Healthy Forest Restoration Act and other legislation to meet National Fire Plan goals and objectives.
- ▶ Manage a fire program that will improve condition class, forest health, and ecosystem sustainability over the long term.

- ▶ Plan prescribed fires under an approved fire management plan (FMP). FMPs are strategic plans that define a program to manage wildland and prescribed fires based on the local approved Forest Plan.

Objectives

OBJ.58 Priority 1 - Treat approximately 3,500 acres of Federal lands adjacent (within 1/2 mile) of Communities at Risk over the next 5 years. Emphasize mechanical treatments designed specifically to lower condition class and associated wildfire risk. In concert with the Arkansas Forestry Commission, over the next 5 years, treat approximately 55,000 acres of private and Federal lands in the wildland urban interface/intermix (WUI) areas as identified in http://silvis.forest.wisc.edu/projects/WUI_Main.asp. **Performance Indicator:** Acres treated within one-half mile of communities at risk.

OBJ.59 Priority 2 – Expand treatments applied Priority 1 to improve condition class ratings in WUI areas that are within 1.5 miles of private ownerships with structures. Treat approximately 100,000 to 150,000 acres over the next 5 to 10 years. Identify and treat areas where snag hazards pose safety problems to firefighters and/or the public (particularly in oak mortality areas). **Performance Indicator:** Acres treated within 1.5 miles of communities at risk.

OBJ.60 Priority 3 - Over the next 5 to 10 years, treat approximately 100,000 to 150,000 acres with resource objectives combining hazardous fuel reduction with the restoration of fire-adapted ecosystems. Focus on restoration of habitat for threatened, endangered, or sensitive species where periodic fire and reference conditions are expected to promote species viability. Prioritize work to take full advantage of partnerships with non-government organizations (NGOs) and other state and federal agencies. **Performance Indicator:** Acres burned annually.

OBJ.61 Across all community types, annually burn under prescribed conditions an average of 120,000 acres. **Performance Indicator:** Acres burned under prescription conditions per year.

COMMODITIES

Timber

Priorities

- ▶ Provide a stable supply of wood products within the historic national forest market area. Provide supplies of those wood products where the Forest Service is in a unique position to make an impact on meeting the demand, particularly high-quality raw material for specialty uses.
- ▶ Provide a non-declining yield of forest products consistent with land capability, suitability, protection needs, and other resource values.
- ▶ Contribute to the economic base of local communities by providing a sustained yield of high quality wood products at a level consistent with sound

- economic principles, local market demands, and desired ecological conditions.
- ▶ Develop local economy marketing opportunities to improve utilization of hardwood products.

Objectives

OBJ.62 Provide 731 MMBF (146 MMCF) per decade of sawtimber and pulpwood. **Performance Indicator:** Volume of timber sold per year and a running annual average.

OBJ.63 In Management Area 3.E (High Quality Forest Products) and appropriate portions of other MAs, apply appropriate silviculture prescriptions to provide the following forest products: 18" to 20" sawtimber with grade 1 or 2 butt logs and/or yellow pine 18" sawtimber. **Performance Indicator:** During inventory, determine average DBH.

OBJ.64 In Management Area 3.C (Mixed Forest) and appropriate portions of other MAs, apply appropriate silviculture prescriptions to provide the following forest products: 14" to 16" sawtimber with grade 2 butt logs and/or yellow pine 18" sawtimber. **Performance Indicator:** During inventory, determine average DBH.

Other Forest Products

Priorities

- ▶ Allow use of various forest products at appropriate levels to sustain resource values.
- ▶ Monitor forest product removal permits to analyze the magnitude of the removals and changes in product demands.

Minerals

Priorities

Authorities for minerals permitting are as follows:

- ▶ The Forest Supervisor delegates the District Ranger as the authorized officer for decisions concerning locatable and saleable hardrock minerals cases and geophysical exploration requests. In leasable cases, the District Ranger is responsible for evaluating the suitability (availability) of forest lands for exploration and mining, which are then presented as recommendations by the Forest Supervisor to the Regional Forester.
- ▶ The Regional Forester is the authorized Forest Service officer responsible for making the final decision to consent or deny permission to the USDI, Bureau of Land Management for issuance of permits and leases.

- ▶ The USDI, Bureau of Land Management (BLM) is the federal agency responsible for issuing and administering leasable mineral permits and leases once Forest Service consent is granted.
- ▶ Unless statutorily withdrawn, federal hardrock leasable minerals are available for lease in all management areas.
- ▶ Oil and gas lease access is most restrictive in No Surface Occupancy (NSO) stipulated management areas. See Table 2-5, Oil and Gas Leasing Consent Decisions.

Administer minerals program to:

- ▶ Encourage and facilitate the orderly exploration, development, and production of mineral and energy resources in order to promote self-sufficiency in those mineral and energy resources necessary for economic growth and national defense.
- ▶ Ensure that exploration, development, and production of mineral and energy resources are conducted in an environmentally sound manner and that these activities are integrated with the planning and management of other national forest resources.
- ▶ Ensure that lands disturbed by mineral and energy activities are reclaimed for other productive uses.
- ▶ Administer removal of common variety mineral materials on minerals contracts, free use permits, or forest products permits in areas where development does not conflict with other resource objectives.
- ▶ Administer the federal mineral resource program to meet demands for energy and non-energy minerals consistent with management areas, multiple use objectives, and in accordance with agency policies and existing laws.
- ▶ For non-energy mineral resources and mineral material authorizations, emphasize authorizations of minerals needed for environmental protection, public infrastructure, flood protection, erosion control, and watershed restoration.
- ▶ On National Forest System tracts where mineral rights are outstanding or reserved, respect the exercise of private mineral rights to explore and develop mineral resources.
- ▶ Where reserved or outstanding mineral rights are involved, encourage the mineral owner to implement all surface-disturbing activities outside riparian areas.
- ▶ Manage geologic resources to protect public safety and facilities.
- ▶ Locate and design facilities and management activities to avoid, minimize, or mitigate negative effects on geologic resources with identified values (scientific, scenic, paleontological, ecological, recreational, drinking water, etc.).
- ▶ Review existing mineral withdrawals to determine if continuation is consistent with the statutory objectives of the programs for which the lands were withdrawn.

Objectives

OBJ.65 Process all applications for federal mineral leases, licenses, and permits within 120 days. **Performance Indicator:** Number and percent of applications processed in 120 days.

OBJ.66 Process all operations proposed under outstanding and reserved mineral rights within 60 days and 90 days. **Performance Indicator:** Number and percent of operations proposed within 60 to 90 days.

Consent to Lease

The Regional Forester consents (acquired lands) or has no objection (public domain lands) to lease those lands available for oil and gas leasing subject to standard lease terms or subject to additional constraints (stipulations such as NSO and CSU) as required for a specific management area. This consent/no objection decision is valid until the Forest Service provides the Bureau of Land Management written notification that consent is withdrawn or amended. Table 2-5 displays gas leasing stipulations, whether lands are available or closed for oil and gas exploration, and leasing according to the consent decision. Table 2-5 shows acres of lands subject to the stipulations.

Table 2-5: Oil and Gas Leasing Consent Decisions by Management Area.

Management Area	Oil and Gas Exploration and Leasing	Oil and Gas Leasing Stipulation	Stipulation Acres
1.A Designated Wilderness	Withdrawn	Withdrawn	66,728
1.B Recommended Wilderness Additions	Withdrawn	Withdrawn	471
1.C Designated Wild and Scenic Rivers (wild sections)	Withdrawn	Withdrawn	2,063
1.C Designated Wild and Scenic Rivers (scenic sections)	Available	CSU/NSO*	13,380
1.C Designated Wild and Scenic Rivers (recreational sections)	Available	CSU	4,416
1.D Recommended Wild and Scenic Rivers (sections all scenic)	Available	CSU/NSO*	6,219
1.E Experimental Forests	Available	CSU	5,071
1.F Research Natural Areas	Available	NSO	2,682
1.G Special Interest Areas	Available	NSO	23,243
1.H Scenic Byway Corridors	Available	CSU	41,344
2.A Ozark Highlands Trail	Available	NSO	6,176
2.B State Parks	Available	NSO	3,806
2.C Developed Recreation Areas	Available	NSO	3,110
2.D Upper Buffalo Dispersed Recreation Area	Available	CSU	6,115
2.E Wedington Unit Urban Recreation Area	Available	CSU	10,467
2.F Indian Creek Dispersed Recreation Area	Available	CSU	17,100

Table 2-5: Oil and Gas Leasing Consent Decisions by Management Area. (Continued)

Management Area	Oil and Gas Exploration and Leasing	Oil and Gas Leasing Stipulation	Stipulation Acres
3.A Pine Woodland	Available	CSU	97,629
3.B Oak Woodland	Available	CSU	154,704
3.C Mixed Forest	Available	Standard	360,401
3.D Oak Decline Restoration Areas	Available	CSU	67,691
3.E High Quality Forest Products	Available	Standard	214,358
3.F Old Growth Area	Available	CSU	5,062
3.G Crowley's Ridge Upland Hardwood	Available	CSU	11,443
3.H Mississippi River Bottomland Hardwood	Available	CSU	3,573
3.I Riparian Corridors	Available	CSU	11,484
3.J Pastures and Large Wildlife Openings	Available	CSU	7,072
3.K Wildlife Emphasis Area	Available	CSU	15,712

(NSO) – No surface occupancy Used when surface occupancy of certain lands is prohibited.

(CSU) – Controlled surface use Used when restrictions will apply to occupancy such as requiring additional mitigation to resolve potential conflicting uses, or to meet visual quality objectives.

MANAGEMENT AREAS

The 1982 planning regulations guiding implementation of the National Forest Management Act (NFMA) call for lands and waters to be assigned to "management areas" (36 CFR 219.11), which are areas within a National Forest having desired conditions, suitable uses, management objectives, and design criteria in common. This section describes the 25 management areas (MAs) identified on the Ozark-St. Francis National Forests. Table 2-6 gives the names and acreages of the 25 MAs. Acreages are approximate and are subject to change based on land adjustments (purchases, exchanges) and updated inventories. Following Table 2-6, there is a description of each management highlighting its emphasis, priorities, objectives, and monitoring criteria, as applicable.

Management areas (MAs) on the Ozark-St. Francis National Forests were designed to be easily located. This was done to make it easier for the public to find the management areas and to give districts definite boundaries making administration of the areas easier. They generally have identifiable boundaries such as roads, streams, or well-defined ridges. Each management area contains an emphasis and desired future condition statement, which describes the primary focus of the MA. They also contain standards or design criteria (Chapter 3) providing managers with specific management direction as they work toward reaching desired future conditions. Some of them also contain specific objectives and monitoring elements that provide managers with measures to determine if they are achieving the desired future conditions.

Desired Conditions

Desired conditions are the primary focus of management areas and provide a snapshot of what the management area will look like when priorities, objectives, and standards are implemented. Desired conditions:

- ▶ Can apply to the present or the future, and do not consider costs.
- ▶ Include descriptions of ecological, economic, and social attributes.
- ▶ Have different time frames, but accomplishment should occur within 10 to 50 years.
- ▶ Are driven by priority and budget.

Table 2-6. Management Areas.

Management Area Name and Number	Acres
1.A Designated Wilderness	66,728
1.B Recommended Wilderness Additions	471
1.C Designated Wild and Scenic Rivers	19,859
1.D Recommended Wild and Scenic Rivers	6,219
1.E Experimental Forests	5,071
1.F Research Natural Areas	2,682
1.G Special Interest Areas	23,243
1.H Scenic Byway Corridors	41,344
2.A Ozark Highlands Trail	6,176
2.B State Parks	3,806
2.C Developed Recreation Areas	3,110
2.D Upper Buffalo Dispersed Recreation Area	6,115
2.E Wedington Unit Urban Recreation Area	10,467
2.F Indian Creek Dispersed Recreation Area	17,100
3.A Pine Woodland	97,629
3.B Oak Woodland	154,704
3.C Mixed Forest	360,401
3.D Oak Decline Restoration Areas	67,691
3.E High Quality Forest Products	214,358
3.F Old Growth Area	5,062
3.G Crowley's Ridge Upland Hardwood	11,443
3.H Mississippi River Bottomland Hardwood	3,573
3.I Riparian Corridors	11,484
3.J Pastures and Large Wildlife Openings	7,072
3.K Wildlife Emphasis Area	15,712

Note: Acreages are Estimates based on GIS Analyses.

1.A Designated Wilderness

Emphasis

Congress has designated five wilderness areas on the Ozark NF; no wilderness areas exist on the St. Francis NF. These include: the East Fork, Hurricane Creek, Leatherwood, Richland Creek, and Upper Buffalo Wilderness Areas. These areas

encompass approximately 66,728 acres of the Ozark NF. This MA is unsuitable for timber production. Mineral extraction or prescribed fires are not allowed.

The emphasis is to allow ecological and biological processes to progress naturally with little to no human influence or intervention, except for the minimum impacts made by those who seek the wilderness as a special place offering opportunities to experience solitude and risk in as primitive surroundings possible. Management focuses on protecting and preserving the natural environment from human influences.

Desired Condition

The Wilderness Act describes wilderness as "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." Wilderness is an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed to preserve its natural conditions. Wilderness generally appears to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable. Wildernesses on the Ozark NF have outstanding opportunities for solitude or a primitive and unconfined type of recreation. They are of sufficient size as to make practicable preservation and use in an unimpaired condition, and may contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

They contain a natural, forested appearance shaped primarily by natural processes. Rare communities and associated species not dependent upon disturbances such as fire exist in the wilderness areas. Disturbance-dependent communities continue to decline across this MA, confined to small brushy and herbaceous gaps and occasional large openings from natural disturbance events. Insects and diseases such as red oak borer and oak decline play a major role in shaping future species composition and successional stages across these areas. Cavity trees, cull trees, standing dead trees, and down logs are common throughout the area as a result of natural mortality.

Recreation management provides solitude and remoteness in the most primitive and natural recreation setting possible; access to wilderness areas is limited. Trailheads located on surrounding roads are designed with sensitivity to scale and character setting the tone for experiencing a primitive recreation experience. Once in the wilderness, visitors on foot or horseback must rely, to varying degrees, on their own personal physical abilities and primitive recreation skills. Wilderness recreation includes inherent risks. Visitors are isolated from the sights and sounds of others and encounters with other visitors are rare. Travel within wilderness is strictly non-motorized and non-mechanized. Mountain bikes or game carts are not allowed in wilderness areas.

Most visitor information is dispensed outside the wilderness at trailheads and through off-site public information and education efforts. Wilderness visitors are encouraged to "pack-it-in and pack-it-out" and to "leave no trace." Most of the

wilderness trails on the Ozark NF are located on old logging roads that were present prior to designation. These roads are slowly reverting back to trails that lie lightly on the land. Typically, narrow footpaths or horse trails that blend well with the natural surroundings are present.

Structures including signs, bridges, and waterbars are minimal. The few structures appearing in wilderness are generally for the protection of resources or were present prior to wilderness designation. Some of the wildernesses have existing roads accessing private in-holdings. The Federal Government owns most of the lands within the boundaries of designated wilderness areas, both surface and subsurface, with no encumbrances.

Priorities

- ▶ Protect and manage wilderness to improve the capability to sustain a desired range of benefits and value so that changes in ecosystems are primarily a consequence of natural processes. Protect and manage the areas recommended for wilderness designation to maintain their wilderness values.
- ▶ Update all wilderness management plans, including monitoring components, wilderness education, and restoration needs by 2008.
- ▶ Prohibit mining claim locations under the General Mining Law of 1872 in Designated Wildernesses (MA 1.A)

Objectives

MAOBJ.1 Conduct inventories to determine the presence and extent of non-native invasive species in wildernesses by 2010. Based on results of these inventories, develop and implement appropriate monitoring and treatment programs. **Performance Indicators:** Number of inventories completed, monitoring plans completed, and acres treated for invasive species control.

Monitoring

Within the Designated Wilderness MA (1.A), monitor and evaluate trends in:

- ▶ Visitor use and resource damage using the Limits of Acceptable Change (LAC) process.
- ▶ Old roads and trails reverting back to a natural appearance.

1.B Recommended Wilderness Additions

Emphasis

Proposed wilderness additions include lands that have been acquired adjacent to existing wilderness areas (approximately 471 acres) or are boundary adjustments that will help manage wilderness values. Until and after Congress designates them as wilderness, these areas will be managed like MA 1.A. Table 2-7 displays the additional acres to each exiting wilderness.

Table 2-7. Acres Added to Existing Wilderness Areas.

Wilderness	Additional Acres
Leatherwood	334
Richland Creek	16
East Fork	121
Totals	471

Priorities

- ▶ Complete land line surveys on new recommended wilderness boundaries for boundary posting after congressional designation.

1.C Designated Wild and Scenic Rivers**Emphasis**

In April 1992, Congress designated six Wild and Scenic Rivers on the Ozark NF. These rivers include: Big Piney Creek, the Buffalo River, Hurricane Creek, Mulberry River, North Sylamore Creek, and Richland Creek. These areas include approximately 19,859 acres of the Ozark-St. Francis National Forests. This MA is unsuitable for timber production. The total miles of Wild and Scenic River designation is 162.5 miles shown in Table 2-8 as follows:

Table 2-8: Total miles of Wild, Scenic, and Recreational Sections of Rivers.

River	Wild Sections	Scenic Sections	Recreational Sections
Big Piney Creek		45.2	
Buffalo River	9.4	6.4	
Hurricane Creek	2.4	14.2	
Mulberry River		19.4	36.6
North Sylamore Creek		14.5	
Richland Creek	5.3	11.2	
Totals	15.0	110.9	36.6

This MA is managed to enhance and protect the outstandingly remarkable values and unique qualities of each river and its surroundings. The rivers will be preserved in a free-flowing condition for the benefit, use, and enjoyment of present and future generations. Each one of these rivers has a comprehensive Wild and Scenic River Plan, which was completed in 1996.

WILD SECTIONS**Desired Condition**

Of all of the river designations, this one offers the most primitive and remote settings. All the wild sections of the Wild and Scenic Rivers on the Ozark NF (15 miles) are located in wilderness areas (see Table 2-8). Management of the river corridors is

focused on protecting and preserving the natural environment and natural processes from human influences. Recreation management is designed to provide solitude and remoteness in the most primitive and natural recreation setting possible. Access to the wild sections is limited to access points outside the wilderness areas. Trailheads at perimeter roads are designed with sensitivity to scale and character to set the tone for a primitive experience.

This portion of the MA is primitive non-motorized; however, activities outside the wilderness boundaries may occasionally intrude on the sights and sounds within the corridors providing a less-primitive recreation experience. Once in the corridors, visitors hiking, fishing, or floating must rely to varying degrees on their own personal physical abilities and primitive recreation skills. Trails are designed to accommodate use and river access while protecting the wilderness and wild and scenic river's outstandingly remarkable values. Visitor information is provided outside of the wilderness boundaries at trailheads and through off-site public information and education efforts. Wild river visitors are encouraged to "pack-it-in and pack-it-out" and to "leave no trace." Outfitter and guide permits provide river tours and equipment outside the wilderness boundaries.

The landscape character is naturally evolving; only the linear swath of the river breaks the continuous forest canopy. Occasional gaps in the canopy may occur from the results of natural disturbances. The mature forest is comprised primarily of large stemmed hardwoods on slopes and a mixture of hardwoods and pines along the rivers' banks. Understory plants provide a lush vegetative understory visible from the river. Old-growth riparian forest communities will increase over the decades, except where significant natural disturbances occur.

There are good to optimal habitat conditions for mid- to late-successional deciduous forest associates; area-sensitive, mid- to late-successional deciduous associates; bottomland hardwood associates; mixed mesic forest associates; and basic mesic forest associates. These linear travel ways of relatively remote habitat provide migration corridors for a wide variety of species. The protection of rare communities and species associates is provided along with protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species.

SCENIC SECTIONS

Desired Condition

Scenic rivers and their surroundings are slightly more developed than their "wild" counterparts. The rivers' shorelines are largely undeveloped; however, occasional roads may reach or bridge the rivers and there may be designated parking areas and trailheads. Trail users may include hikers, mountain bikers, horseback riders, and motorized vehicle enthusiasts. The scenic sections of the Forests' Wild and Scenic Rivers total 110.9 miles (see Table 2-8).

Portions of the river corridor that currently meet the criteria for semi-primitive, non-motorized recreational opportunities will be maintained; however, the majority of

these corridors will be managed as semi-primitive, motorized, or roaded-natural. Visitors enjoy a natural setting although sights and sounds of human activity and motorized vehicles may be present. Visitors' physical abilities and primitive recreation skills are challenged moderately. The opportunity to encounter other visitors is moderate to high depending on the location and time of year. Visitors seeking solitude may find it by hiking some distance from roads and parking areas or by visiting during non-peak seasons or midweek. Outfitter and guide permits provide river tours and equipment at access points within the corridors.

The landscape character is "naturally appearing" or "pastoral" with high scenic integrity. A visitor may see some evidence of human disturbance reminiscent of early America including rural structures such as barns, grazing animals, meadows, fields, rustic campgrounds, and occasional roads. Facilities are minimized and are primarily for visitor safety and access and to protect river resources. Facilities may include parking areas, trailheads, interpretive kiosks, rest rooms, trails, and signs. Facilities are understated in appearance and are designed to complement the natural environment in scale, character, and color. Trails are designed to accommodate use and river access while protecting the resources and the rivers' outstanding resource values.

Natural processes (floods, windstorms, and fires) would be the primary cause of disturbances. Lands are classified as unsuitable for timber production, although management of vegetation is permitted within the river corridor to maintain outstandingly remarkable values. Vegetation management may be used for scenic enhancement or rehabilitation to provide wildlife viewing opportunities; maintain developed recreation facilities; improve threatened, endangered, sensitive, and locally rare species habitat; restore native vegetative communities; restore riparian ecosystems; reduce unnatural fuel buildups; or control non-native invasive vegetation. Naturally-ignited wildland fires are permitted to play a natural role when external risks such as private land, weather, or terrain allow.

There are good to optimal habitat conditions for mid- to late-successional deciduous forest associates, bottomland hardwood associates, mixed mesic forest associates, and basic mesic forest associates. These linear travel ways of relatively remote habitat provide migration corridors for a wide variety of species. Where the forested canopy is at least 70 percent closed across the landscape, good to optimal habitat conditions for area-sensitive, mid- to late-successional habitat associates is provided. Management or protection of rare communities and species associates is provided, along with management or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species.

RECREATIONAL SECTIONS

Desired Condition

The recreational river corridors provide outstanding opportunities for people to enjoy a wide variety of river-oriented recreation opportunities in an attractive setting. The

rivers are readily accessible by roads. Transportation facilities may parallel the river for long stretches.

There is a low need for visitors to rely on their personal physical abilities and primitive recreation skills within these areas. The sights and sounds of other visitors are evident, and opportunities to encounter other visitors are moderate to high. Visitors seeking solitude may find that difficult to achieve, particularly in peak-use seasons. Trails may be highly developed including hardened trails for a high level of accessibility for persons of all abilities. Off-highway vehicle (OHV) use is only allowed on trails designated for OHV use.

The landscape character may range from naturally appearing to transitional-mixed use. There is substantial evidence of human activity along the shores of some of these rivers, possibly including modern residential development, commercial structures, and a full range of various agricultural and forestry uses. On National Forest System lands, visitors enjoy a natural appearing setting with a range of human-made recreational developments. Utility transmission corridors, electronic or communication facilities, or signs of mineral development activity may be seen within these river corridors. The goal, however, is to blend these facilities into the background so that they remain visually subordinate to the natural landscape. Existing scenic integrity may range from high to very low, but the objectives on National Forest System lands will be moderate or higher.

With continued population growth and the popularity of these recreational river sections, there is the potential for large numbers of visitors at peak-use seasons. In the future, regulations may be necessary for protection of the resources and visitors. Information is provided at bulletin boards or kiosks at the river, off-site Forest Service visitor centers, and in brochures. Visitors are encouraged to practice minimum impact techniques while recreating. Trash receptacles may be provided at parking areas and high-use areas. Facilities of a modern nature may be present to provide for visitor safety and comfort and to protect the river resources. Facilities are designed to fit the character of the specific sites where they are located. This could range from semi-primitive to rural. Facilities might include parking areas, trailheads, bulletin boards, interpretive kiosks, signs, rest rooms, canoe/raft launches, fishing platforms, and picnic sites. Outfitter and guide permits provide river tours and equipment at access points within the corridors.

These linear corridors provide a mix of habitats and successional stages for a wide variety of species that favor, or are tolerant of, habitat edges and human disturbance. Habitat associations being emphasized include mid- to late-successional deciduous associates and bottomland forest associates. Habitat conditions beneficial to mixed mesic associates and mixed xeric associates (primarily xeric oak and xeric oak-pine habitats) are provided. These conditions provide suitable habitat for eastern wild turkey and marginal habitat for ruffed grouse. Management and protection of rare communities and species associates is provided along with management and protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species.

Vegetation is influenced both by natural processes and humans. Lands are classified as unsuitable for timber production, although management of vegetation is permitted within the river corridor to maintain outstandingly remarkable values. Prescribed fire, commercial, and non-commercial felling of trees may be used for scenic enhancement or rehabilitation to provide wildlife viewing opportunities; maintain developed recreation facilities; improve threatened, endangered, sensitive, and locally rare species habitat; restore native vegetative communities; restore riparian ecosystems; reduce unnatural fuel buildups; or control non-native invasive vegetation. Naturally-ignited wildland fires are permitted to play a natural role when external risks such as private land, weather, or terrain allow.

Priorities

- ▶ Manage designated wild and scenic river sections to perpetuate their free-flowing condition and designated classifications, and to protect and enhance their outstandingly remarkable values and water quality.
- ▶ Manage designated wild and scenic rivers according to their Comprehensive River Management Plan.
- ▶ Review public access needs.
- ▶ Prohibit mining claim locations under the General Mining Law of 1872 in designated wild sections of the Designated Wild and Scenic Rivers (MA 1.C).

Objectives

MAOBJ.2 Review and revise Wild and Scenic River Plans the first decade.
Performance Indicator: Number of plans revised.

Monitoring

Within the Designated Wild and Scenic Rivers MA (1.C), monitor and evaluate trends in:

- ▶ Visitor use in wild sections.
- ▶ Visitor satisfaction.
- ▶ Changes in outstandingly remarkable values for both scenic and recreational sections.

1.D Recommended Wild and Scenic Rivers

Emphasis

The North Fork of the Illinois Bayou is recommended as part of the Wild and Scenic River System. The river is 22.6 miles long, and is classified as scenic; a one-quarter (1/4) mile buffer is managed under the same conditions as the scenic section of MA 1.C. This area includes approximately 6,219 acres of the Ozark NF. This area is unsuitable for timber production.

- ▶ For the newly recommended Wild and Scenic River (North Fork of Illinois Bayou River), a Comprehensive River Management Plan and boundary declaration will be prepared and implemented within three years of congressional designation as required in the designation language.

1.E Experimental Forests

Emphasis

Experimental forests are congressionally authorized and have been designated by Forest Service Chiefs over the last 90 years. The national network of experimental forests provides much of the scientific basis for the management of forest ecosystems, including public and private lands. The Southern Research Station (SRS) manages experimental forests on the Ozark NF. These lands help provide the current and future research needs of the SRS and provide scientific information to understand, manage, and sustain the ecological processes, structures, and benefits of loblolly pine, shortleaf pine, mixed pine-hardwood, and hardwood forests in the uplands of the mid-South. They demonstrate common forestry practices for non-industrial private forest landowners. Appropriate management tools include timber harvest, prescribed fire, and other research-related activities.

The Ozark National Forest has two experimental forests: the Henry Koen Experimental Forest (designated in 1950) and the Sylamore Experimental Forest (designated in 1934). MA 1.E is allocated to approximately 5,071 acres on the Ozark NF. There are no experimental forests on the St. Francis NF. This area is unsuitable for timber production.

Desired Condition

Tree species composition varies within the experimental forests. Active management due to research activities is obvious. The landscape character is natural appearing. Lands are classified as unsuitable for timber production and are dedicated to experimentation and education by implementing national and international research programs. General forest visitors are encouraged to visit and learn about ongoing research and its potential benefits.

Management or protection of rare communities and species associates is provided, along with management or protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species.

These areas provide a variety of motorized and non-motorized recreation opportunities depending on the purposes for which the experimental forests were established. Human activities may be evident in some places. Visitors will likely see other people.

Priorities

- ▶ Protect and manage experimental forests to maintain them as a resource to be used to develop and disseminate scientific knowledge and silvicultural techniques needed to provide a full range of benefits to the OSFNFs and other Southern forests.
- ▶ Continue to cooperate and assist the Southern Research Station to provide to forest managers research data related to timber harvest, ecosystem management, prescribed burning, soil, water, and other related forestry activities.

1.F Research Natural Areas

Emphasis

Research natural areas (RNAs) are part of a national network of ecological areas designated in perpetuity for research and education and/or to maintain biological diversity on National Forest System lands. Research natural areas are for non-manipulative research, observation, and study. In addition, they may assist in implementing provisions of special acts such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act.

These areas are managed for scientific research in an undisturbed state as a baseline for comparison with other forest environments. The RNAs on the Ozark-St. Francis National Forests include approximately 2,682 acres, and are unsuitable for timber production.

DISMAL HOLLOW RESEARCH NATURAL AREA

Desired Condition

This RNA is located on the Ozark NF in Newton County, Arkansas. This RNA and its ecosystems continue to furnish ecological information of value to the Forest Service and society at large. The Dismal Hollow RNA was established to represent the mixed mesophytic forest ecosystem. The landscape character is naturally evolving. Human uses do not cause detectable and significant ecological changes.

Vegetation is entirely influenced by natural processes. Predominately old-growth forest communities develop throughout the area with small canopy gaps and occasional large openings of early successional habitat created through natural disturbance. Non-native species occur only as transients and are not self-perpetuating. The protection of rare communities and species associates is provided, along with the protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species.

This RNA is used as a collection area of information for scientific research, a research area for graduate student theses, and a subject area for environmental education. All users, including Forest Service researchers, are subject to use limitations. Other compatible uses such as individual nature study, not including

specimen collection, are permissible unless the use threatens the ecological integrity of the area. Infrastructures, such as trails or parking areas are minimal. There is little or no interaction among visitors. People must rely heavily on primitive recreation skills.

TURKEY RIDGE RNA

Desired Condition

This RNA is located on the St. Francis NF in Phillips County, Arkansas. The RNA and its ecosystems continue to furnish ecological information of value to the Forest Service and society at large. The area is representative of upland oak forest ecosystems containing white oak/red oak-hickory and swamp oak/cherrybark oak timber stands. The landscape character is natural evolving. Human uses are not causing detectable and significant ecological changes.

Vegetation is entirely influenced by natural processes. Predominately old-growth forest communities develop throughout the area with small canopy gaps and occasional large openings of early successional habitat created through natural disturbance. Non-native species occur only as transients and are not self-perpetuating. The protection of rare communities and species associates is provided, along with the protection measures for population occurrences for threatened, endangered, sensitive, and locally rare species. This will provide a high likelihood that species within these habitats will continue to persist on National Forest System lands.

This area is primarily used as a collection area of information for scientific research, a research area for graduate student theses, and a subject area for environmental education. All users, including Forest Service researchers, are subject to use limitations. Other compatible uses such as individual nature study, not including specimen collection, are permissible unless the use threatens the ecological integrity of the area. Infrastructures, such as trails or parking areas are minimal. People must rely heavily on primitive recreation skills such as orienteering. Infrastructures such as trails or parking areas are minimal. There is little or no interaction among visitors.

Priorities

- ▶ Protect and manage research natural areas to maintain natural processes. Identify a sufficient range of opportunities to meet research needs. Compatible uses and management activities are allowed

Monitoring

Within the Research Natural Areas MA (1.F), monitor and evaluate trends in:

- ▶ Ecological communities conditions to be used as a baseline to compare against other forest ecosystems.

1.G Special Interest Areas

Emphasis

The OSFNFs have 21 Special Interest Areas (SIAs) totaling approximately 23,243 acres. Each SIA has its own unique qualities outlined in Table 2-9.

Table 2-9. Special Interest Areas on the OSFNFs.

SIA	Acres	Unique Qualities
Alum Cove	230	Geologic/Scenic
Blue hole	2,190	Geologic/Scenic
Buzzard Roost	62	Geologic/Scenic
City Rock Bluff	370	Geologic/Scenic
Clifty Canyon	5,486	Botanical/Biological
Devils Canyon	1,827	Geologic/Scenic
Devils Eyebrow	364	Geologic/Scenic
Dismal Creek	245	Botanical
Eagles Gap	225	Geologic/Scenic
Fern Gully	306	Botanical, Geologic, Scenic
Hare Mountain	88	Geologic/Scenic
Jack's Creek	1,895	Geologic/Scenic
Mt. Magazine	4,319	Geologic/Scenic
North Twin	1,219	Botanical/Zoological/Scenic
Pedestal Rocks	1,016	Scenic/Geologic
Penhook	628	Geologic/Botanical
Sams Throne	621	Geologic/Scenic
Sandstone Hollow	512	Geologic/Scenic
Stack Rocks	339	Geologic/Scenic
Waldo/Wainscott	407	Botanical
White Rock	895	Geologic/Scenic

SIAs are managed for their unique geological, botanical, biological, zoological, scenic, or cultural features. The features are unique enough that they are not found on large areas anywhere else on the Forests, or they provide the best representation of similar areas on the Forests. These areas are designated as SIAs because of their unique features, complexity, and degree of interest. They are managed for their unique recreational and educational values, and are intended for public use and interpretation. Each SIA will have a comprehensive management plan completed before capital investments are implemented. These areas are unsuitable for timber production.

Desired Condition

The unique qualities of the SIAs of the Ozark-St. Francis National Forests are predominately geologic, scenic, or botanical. They provide outstanding opportunities to learn about the natural history of the Forests, and to enjoy a variety of recreation

opportunities in an attractive setting. Public access is designed to protect sensitive resources; access to some SIAs may be limited in order to protect resources.

Recreational use of some SIAs requires extreme physical ability; others are similar to developed recreation areas where less skill is needed. Education and interpretation is strongly emphasized; school groups are encouraged to visit the sites. The sights and sounds of other visitors are evident, and opportunities to encounter other visitors are moderate to high. Visitors seeking solitude may find it difficult to achieve in peak-use seasons. Trails may be highly developed including hardened trails and boardwalks to protect the resource and to provide for a high level of accessibility for persons of all abilities. Other appropriate recreational activities include bird watching, photography, and hunting.

Visitors enjoy natural appearing landscapes featuring structurally diverse forest communities of continuously forested canopy with the exception of occasional gaps created by storms, insects, diseases, or fire. Infrequent pastoral and historic/cultural enclaves may also exist. Road corridor improvements and interpretive facilities are evident changes to the natural environment, but these man-made alterations fit well with the character of the surrounding landscape. Road and trail construction occurs in SIAs to provide access for recreational uses and other resource needs. Other management activities are not evident to the average visitor and the valued character of these landscapes appears intact with no noticeable deviations.

Prescribed fire, use of wildland fire, integrated pest management, and commercial or non-commercial tree removal may be used to promote and maintain the qualities of the SIAs, sustain forest health and safety, maintain recreation facilities (including roads and trails), maintain wildlife habitat, maintain rare communities and species dependent on disturbances; reduce fuel buildups; or control non-native invasive vegetation. SIAs are unsuitable for timber production.

Priorities

- ▶ Protect and manage each special interest area (SIA) for its unique qualities and features. Allow uses and management activities, including access, that complement or are subordinate to the unique qualities and features.
- ▶ Within the planning cycle, develop management plans and monitoring protocols for existing SIAs. Management plans for SIAs will be developed before implementing project work.

Monitoring

Within the Special Interest Area MA (1.G), monitor and evaluate trends in:

- ▶ Public interpretation of unique SIA values.
- ▶ Completion of management plans.

1.H Scenic Byway Corridors

Emphasis

The Ozark-St. Francis National Forests have nine scenic byways, approximately 222 miles. These byways include Highway 123, Mt. Magazine Scenic Byway, Mulberry River Road, Ozark Highlands Byway, Pig Trail Byway, Scenic 7 Byway, St. Francis Scenic Byway, Sylamore Creek Scenic Byway, and the Sylamore Scenic Byway Extension.

Scenic byway corridors are managed to offer visitors the opportunity to enjoy viewing outstanding natural and cultural landscapes along a well-maintained road. These areas may contain recreational and interpretive trails. The visible area during dormant seasons (up to 1/2 mile from either side of the road) defines the byway corridors, unless other criteria are established in the specific scenic byway management plan. Management is focused on protecting and showcasing the unique and scenic natural and cultural resources, and increasing tourism.

Desired Condition

The areas provide exceptional opportunities for motorized recreation, especially scenic driving. The views along the different byways vary, and include a variety of landscape characters, ranging from natural appearing to pastoral, historic, and cultural. They provide colorful accents and interesting textures, which change with the seasons. Visitors enjoy viewing wildlife in the occasional openings scattered throughout the Forests. Water or geographic features as well as cultural landscapes (such as hay fields, grazing livestock, and the occasional rustic cabin) provide scenic diversions to the predominately-forested landscape. Road corridor improvements and interpretive facilities are evident changes to the natural environment. These man-made alterations fit well with the character of the surrounding landscape. Other management activities are not evident to the average visitor.

The management area is easily accessed. A good road surface and providing informational signs for protection of the natural and cultural resources as well as the safety and comfort of visitors minimizes impacts of visitors within the MA.

The potential for encounters with other forest visitors is moderate to high, especially at byway facilities, (pullouts, overlooks, interpretive kiosks, trails, restrooms, and picnic sites). Scenic, historic, and natural resources are interpreted for the benefit of visitors. These recreation and interpretive facilities are designed and constructed to blend well and complement the natural or cultural environment surrounding the byway. There are limited opportunities for remoteness, although visiting the byway in the winter (if not seasonally closed) or mid-week improves opportunities for achieving solitude. There is low risk and little need for visitors to rely on personal physical abilities or primitive outdoor recreation skills. Most, if not all, facilities are designed to accommodate persons with disabilities.

Vegetation is influenced both by natural processes and humans. Biological communities are maintained or improved to provide an attractive setting for visitors while providing for the protection of rare communities and threatened, endangered, sensitive, and locally rare species. Forest management activities maintain the natural characteristics that make the area scenic. Commercial timber harvest is appropriate to maintain the long-term goals of a diverse and vigorous forest with sensitivity to dispersed recreation and scenic values. Timber harvesting operations focus on what is retained in the stand, not on wood fiber production. Timber harvest practices are visually subordinate to the surrounding landscape. The MA is suitable for timber production. Prescribed fire and other management treatments are appropriate vegetative management tools available to be used to enhance the byway corridors in conjunction with other resource values.

These areas are characterized by a predominance of mid- and late-successional forests. Forest structure varies according to ecological factors, but largely consists of a mature overstory; a fairly open midstory; and a well-developed herbaceous and shrubby understory. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs, and wildflowers. Even-aged, two-aged, and uneven-aged forest communities along with medium and small patches of late-successional to old-growth forest communities continue to develop throughout the area.

Priorities

- ▶ Preserve viewshed quality when accomplishing other resource activities.
- ▶ Develop public view points and interpretive opportunities.
- ▶ Promote and manage the scenic byways within the Forests for the traveling public and the benefit of local communities.
- ▶ Work toward state or national scenic byway designation for all byways
- ▶ Within one year of the approval of the LRMP revision, establish a schedule to complete corridor plans for all scenic byways. Complete all plans in the first planning period.

Objectives

MAOBJ.3 Improve or maintain all designated scenic overlooks at least once per decade. **Performance Indicators:** Number of scenic overlooks improved or maintained per year; percent maintained or improved per decade.

MAOBJ.4 Complete one scenic byway management plan each year: **Performance indicator:** Number of management plans completed annually.

Monitoring

Within the Scenic Byway Corridors MA (1.H), monitor and evaluate trends in:

- ▶ Meeting scenic integrity objectives.

2.A Ozark Highlands Trail Corridor

Emphasis

The Ozark National Forest's Ozark Highlands Trail (OHT) Corridor includes approximately 6,175 acres and is 165 miles long from Lake Fort Smith State Park to the Buffalo River. The trail is a designated National Recreation Trail, the only one on the Forests. The corridor width is 198 feet on either side of the centerline of the trail center and was established to provide visual enhancement, protect the trail, and minimize maintenance by keeping a canopy over the trail.

Management practices are designed to protect the OHT experience; preserve and strengthen the role of volunteers and volunteer organizations; provide opportunities for high quality outdoor recreation experiences; and provide for the conservation and enjoyment of the nationally significant scenic, historic, natural, and cultural qualities of the land through which the OHT passes. This area is unsuitable for timber production.

Desired Condition

The OHT traverses the Ozark National Forest for travel on foot through the wild, scenic, wooded, pastoral, and culturally significant lands of the Ozark Mountains. The OHT is a combination of simple footpath and old roads favoring the heights of land, and located for minimum reliance on construction for protecting the resource. Views from the OHT are predominantly forested, sporadically intermixed with old fields, pastoral valleys, and cultural landscapes. The OHT offers a diversity of topography and a variety of vegetation and animal life exposing the hiker to the entire range of land forms, water features, history, and uses of the land that are found in the Ozark Mountains.

Facilities include the OHT footpath itself, trailhead parking areas, and information boards at road crossings and developed recreation areas. The footpath (designed, constructed, and maintained for foot travel only) wears lightly on the land. Recreation management is designed to provide a variety of opportunities in the most primitive and natural recreation setting possible. Motorized recreation, bicycles, horses, and pack stock are not allowed on the OHT trail.

Roads, utility transmission corridors, communication facilities, or signs of mineral development activity exist or may be seen within the MA. However, the goal is to avoid these types of facilities to the greatest extent possible and blend facilities that cannot be avoided into the landscape so that they remain visually subordinate.

This MA retains a natural, forested, or pastoral appearance shaped by both natural processes and humans. Management practices are modified to recognize the nationally significant aesthetic and recreational values of these lands. This area is classified as unsuitable for timber production, however low intensity vegetation management is appropriate to maintain the long-term goals and stewardship objectives of the OHT. Prescribed fire is an appropriate vegetative management tool

available to be used in the corridor to enhance or improve trail qualities, and to be used with other resource activities. Management activities needed to preserve or create vistas and desirable open areas are a high priority. Activities are planned and carried out in cooperation with appropriate OHT management partners.

A predominance of mid- and late-successional forests with multiple canopy layers, which provide a variety of habitat niches as well as thermal and protective cover for wildlife, characterizes this MA. Small to medium patches of old-growth forest communities continue to develop throughout this area. Some of these patches may be early-successional habitat including; old fields and openings, wind damage, wildfire, insect or disease infestations, or vegetation management activities. Occasional large openings of early-successional habitat may be maintained as old fields and pastoral landscapes or may be created through natural disturbance.

Priorities

- ▶ Maintain a forest trail system across the Ozark NF.
- ▶ Manage the Ozark Highland Trail to protect the trail experience, and to provide for the conservation and enjoyment of its nationally important scenic, historic, natural, and cultural qualities.

Monitoring

Within the Ozark Highlands Trail MA (2.A), monitor and evaluate trends in:

- ▶ Completion of trail maintenance.

2.B State Parks

Emphasis

This management area is allocated to approximately 3,806 acres across the Ozark-St. Francis National Forests. There are three recreation areas on the Forests managed by the State of Arkansas as state parks. They are Devils Den, Mount Magazine State Park, and the Mississippi River State Park. The emphasis is slightly different than the developed recreation MA.

State parks are destination area recreation sites managed under special use authorizations or other agreements with the State of Arkansas. They are managed to provide the public with a high level of recreational opportunities in visually appealing and environmentally healthy settings. Facilities are provided to enhance the quality of the recreational experience and/or to mitigate damage to the affected ecosystems. These areas also serve as "gateways" to the wide diversity of recreation opportunities on the remainder of the forests. The terms and conditions of the land use authorizations serve as the underlying management direction for managing these parks. This area is unsuitable for timber production.

Desired Condition

Visitors are able to choose from a wide variety of recreation opportunities in high quality, well-maintained settings. Campgrounds, picnic sites, boat ramps, river-access sites, swimming beaches, interpretive sites, primitive vehicle camps, and trailheads for walkers, horseback riders, and bicycle riders are all examples of facilities found in these state parks. Other facilities consistent with the mission and complimentary to the ecosystem may also be provided. Constructed facilities are normally very visually evident, depending on the development scale needed. Facilities outside the parks are provided to protect resources. Outdoor skills are generally of low importance except where knowledge of specialized activities (e.g., boating, hang gliding, rock climbing, or horseback riding) is critical. Trails associated with these areas are well marked and may include loop systems, interpretive programs, and features for visitors with special access needs. Roads provide access to the support facilities (e.g., roads, parking lots, water access, cabins, lodge, and visitor centers) while non-motorized experiences (e.g., walking and viewing nature) are available.

Recreation information and regulations are provided to make the visitor's experience more enjoyable. Interpretive programs may also be offered to enhance the visitor's educational and recreational experience.

The landscape character is a natural appearing, visually appealing landscape emphasized by providing open park-like settings featuring special attractions like rock outcroppings and waterfalls. Management activities maintain a healthy mid-successional forest of mixed hardwoods and pines. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs, and wildflowers. These areas may also include natural appearing open areas or pastoral landscapes.

Due to the high level of recreational use and the management for aesthetics and safety, vegetation is greatly influenced by humans. Vegetative management for forest health is appropriate to maintain the long-term goals of a diverse and vigorous forest emphasizing recreation, scenery, and visitor safety. It is also an appropriate management tool to provide improved threatened, endangered, sensitive, and locally rare species habitat; to reduce fuel buildups; or to control non-native invasive vegetation and pests. Integrated pest management is used to eradicate or suppress insects, diseases, and non-desirable invasive vegetation. Use of prescribed fire may be used, but is carefully managed due to high visitor use and the infrastructure investments throughout the area. Wildland fires are suppressed.

These areas are characterized by a predominance of mid- and late-successional forests. Forest structure varies according to ecological factors, but largely consists of a mature overstory, a fairly open midstory, and a well-developed herbaceous and shrubby understory. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs, and wildflowers. Even-aged, two-aged, and uneven-aged forest communities continue to develop throughout the area along with medium and small patches of late-successional to old growth forest communities. Wildlife viewing opportunities are maintained and expanded through cultivation, mowing, and burning of openings and pastoral areas.

Priorities

- ▶ Work with the State Parks to provide interpretive information about forest management activities.

Monitoring

Within the State Parks MA (2.B), monitor and evaluate trends in:

- ▶ Visitor satisfaction related to the partnership.
- ▶ Public health and safety through the permit.

2.C Developed Recreation Areas

Emphasis

This management area is allocated to approximately 3,110 acres across the Ozark-St. Francis National Forests. Developed recreation areas are managed to provide the public with a variety of recreational opportunities in visually appealing and environmentally healthy settings. Facilities are provided to enhance the quality of the recreational experience and to mitigate damage to the affected ecosystems. These areas also serve as "gateways" to the wide diversity of recreation opportunities on the remainder of the Forests. This area is unsuitable for timber production

Desired Condition

Visitors are able to choose from a wide variety of recreation opportunities in high quality, well-maintained settings. Campgrounds, picnic sites, boat ramps, river-access sites, swimming beaches, interpretive sites, and trailheads for hikers, horseback riders, and bicycle riders are all examples of facilities found in these recreation areas. In addition, other facilities consistent with the mission and complimentary to the ecosystem may be provided. Constructed facilities blend into the landscape. Facilities outside the developed recreation sites are provided to protect resources. Facilities that provide for user convenience and resource protection are constructed and/or maintained in the developed recreation areas. Outdoor skills are generally of low importance except where knowledge of specialized activities (e.g., boating or horseback riding) is critical. Trails associated with these areas are well marked and may include loop systems, interpretive programs, and/or features for visitors with special access needs. Roads provide access to the support facilities (e.g., roads, parking lots, or water access) while non-motorized experiences (e.g., walking, viewing nature, water related and other day-use activities) are emphasized. OHV use is allowed only in developed recreation sites that are in direct support of motorized trails.

Recreation information and regulations are provided to make the visitor's experience more enjoyable. Interpretive programs may also be offered to enhance the visitor's educational and recreational experience. Access to fishing, hunting, and nature study are emphasized. Fish stocking is appropriate for developed recreation sites.

The landscape character is a natural appearing landscape emphasizing open forest settings, highlighting large diameter trees, and featuring special attractions like rock outcroppings and waterfalls. Management activities maintain a healthy mid-successional forest of mixed hardwoods and pines. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs, and wildflowers. These areas may also include natural appearing open areas or pastoral landscapes. The scenic integrity objectives are in the upper values of high to moderate.

Due to the high level of recreational use and the management for aesthetics and safety, vegetation is greatly influenced by humans. Vegetative management for forest health is appropriate to maintain the long-term goals of a diverse and vigorous forest emphasizing recreation, scenery, and visitor safety. It is also an appropriate management tool to provide improved threatened, endangered, sensitive, and locally rare species habitat; to reduce fuel buildups; or to control non-native invasive vegetation and pests. Integrated pest management is used to eradicate or suppress insects, diseases, and non-desirable invasive vegetation. Prescribed fire is used to enhance recreational settings and to reduce fuels for protection of infrastructure investments. Wildland fires are suppressed.

These areas are characterized by a predominance of mid- and late-successional forests. Forest structure varies according to ecological factors, but largely consists of a mature overstory of hardwoods occasionally mixed with pines, a fairly open midstory, and a well-developed herbaceous and shrubby understory. Understory vegetation includes a variety of native deciduous and evergreen flowering trees, shrubs, and wildflowers. Even-aged, two-aged, and uneven-aged forest communities continue to develop throughout the area along with medium and small patches of late-successional to old growth forest communities. Wildlife viewing opportunities are maintained and expanded through cultivation, mowing, and burning of openings and pastoral areas.

Priorities

- ▶ Supply a variety of recreational facilities that are responsive to user demands.
- ▶ Operate developed recreation sites including campsites and picnic areas. Activities included in this endeavor are trash collecting, cleaning, maintaining equipment, monitoring water systems, and other activities associated with keeping the facilities clean, safe, and in good repair. These will continue to be managed utilizing meaningful measures standards or the appropriate Agency standards while stressing health and safety.
- ▶ Focus investments and improve the cost effectiveness of operating recreational facilities by using one or more of the following techniques where feasible: decommissioning underused sites, maintaining concessionaire agreements, entering into management partnerships, and investigating other measures.

- ▶ Focus developed recreation on the niche statement written during the recreation alignment process, which emphasizes water related day-use activities, scenic and wildlife viewing, and trail activities such as hiking, biking, horseback riding, and OHV riding. Overnight facilities will only be developed in support of the niche activities.

Objectives

MAOBJ.5 Reduce the recreation facilities maintenance backlog by approximately 10 percent within 3 to 5 years. **Performance Indicator:** Number of backlog sites maintained.

MAOBJ.6 Improve accessibility within at least one recreation site per year. **Performance Indicator:** Annual number of sites improved for accessibility.

MAOBJ.7 Maintain all recreation facilities to standard. **Performance Indicator:** Annual number of facilities maintained to standard.

Monitoring

Within in the Developed Recreation Areas MA (2.C), monitor and evaluate trends in:

- ▶ Visitor satisfaction.
- ▶ Public health and safety.

2.D Upper Buffalo Dispersed Recreation Area

Emphasis

This management area is located in Newton County on the Buffalo Ranger District of the Ozark NF. It is allocated to approximately 6,115 acres. This area is suitable for timber production. This is an area of dispersed recreational use with no developed campgrounds. This area is managed to provide the public a variety of recreational opportunities in a setting that provides quality scenery, non-motorized trails, and limited facilities.

Desired Condition

Visitors are able to choose from a wide variety of non-motorized dispersed recreation opportunities such as hiking, mountain bike riding, horseback riding, nature study, hunting, and fishing. Public motorized access is not allowed in this area except on roads not under Forest Service jurisdiction. Visitors will see other people in some parts of this area. Trails are maintained and improved as needed. Outdoor skills are of moderate importance for visitors except where knowledge of specialized activities such as horseback riding, mountain biking, or rock climbing is critical.

Management in this area includes prescribed fire, integrated pest management, wildlife management, and commercial timber harvest. Vegetative management is used to manage for forest health and desired recreation settings. Integrated pest management is used to eradicate or suppress insects, diseases, and non-desirable, invasive vegetation. Prescribed fires are used to restore and maintain historic fire regimes. Wildlife viewing opportunities are maintained through openings, cultivation, mowing, and burning of openings and pastoral areas.

This area is managed under a mixed forest vegetation management emphasis, characterized by a predominance of early-, mid- and late-successional pine and hardwood forests. The valued character of these landscapes appears intact with some deviations such as vistas created for viewing opportunities. Structural diversity within mixed mesophytic and dry-to-mesic oak forest communities is enhanced through commercial and non-commercial vegetation management activities.

Priorities

- ▶ Maintain semi-primitive non-motorized management of activities.

Monitoring

Within the Upper Buffalo Dispersed Recreation Area MA (2.D), monitor and evaluate trends in:

- ▶ Visitor satisfaction.

2.E Wedington Unit Urban Recreation Area

Emphasis

This management area is allocated to approximately 10,467 acres on the Ozark NF. The area is located 13 miles from Fayetteville on the Boston Mountain Ranger District, and is commonly known as the Wedington Unit. Because of its proximity to one of the fastest growing communities in Arkansas, it is managed as an urban forest with a recreational emphasis. The Lake Wedington Developed Campground will be managed similar to sites in MA 2.C. The Wedington Unit Urban Recreation Area is closed to OHV use. This area is suitable for timber production.

Desired Condition

Visitors are able to choose from a wide variety of recreational opportunities in high quality, well-maintained settings. Campgrounds, picnic sites, boat ramps, swimming beaches, interpretive sites, and trailheads for hikers, horseback riders, and bicycle riders are all examples of facilities found in this recreation area. Constructed facilities are normally visually subordinate to the land and depend on the development scale appropriate to the recreational opportunity spectrum class. Facilities outside the developed recreation sites are provided to protect resources. Facilities that provide for user convenience and resource protection are constructed and/or maintained in

the developed recreation areas. Outdoor skills are generally of low importance except where knowledge of specialized activities (e.g., boating or horseback riding) is critical. Trails associated with the area are well marked and may include loop systems, interpretive programs, and/or features for visitors with special access needs. Roads provide access to the support facilities (e.g., roads, parking lots, or water access) while non-motorized experiences (e.g., walking and viewing nature) are emphasized. No motorized trails are located in the Wedington Unit Urban Recreation Area.

Recreation information and regulations are provided to make the visitor's experience more enjoyable. In addition, interpretive programs may be offered to enhance the visitor's educational and recreational experience. Access to fishing, hunting, and nature study are emphasized. Fish stocking is appropriate for developed recreation sites.

The landscape character is a natural appearing landscape emphasizing open forest settings, highlighting large diameter trees, and featuring special attractions like rock outcroppings. Management activities maintain a healthy mid-successional forest of mixed hardwoods and pines managed under an oak or pine woodland vegetative prescription. The forest is dominated by grass and herbaceous understories with widely spaced large oaks and pines. The open park-like woodlands result in open forest conditions suitable for trail use and wildlife viewing.

Due to the high level of recreational use and the management for aesthetics and safety, vegetation is greatly influenced by humans. Vegetative management for forest health is appropriate to maintain the long-term goals of a diverse and vigorous forest emphasizing recreation, scenery, and visitor safety. It is also an appropriate management tool to provide improved threatened, endangered, sensitive, and locally rare species habitat; to reduce fuel buildups; and to control non-native invasive vegetation and pests. Integrated pest management is used to eradicate or suppress insects, diseases, and non-desirable invasive vegetation. Prescribed fire is used throughout the Wedington Unit. Wildland fires are suppressed.

Priorities

- ▶ Provide urban recreation opportunities.

Monitoring

Within the Wedington Unit Urban Recreation Area (2.E), monitor and evaluate trends in:

- ▶ Visitor satisfaction.

2.F Indian Creek Dispersed Recreation Area

Emphasis

This management area is allocated to approximately 17,100 acres, located on the Pleasant Hill Ranger District, of the Ozark NF. This is an area managed for dispersed recreational use, with no developed recreation sites. This area is managed to provide the public a variety of dispersed recreation opportunities in a setting that provides quality scenery and dispersed recreation opportunities with limited facilities. Motorized recreation opportunities are provided through the access established to dispersed recreation opportunities are added through the Forests' trails strategic plan. This area is suitable for timber management.

Desired Condition

Visitors are able to choose from a wide variety of dispersed recreation opportunities such as hiking, mountain bike riding, horseback riding, rock climbing, nature study, hunting and fishing. Public motorized access is limited to designated Forest Service roads and trails, which are primarily designed as access to the dispersed recreation opportunities. These designated routes may be considered for development as motorized opportunities if they fit with the Forests' trails strategy. All trails are maintained, and improved as needed. Outdoor skills are of moderate importance for visitors except where knowledge of specialized activities such as horseback riding, mountain biking, or rock climbing is critical.

Management in this area includes prescribed fire, integrated pest management, wildlife management, and commercial timber harvest. Access for management activities other than recreation will be provided on the few open Forest Service roads and by temporary roads, which will be closed to motorized use once management activities are completed, unless the Forests' trails strategy determines that they are appropriate for motorized recreation opportunity. Vegetative management is used to manage for forest health and desired recreation settings. Integrated pest management is used to eradicate or suppress insects, diseases, and non-desirable, invasive vegetation. Prescribed fires are used to restore and maintain historic fire regimes. Wildlife viewing opportunities are maintained through openings, cultivation, mowing, and burning of openings and pastoral areas.

This area is managed under a mixed forest vegetation emphasis; characterized by a predominance of early-, mid-, and late-succession pine and hardwood forests. The valued character of these landscapes appears intact with some deviations such as vistas created for viewing opportunities. Structural diversity within mixed mesophytic and dry-to-mesic oak forest communities is enhanced through commercial and non-commercial vegetation management activities.

Priorities

- ▶ Provide a combination of semi-primitive, non-motorized, and motorized management activities.
- ▶ Maintain two major motorized routes through the Indian Creek Dispersed Recreation Area as the primary access with secondary routes supporting dispersed recreation opportunities. This includes access to trailheads for horseback riding, hiking, biking, rock climbing activities, local historic points of interest, interpretive opportunities, and administrative uses including timber harvest for forest health. Development of motorized recreation opportunities will not be a priority in this area although they will exist due to motorized access to other recreational opportunities.
- ▶ Determine where motorized access will be allowed by considering support of dispersed recreation activities, disturbance of solitude of large blocks of land, public health and safety, forest health, and local economic and administrative considerations.
- ▶ The Forests' Trails Strategy Team will consider motorized opportunities in this area utilizing roads and trails developed for access to other dispersed recreation opportunities.

Objectives

MAOBJ.8 Closure or obliteration of roads that do not meet the above criteria will be a priority in this MA. **Performance Indicator:** Miles of road not meeting criteria that are closed.

MAOBJ.9 Inventory current and potential dispersed recreation activities and develop a motorized access plan to support them. **Performance Indicator:** Completion of inventory and access plan.

Monitoring

Within in the Indian Creek Dispersed Recreation Area MA (2.F), monitor and evaluate trends in:

- ▶ Visitor satisfaction.

3.A Pine Woodland

Emphasis

This management area is allocated to approximately 97,629 acres across the Ozark NF. This area is suitable for timber production. The primary emphasis in this management area is to restore and maintain a landscape mosaic of open pine woodland that approximates historical conditions. The purpose is to provide habitat for associated plants and animals, some of which are rare and declining, and to create a setting for recreation that is different, uncommon, visually appealing, and rich in wildlife. Restoration and maintenance of pine woodland occur primarily on

xeric and dry sites within this management area. This management area differs from MA 3.B. because its primary emphasis is restoring pine woodland rather than oak woodland. Where oak dominates on oak-appropriate sites, however, restoration and maintenance of oak woodland is also emphasized. On more mesic sites, management emphasis varies as needed to provide for other multiple uses and values that are compatible with the primary emphasis of this area.

Lands within this management area are predominately classed as suitable for timber production. Silvicultural prescriptions applied are primarily those for pine woodland restoration with a variety of other prescriptions applied in areas not suited for woodland restoration.

Restoration and maintenance of pine woodland is accomplished through application of a variety of forest management practices. Thinning of trees is often needed to create initial open-canopy conditions, and may be achieved through manual, mechanical, or chemical methods including use of commercial timber sales. Frequent prescribed fire (often applied at landscape scales) may be used to thin trees, and is the predominate method used to maintain open conditions and well-developed understory communities. Regeneration of woodland occurs on a scheduled basis to diversify age class distribution to ensure a sustained supply of this habitat over time.

Desired Condition

This area is characterized by a mosaic of woodland and forest with pine woodland occupying approximately 60 percent of the total community acreage, and typically occurring on ridges and south- to-west facing aspects. Generally, patches of pine woodlands are well connected in networks of ridges and other suitable sites incorporating other fire-dependent communities such as glades and barrens. Forests (> 60% canopy closure) are present on lower slopes and drains, with most being in an open condition (60 to 80% canopy closure).

Pine woodlands have open canopies (10 to 60% canopy closure), sparse midstories, and well-developed understories that are typically dominated by grasses and forbs, but also may have a significant woody component. The density of the overstory and midstory and the woody component of the understory generally increase as one moves down slope and onto north and east aspects, gradually merging with more typical forest conditions.

Where pine woodland restoration efforts have just begun, evidence of management activities used to thin forests is common and may include downed trees, tree branches, and stumps. Within a few years, these elements are much less evident as they are obscured by well-developed understories and are reduced through the effects of fire and decay.

Evidence of fire is common at all stages of the pine woodland restoration process in the form of charred bark and top-killed woody sprouts. Occasionally, freshly burned areas are encountered with large areas of blackened ground and scorched

vegetation. These areas typically green-up quickly through the sprouting of fire-adapted vegetation. Fire often occurs over large areas (up to several thousand acres) in blocks surrounded to the extent practicable by existing permanent fire breaks such as roads and streams. Typically, blocks are burned every two to five years with every third burn, on average, occurring within the growing season (April 1 through October 15). Fire intensity varies with topographic condition resulting in a variety of vegetation conditions across the landscape. Some areas, especially the most mesic sites, do not typically burn, or burn at very low intensities with minimal effects on vegetation and litter layers.

Age classes of pine woodland patches are diverse and generally balanced from regenerating up to mature and old growth with overstory ages up to 120 to 150 years or more. Woodland above the minimum old growth age (100 years) is common. Regenerating and young woodland (0 to 40 years old) may have higher levels of canopy closure (> 60%) than that which defines the woodland condition (< 60% canopy closure).

The abundance of pine woodlands within this area provides optimal habitat conditions for many species including management indicator species brown-headed nuthatch and northern bobwhite, rare species, and species in demand for hunting such as wild turkey and whitetail deer.

Forest communities other than pine woodland are present in a variety of conditions and ages. Evidence of vegetation management may be present in these communities. Where rare communities are present within this area, they support healthy populations of associated species, and are free from threats that would degrade their integrity. Water quality in stream systems is excellent, and aquatic communities reflect native diversity.

These areas are used by the public for a variety of motorized and non-motorized recreational opportunities. The sights and sounds of human activities, especially motorized uses along main travel corridors, are evident in many parts of these areas. Visitors may frequently see other people in these areas. Motorized access is usually available. Non-motorized trails may also be available. The road system is of high quality and well maintained. Forest products produced by achieving desired conditions within this area contribute to the social and economic well being of the people living in surrounding areas. Evidence of timber harvest including active harvest operations may be encountered.

Monitoring

Within the Pine Woodland MA (3.A), monitor and evaluate trends in:

- ▶ Abundance of pine woodland.
- ▶ Proportion of the Shortleaf Pine-Oak Forest and Woodland Community burned at desired intervals and seasons.

3.B Oak Woodland

Emphasis

This MA is allocated to approximately 154,704 acres across the Ozark NF. This area is suitable for timber production. The primary emphasis in this management area is to restore and maintain a landscape mosaic of open oak woodland that mimics historical conditions. The purpose is to provide habitat for associated plants and animals, some of which are rare and declining, and to create a setting for recreation that is visually appealing, rich in wildlife, and not commonly encountered elsewhere. Restoration and maintenance of oak woodland occurs primarily on xeric and dry sites within this management area. This management area differs from MA 3.A because its primary emphasis is restoring oak woodland rather than pine woodland. Where pine dominates on pine-appropriate sites, however, restoration and maintenance of pine woodland is also emphasized. On more mesic sites, management emphasis varies as needed to provide for other multiple uses and values compatible with the primary emphasis of this area.

Lands within this management area are predominately classed as suitable for timber production. Silvicultural prescriptions applied are primarily those for oak woodland restoration with a variety of other prescriptions applied in areas not suited for woodland restoration.

Restoration and maintenance of oak woodland is accomplished through application of a variety of forest management practices. Thinning of trees is often needed to create initial open-canopy conditions, and may be achieved through manual, mechanical, or chemical methods including use of commercial timber sales. Frequent prescribed fire (often applied at landscape scales) may be used to thin trees, and is the predominate method used to maintain open conditions and well-developed understory communities. Regeneration of woodland occurs on a scheduled basis to diversify age class distribution to ensure a sustained supply of this habitat over time.

Desired Condition

This area is characterized by a mosaic of woodland and forest with oak woodland occupying approximately 60 percent of xeric and dry sites, and typically occurring on ridges and south- to-west facing aspects. Patches of oak woodland are generally well connected in networks of ridges and other suitable sites incorporating other fire-dependent communities such as glades and barrens.

Oak woodlands are primarily comprised of the Dry Oak Forest and Woodland community. They have open canopies (10 to 60% canopy closure), sparse midstories, and well-developed understories that are typically dominated by grasses and forbs, but also may have a significant woody component. The density of the overstory and midstory and the woody component of the understory generally increase as one moves down slope and onto north and east aspects, gradually merging with more typical forest conditions.

Where oak woodland restoration efforts have just begun, evidence of management activities used to thin forests is common, and may include downed trees, tree branches, and stumps. Within a few years, these elements are much less evident as they are obscured by well-developed understories, and are reduced through the effects of fire and decay.

Evidence of fire is common at all stages of the oak woodland restoration process in the form of charred bark and top-killed woody sprouts. Occasionally, freshly burned areas are encountered with large areas of blackened ground and scorched vegetation. These areas typically green-up quickly through the sprouting of fire-adapted vegetation. Fire often occurs over large areas (up to several thousand acres) in blocks surrounded to the extent practicable by existing permanent fire breaks such as roads and streams. Typically, blocks are burned every two to seven years with every third burn, on average, occurring within the growing season (April 1 to October 15). Fire intensity varies with topographic condition resulting in a variety of vegetation conditions across the landscape. Some areas, especially the wettest sites, do not typically burn, or burn at very low intensities with minimal effects on vegetation and litter layers.

Age classes of oak woodland patches are diverse and generally balanced from regenerating up to mature and old growth with overstory ages up to 140 to 200 years or more. Woodland above the minimum old growth age (110 years) is common. Regenerating and young woodland (0 to 40 years old) may have higher levels of canopy closure (> 60%) than that which defines the woodland condition (< 60% canopy closure).

The abundance of oak woodlands within this area provides optimal habitat conditions for many species including management indicator species prairie warbler and northern bobwhite, rare species, and species in demand for hunting such as wild turkey and whitetail deer.

Forest communities other than oak woodland are present in a variety of conditions and ages. Evidence of vegetation management may be present in these communities. Where rare communities are present within this area, they support healthy populations of associated species, and are free from threats that would degrade their integrity. Water quality in stream systems is excellent, and aquatic communities reflect native diversity.

These areas are used by the public for a variety of motorized and non-motorized recreational opportunities. The sights and sounds of human activities, especially motorized uses along main travel corridors, are evident in many parts of these areas. Visitors may frequently see other people in these areas. Motorized access is generally available. Non-motorized trails may also be available. There is a high quality road system that is well maintained. Forest products resulting from achieving desired conditions within this area contribute to the social and economic well being of the people living in surrounding areas. Evidence of timber harvest including active harvest operations may be encountered.

Monitoring

Within the Oak Woodland MA (3.B), monitor and evaluate trends in:

- ▶ Abundance of oak woodland.
- ▶ Proportion of potential Dry Oak Forest and Woodland acreage burned at desired intervals and seasons.

3.C Mixed Forest

Emphasis

This management area is allocated to approximately 360,401 acres across the Ozark-St Francis National Forests. These lands are managed to ensure the health and sustainability of the pine, pine/hardwood, hardwood/pine, and hardwood forest types across the landscape. Timber will be a by-product of vegetation management aimed at maintaining sustainable ecosystems. This area is suitable for timber production.

Light levels to the forest floor are managed to develop an assemblage of desirable regeneration and to maintain a moderate herbaceous component. This is accomplished through silvicultural activities including prescribed fire as well as mechanical and chemical vegetation control. The difference between this management area and woodland MAs is that stocking levels of trees in this MA are denser than the stocking levels in the woodland MAs.

Desired Condition

The character of the land is predominately natural appearing with a diversity of forest successional classes and ecological community types. Thinning, prescribed fire at regular intervals, and regeneration harvests are common silvicultural treatments. Stands are regularly thinned to reduce stress as trees age. Fire is common, typically as a result of prescribed burning. Evidence of fire in the form of charred bark and occasional freshly burned areas may be encountered. Fires occur approximately every 3 to 10 years, during both the dormant and growing seasons. Growing season fires generally occur on lower sites appropriate for woodland conditions. Pine and oak woodlands are found throughout the area on appropriate sites. Late-successional to old growth characteristics are provided on suitable lands within this area. High quality, well-maintained roads through the area are designed to facilitate vegetative management and protect water quality. Although a mixed forest is the overriding emphasis of this MA, a variety of silvicultural prescriptions can be used (depending on site conditions) to meet other secondary desired conditions.

Other communities that occur on low productivity sites (e.g., glades) typically comprise a small proportion of the area. Where they occur; however, they exhibit high levels of ecological integrity and diversity of characteristic species. Rare communities within the management area are maintained at desired composition, structure, and function. They support characteristic associations of species. Occurrences for

threatened and endangered species are stable or expanding as are those for sensitive and locally rare species, which are needed to provide for their viability.

While the landscape character will appear natural, the management activities are visually evident and may occasionally dominate the natural landscape. These areas will provide a variety of motorized and non-motorized recreation opportunities including hunting, fishing, hiking, bicycling, berry picking, dispersed camping, driving for pleasure, and viewing scenery and wildlife. Visitors will likely see other people in the parts of these areas with motorized access. The trail and access emphasis will depend on the specific conditions of each area. Outdoor skills are of moderate importance to visitors in these areas except where knowledge of specialized activities such as hiking, hunting, mountain biking, or OHV use is necessary.

Priorities

- ▶ Manage for pine and oak woodlands on lower sites.
- ▶ Managed for medium density or balanced age classes on medium to high sites.

Objectives

MAOBJ.10 Apply appropriate silviculture prescriptions to provide the following forest products on medium to high sites: 14" to 16" sawtimber with grade 2 butt logs and/or yellow pine 18" sawtimber. **Performance Indicator:** Determine DBH during inventories.

Monitoring

Within the Mixed Forest MA (3.C), monitor and evaluate trends in:

- ▶ Number of acres harvested.

3.D Oak Decline Restoration Areas

Emphasis

This MA is allocated to approximately 67,691 acres on the Ozark-St. Francis National Forests. These areas range from low to high sites and occur on south as well as north facing aspects. These are areas where red oak and white oak trees suffered severe mortality due to general oak decline, repeated insect outbreaks (red oak borer), and disease. Fuel loadings in these areas are high and wildlife mast producing capabilities are greatly reduced from what was present the last 50 years. While present in some areas, red oak and white oak regeneration is at risk from being overtopped by competitors, which will rapidly respond to the increased light. Other areas are completely devoid of oak regeneration and the oak overstory has died leaving no possible future seed source. This area is suitable for timber production.

The emphasis of this MA is to restore and maintain a healthy white oak group, red oak group, and hickory forest that is resistant to large-scale insect and disease attacks and provides for regeneration of oak into the future. Currently, the red oak ecotype is all but gone from these acres due to recent massive outbreaks of red oak borer, other pathogens, and general oak decline. The replacement forest in the absence of management will likely succeed to shade tolerant species such as dogwood and gum. Most of the area has suffered heavy mortality with red oak mortality ranging from 70 to 100 percent. Red oak regeneration is absent or, if it exists, is in a shaded condition from shade tolerant competitors and may soon die. Fuel loading is extremely high creating a serious fire hazard for the next few years. The primary objective of this MA is to return mast-producing trees to the area for wildlife and to repopulate the forest stands with desirable species of commercial value to assist local economies. Management to achieve the desired future condition of these areas is accomplished through various forest management practices including prescribed fire and manual, mechanical, and chemical vegetation control.

Desired Condition

The desired future condition is to have a well-balanced age class scattered over the landscape. Prescribed fire every 3 to 10 years will effectively release the existing red and white oak seedlings on much of the area. On high sites, oak planting may occur where no existing advanced regeneration is present. Pine, a pioneer species, will capture some of these sites. Because it is commercially viable and desirable for wildlife, pine is managed where it exists.

A series of regular thinning maintains quality oaks in a stress-free environment. This thinning will help prevent serious outbreaks of pathogens. The species mix of the restored forest is diverse, resisting pathogens that target individual tree species or species groups.

Evidence of forest management activities (e.g., tree stumps, logging roads) is seen as a result of forest management. Rare communities and associated species continue to exist in the area including disturbance dependent communities requiring active management. Although oak restoration is the overriding theme of this management area, other silvicultural prescriptions can be used depending on site conditions. High quality, well-maintained roads through the area are designed to facilitate timber removal and protect water quality.

Habitat associations emphasized include both xeric and mesic oak habitats, and some species (fire dependent species) in the early-successional habitat. The conditions are suitable for wild turkey and whitetail deer. The management and protection of rare communities and species habitats is provided along with the management and protection for population occurrences of threatened, endangered, and sensitive (TES) and locally rare species.

The landscape character is of a forest with closed overstory canopies except where thinned to promote oak regeneration. Herbaceous vegetation is created through repeated prescribed fire, but will not be the primary objective of this prescription. In

order to balance age classes and to prevent the recurrence of an over mature landscape regeneration, harvests are prescribed. Evidence of man's involvement is moderately evident. These areas provide a variety of motorized and non-motorized recreation opportunities. The sights and sounds of human activities, especially motorized uses along main travel corridors, are evident in many parts of these areas. Visitors will frequently see other people. Motorized access is available to many places. Outdoor skills are of moderate or low importance for visitors except where knowledge of specialized activities such as mountain biking, horseback riding, or driving OHVs is critical.

Priorities

- ▶ Restore pine and oak woodlands on lower sites.
- ▶ Restore a red oak/white oak/hickory forest type in heavily damaged hardwood areas.

Monitoring

Within the Oak Decline Restoration Areas MA (3.D), monitor and evaluate trends in:

- ▶ Number of acres restored to a red oak/white oak/hickory forest type.

3.E High Quality Forest Products

This MA is allocated to approximately 214,358 acres across the Ozark-St Francis National Forests. This area is suitable for timber production.

Emphasis

This MA includes lands capable of producing valuable, high quality sawtimber and is allocated to areas with high site productivity where maximum economic return for investment can be achieved. This prescription maintains forest densities in accordance with published yield tables and regional guidelines to produce trees with clear boles (trunks) and smaller crowns than would occur in areas of more open forests and woodlands. Timber stand improvement and regeneration harvest methods are applied that best provide for the growth and harvest of high quality sawtimber that is most in demand in the marketplace. Emphasis is on producing 14" to 16" sawtimber with grade 2 butt logs and/or yellow pine 18" sawtimber. Other forest products such as pulpwood, fuelwood, and low value sawtimber are provided as a result of timber stand improvement to cultivate high quality, valuable sawtimber. Product objectives are accomplished through various forest management practices including prescribed fire and manual, mechanical, and chemical vegetation control.

Management activities are applied in ways that maintain appropriate conditions for wildlife habitat, soil productivity, water quality, recreational opportunity, and scenic beauty. Opportunities are also provided for utilization of other high-value forest

products. Although production of high quality forest products is the overriding emphasis of this management area, a variety of silvicultural prescriptions can be used depending on site conditions to meet other secondary desired conditions.

Desired Condition

These lands support a balanced age class distribution of forest stands containing native tree species capable of sustained, high-value timber production. Tree growth rates and vigor are high. Incidence of insect and disease outbreaks is low.

The landscape character is naturally appearing with mixtures of hardwood, mixed hardwood/pine and pine/hardwood, and pine forest communities. Management activities may be visually evident in portions of these areas. Evidence of management activity may include active timber harvest operations, tree stumps, temporary roads, skid trails, and log landings. Layout of timber sale boundaries, retention of individual trees and clumps, and seeding of exposed soil reduce visual impacts. Large stemmed trees interspersed with canopy gaps and 10- to 80-acre transitional openings provide moderate to high scenic diversity.

Fire is common, typically as a result of prescribed burning. Evidence of fire in the form of charred bark and occasional freshly burned areas may be encountered. Fires occur approximately every 3 to 10 years on a given site. As long as the quality of forest products is maintained, both dormant and growing season fires occur. Maximum stand ages are typically from 60 to 110 years for pine, and 90 to 110 years for hardwoods. A mix of forest successional stages characterizes these areas. Regenerating forest patches may be 10 to 80 acres in size, and may be clustered or scattered across the landscape. Some characteristics of older-aged forests are provided toward the end of the rotations, but younger forest conditions predominate.

Other communities that occur on low productivity sites (e.g., glades) typically comprise a small proportion of the area. Where they occur; however, they exhibit high levels of ecological integrity and diversity of characteristic species. Rare communities within the management area are maintained at desired composition, structure, and function. They support characteristic associations of species. Occurrences for threatened and endangered species are stable or expanding as are those for sensitive and locally rare species, which are needed to provide for their viability.

Forest products contribute to the social and economic well-being of people and help maintain a way of life long associated with those living within the area. Evidence of timber harvesting is apparent; however, and innovative harvesting techniques use sale layout and design to accommodate visual considerations.

High quality, well-maintained roads through the MA are designed to facilitate timber removal and protect water quality. Designated roads through the area also provide recreation opportunities for OHV and passenger-vehicle travel. These areas provide a variety of motorized and non-motorized recreation opportunities including hunting, fishing, hiking, bicycling, berry picking, dispersed camping, driving for pleasure, and viewing scenery and wildlife.

Priorities

Objectives

MAOBJ.11 Apply appropriate silviculture prescriptions to provide the following forest products on medium to high sites: 18" to 20" sawtimber with grade 1 or 2 butt logs and/or yellow pine 18" sawtimber. **Performance Indicator:** Determine DBH during inventories.

Monitoring

Within the High Quality Forest Products MA (3.E), monitor and evaluate:

- ▶ Number of acres harvested.

3.F Old Growth Areas

Emphasis

This management area is allocated to approximately 5,062 acres across the Ozark-St Francis National Forests. This area is suitable for timber production.

Emphasis of this management area is to restore old growth conditions as part of a forest-wide network of large (2,500+ acres), medium (100 to 2,499 acres), and small (< 100 acres) old growth patches following guidance in the Region 8 Old Growth Report (*Guidance for Conserving and Restoring Old Growth Forest Communities on the National Forests in the Southern Region*, Forestry Report R8-FR 62, published in June 1997). Management of these areas emphasizes protection, restoration, and management of old growth forests and their associated wildlife, botanical, recreational, scientific, educational, and cultural values. Within this MA, forest management activities occur in order to restore or maintain old growth conditions. These activities may include small amounts of forest regeneration where needed to ensure a long-term sustained supply of old growth conditions. Prescribed fire is a critical management activity for maintaining desired conditions for some old growth types.

This management area is not intended to encompass all old growth forest conditions on the OSFNFs. Additional patches meeting old growth criteria may be scattered throughout other management areas.

Desired Conditions

Desired conditions for old growth forest community types are provided in the Region 8 Old Growth Report. There is a crosswalk to the major forest community types used in this plan in Table 2-10. Desired conditions are described in terms of four defining

characteristics: age, disturbance history, basal area, and tree size (Table 2 in Region 8 Old Growth Report). Additional characteristics such as number of snags, volume of downed wood, and percentage of the canopy in gaps are also described for some forest community types.

Table 2-10: Major Forest Communities for the OSFNs and their Corresponding Old Growth Community Types from the Region 8 Old Growth Report (1997).

Major Communities Ozark NF	Old Growth Community Type
Ozark National Forest	
Dry Oak Forest and Woodland	Dry and Xeric Oak Forest, Woodland, and Savanna
Shortleaf Pine-Oak Forest and Woodland	Xeric Pine and Pine-Oak Forest and Woodland Dry and Dry-Mesic Oak-Pine Forest (in part)
Dry-Mesic Oak Forest	Dry-Mesic Oak Forest Dry and Dry-Mesic Oak-Pine Forest (in part)
Mesic Hardwood Forest	Mixed Mesophytic and Western Mesophytic Forests
Riparian Forest	Eastern Riverfront Forest
Loblolly Pine Forest	Not applicable
St. Francis NF	
Loess Slope Forest	Mixed Mesophytic and Western Mesophytic Forests
Bottomland and Floodplain Forest	River Floodplain Hardwood Forest
Loblolly Pine Forest	Not applicable

In general, desired conditions include presence of old-aged forests, big trees, abundant snags, downed wood, and diverse canopies with frequent gaps. Some evidence of management activities such as charred bark from prescribed fires and stumps from timber sales may be seen, but these are generally subordinate to naturally appearing conditions. Wildlife associated with older forests is abundant. Some patches of regenerating forest are present, but occupy a small proportion of the landscape.

The landscape character is natural appearing. These areas provide a variety of recreation opportunities. Human activities may be evident in some places. Visitors will occasionally see other people, especially near the few open roads in these areas. A non-motorized trail system will provide the predominant means of access. Closed roads are available for non-motorized uses. Outdoor skills are important for visitors in the more remote portions of these areas. Hiking, backpacking, hunting, and fishing are typical activities available.

3.G Crowley's Ridge Upland Hardwood–St. Francis NF

This management area is allocated to approximately 11,443 acres on the St. Francis NF. It includes the upland sites on the St. Francis National Forest. This area is suitable for timber production.

Emphasis

Emphasis in this MA is primarily on maintaining and, where necessary, restoring the oak component within the Loess Slope Forest community, which occupies most of this management area. Limiting the abundance and influence of non-native invasive species such as kudzu is another important area of emphasis. Silvicultural practices such as prescribed fire, herbicides application, pre-commercial thinning, and timber sales are used to encourage oak regeneration and to maintain oak dominance.

Desired Condition

Desired conditions for this MA are essentially the same as the forest-wide desired conditions described for the Loess Slope Forest community in Chapter 1.

The Loess Slope Forest or Crowley's Ridge Community is typically dominated by oaks with various mixtures of beech, maple, and yellow poplar. Some sites are dominated by beech or other representative tree species. Its midstory is often open, but may be complex, especially on more mesic sites. Understories may be sparse or well-developed depending on site quality, overstory density, and fire history. Advanced oak regeneration is common in the understory across all sites, exceeding 300 oak sprouts per acre greater than two feet tall. This advanced regeneration maintains oak dominance within the community on most sites as regeneration events occur. Examples of the community that are dominated by sweetgum, maple, or yellow poplar are uncommon. Abundance and influence of invasive non-native plants is low.

Abundance and distribution of this community remains similar to current abundance and distribution (conversions to or from this type are not common.).

Forests of this type are present in a wide range of age classes from regenerating forest to old growth. Forests typically occur in even-aged or two-aged patches, but also include some uneven-aged patches. Mixes of age classes within given areas vary widely across the St. Francis NF ranging from those favoring younger forests to those favoring older forests. Averaged across the Forest, mature forests (older than 70 years) predominate, comprising approximately 60 percent of the total community acreage. Within this mature component, old growth conditions are common comprising approximately 20 percent of total community acreage. Old growth conditions are concentrated within management areas with low emphasis on active vegetation management, but are also present in variously sized patches scattered throughout other management areas. Patches of regenerating forest (0 to 10 years old) are present across the St. Francis NF at sustained rates of at least five percent of total community acreage with percentages varying widely to meet local desired conditions. Forest-wide percentage of regenerating forest may be higher in the short-term in order to address current age class imbalance and forest health threats. Over time, the forest-wide percentage of this community in regenerating (0 to 10 years old) and young forest (11 to 40 years old) is approximately 20 percent. Patches of regeneration are the result of both natural disturbances (e.g., windthrow, ice storms, insects, and wildfire) and management activity (e.g., timber harvest).

Many areas of mature (70-year age class and older) and mid-aged forests (41 to 70 years old) are relatively open canopied (60 to 80% canopy closure) allowing development of herbaceous understories and advanced oak regeneration. Woodland conditions (10 to 60% canopy closure) are absent or uncommon.

Fire is an important factor for maintaining open forest conditions and stimulating understory development within this community type. Fire return intervals average 5 to 10 years with every third burn, on average, occurring during the growing season (April 1 through October 15). Fire frequencies and intensities are generally highest on drier sites and upper slopes. Fire typically occurs across large landscapes within which this community occurs. Although most acreage of the type within the burn block is affected by fire, some acres may not be burned during any given fire, effectively lengthening the fire return interval on these sites.

This community is enjoyed by the visiting public as a natural setting for hunting, hiking, and sight-seeing. Acorn production provides abundant food for wildlife including popular game species such as wild turkey, whitetail deer, and gray squirrel. These species are common within this community making it a popular setting for hunting. Management of vegetation to create and maintain open forest conditions and desired age class diversity frequently yields wood that is bought by local businesses, contributing to the vitality of local economies. Evidence of these management activities in the form of stumps, logging areas, and harvest operations may occasionally be seen within this community.

Rare communities within the management area are maintained at desired composition, structure, and function. They support characteristic associations of species. Occurrences for threatened and endangered species are stable or expanding as are those for sensitive and locally rare species that are needed to provide for their viability.

Forest product outputs contribute to the social and economic well being of people and help maintain a way of life long associated with those living within the area. Timber harvesting is evident and uses sale layout and design along with innovative harvesting techniques to accommodate visual considerations.

Roads through the area provide recreation opportunities for passenger-vehicle travel. These areas provide a variety of motorized and non-motorized recreation opportunities including hunting, fishing, hiking, bicycling, berry picking, dispersed camping, driving for pleasure, and viewing scenery and wildlife.

Monitoring

For monitoring items within the Crowley's Ridge Upland Hardwood MA (3.G), see the "Loess Slope" section of "Major Forest Communities" in Chapter 1.

3.H Mississippi River Bottomland Hardwoods - St. Francis NF

This management area is allocated to approximately 3,573 acres on the St. Francis NF. This MA encompasses a narrow band along the floodplains of the St Francis and Mississippi Rivers and their tributaries, serving as important ecological corridors along the major river systems for numerous wildlife species. This area is suitable for timber production.

Emphasis

Emphasis of this MA is primarily on the maintenance of the Bottomland and Floodplain Forest Community with special emphasis given to encouraging oak reproduction. Silvicultural practices including hand planting native oak species, thinning, and forest regeneration cutting are used to sustain this community and to encourage oak regeneration.

Desired Condition

Desired conditions for this MA are essentially the same as the forest- wide desired conditions described for the Bottomland and Floodplain Forest Community in Chapter 1.

The Bottomland and Floodplain Forest Community is dominated by a variety of species indicative of bottomlands, floodplains, and riverfronts. Its midstory composition is variable. Understories may be sparse or well-developed depending on site quality, overstory density, and disturbance history. Where bottomland oaks are present, they are sustained through time by appropriate disturbance regimes. Patches of native cane are not uncommon, especially in areas of low overstory density. Abundance and influence of invasive non-native plants is low.

Abundance and distribution of this community remains similar to current abundance and distribution. Conversions to or from this type are not common.

Forests of this type are present in a wide range of age classes from regenerating forest to old growth. Forests typically occur in even-aged, two-aged, or uneven-aged patches. Mixes of age classes within given areas vary widely across the St. Francis NF ranging from those favoring younger forests to those favoring older forests. Averaged across the Forest, mature forests (older than 70 years) predominate comprising approximately 65 percent of the total community acreage. Within this mature component, old growth conditions are common comprising approximately 45 percent of total community acreage. Old growth conditions are concentrated within MAs with low emphasis on active vegetation management, but are also present in variously sized patches scattered throughout other management areas. Patches of regenerating forest (0 to 10 years old) are present across the St. Francis NF at sustained rates of at least five percent of total community acreage with percentages varying widely to meet local desired conditions. Forest-wide percentages of regenerating forest may be higher in the short-term in order to address current age class imbalance and forest health threats. Over time, the forest-wide percentage of

this community in regenerating (0 to 10 years old) and young forest (11 to 40 years old) is approximately 20 percent. Patches of regeneration are the result of both natural disturbances (e.g., windthrow, ice storms, insects, and wildfire) and management activity (e.g., timber harvest).

Many areas of mature (older than 70 years) forest exhibit complex canopy structure characterized by canopy gaps. These gaps result in development of herbaceous understories and/or layers of midstory. Woodland densities (10 to 60% canopy closure) are not common, but may occur in frequently flooded areas and in areas occupied by canebrakes. Fire is relatively infrequent within this community, but occurs at 7- to 10-year intervals where high quality examples of canebrakes are present.

This community is enjoyed by the visiting public as a natural setting for hunting, hiking, and sight-seeing. Management of vegetation to create and maintain desired structural conditions and age class diversity yields wood that is bought by local businesses contributing to the vitality of local economies. Occasionally, evidence of these management activities in the form of stumps, logging areas, and harvest operations may be seen within this community.

Rare communities within the MA are maintained at desired composition, structure, and function. They support characteristic associations of species. Occurrences for threatened and endangered species are stable or expanding as are those for sensitive and locally rare species that are needed to provide for their viability.

Forest product outputs contribute to the social and economic well being of people and help maintain a way of life long associated with those living within the area. Timber harvesting is apparent and uses sale layout and design along with harvesting techniques to accommodate visual considerations.

Monitoring

See the "Bottomland Hardwood" section of "Major Forest Communities" in Chapter 1 for monitoring items within the Mississippi River Bottomland Hardwood MA (3.H).

3.I Riparian Corridors

Emphasis

This MA is allocated to approximately 11,484 acres across the Ozark-St. Francis National Forests. Riparian corridors are managed to retain, restore, and enhance the inherent ecological processes and functions of the associated aquatic, riparian, and upland components within the corridors. Primarily, natural processes (floods, erosion, seasonal fluctuations, etc.) modify most of the areas within the riparian corridors. However, management activities may be used to provide terrestrial or aquatic habitat improvement, favor recovery of native vegetation, control insect infestation and disease, comply with legal requirements (e.g., Endangered Species Act, Clean Water Act), provide for public safety, and meet other riparian functions and values.

Silvicultural treatments including timber and vegetation removal may occur to restore and/or enhance riparian resources such as water, wildlife, and natural communities.

Riparian areas are defined as areas that include both terrestrial and aquatic ecosystems. They extend down into the groundwater, up above the tree canopy, outward across the floodplain, laterally into the terrestrial ecosystem, and along the watercourse at a variable width (Ilhardt, 2000). A riparian corridor is a MA designed to include much of the riparian area. Within the Riparian Corridors MA, management practices are specified to maintain riparian functions and values. As a management area, this includes, at a minimum, a 100-foot corridor along perennial stream channels, natural ponds, lakeshores, wetlands, springs, and seeps.

For the purpose of land allocation, the perennial streams were identified from a National Hydrographic Dataset produced from a U.S. Geological Survey. A corridor width of 100 feet was applied to each side of the identified streams as an estimation of the extent of the riparian area. At the time of LRMP revision, this was the best available process for determining the potential locations of these areas and is subject to the limitations associated with this dataset.

Due to the extent of their spatial distribution, this operational definition does not capture the entirety of riparian areas in existence. The riparian corridors MA designation is designed to encompass the riparian area defined on the basis of soils, vegetation, and hydrology. Field surveys, inventory/mapping, and landscape modeling are appropriate methods for further refining the Riparian Corridors MA boundaries during project level assessments, project level planning, and site specific investigations. If a resource specialist or ID team for a project area does not conduct one of these methods, the minimum width of 100 feet from the defining riparian feature should be applied as the riparian corridor width.

Due to the extent of their spatial distribution, riparian areas are best defined functionally based on a variety of characteristics. This MA is designed to encompass these characteristics based on the landforms, soils, vegetation, and hydrology of the landscape. More than one of the following characteristics is necessary to identify the riparian area:

- ▶ **Landforms-** Floodplains, toe slope to toe slope, natural breaks in the landscape, or manmade features.
- ▶ **Vegetation-** Plants dependent on riparian or wetland habitats. Plants are identified by the PLANTS database (USDA, NRCS. 2004) as indicators or obligates of wetlands.
- ▶ **Soils-** Soils formed from alluvial parent material, soils identified as occasionally flooded by the NRCS soil survey, and anaerobic (wetland) soils.
- ▶ **Hydrology-** Rivers, streams, springs, wetlands, karst features, ponds, and lakes.

Riparian corridor widths are measured in on-the-ground surface feet perpendicular from the edge of the channel or bank (stream, water body, etc.) and extend out from each side of a stream. For ponds, lakes, sloughs, and wetlands (including seeps or

springs associated with wetlands), the measurement would start at the ordinary high water mark and go around the perimeter. For braided streams, the outermost braid is used as the water's edge. An interrupted stream (a watercourse that goes underground and then reappears) is treated as if the stream were above ground. A riparian corridor includes human-created reservoirs, wildlife ponds, wetlands, and waterholes connected to or associated with natural water features. In addition, those areas not associated with natural water features, but supporting riparian associated flora or fauna will have a riparian corridor designation. The Riparian Corridors MA does not apply to human-made ditches, gullies, or other features that are maintained or in the process of restoration.

Desired Condition

Riparian corridors reflect the physical structure, biological components, and ecological processes that sustain aquatic, riparian, and associated upland functions and values. The preferred management for riparian corridors is one that maintains, or moves toward, the restoration of processes that regulate the environmental and ecological components of riparian areas. However, due to the high value that these areas have for many uses, evidence of human activity (developed recreation areas, roads and trails, dams and reservoirs, and pastoral areas) may be present.

The soils of riparian corridors have an organic layer (including litter, duff, and/or humus) of sufficient depth and composition to maintain the natural infiltration capacity, moisture regime, and productivity of the soil (recognizing that floods may periodically sweep some areas within the floodplain of soil and vegetation). Trees within the corridors are managed to provide sufficient amounts and sizes of woody debris to maintain habitat complexity and diversity for aquatic and riparian-associated wildlife species. Woody debris may be purposefully introduced to enhance aquatic and terrestrial habitat. In-stream woody debris includes 75 to 200 pieces per stream mile of which 7 to 20 pieces per mile are in a size class greater than 5 meters long and 55 centimeters in diameter.

The riparian corridor functions as a travel way for aquatic and terrestrial organisms. The corridor serves as a connector of habitats and various aquatic species, thus keeping populations genetically viable. Stream structures (such as bridges, culverts, and aquatic habitat improvement structures) may be evident in some streams and water bodies. With the exception of some dams, most structures do not decrease in-stream connectivity.

Suitable habitat is provided in riparian areas and, where applicable, in the associated uplands for riparian-associated flora and fauna, especially threatened, endangered, sensitive (TES), and locally rare species. Vegetation (dead and alive) reflects the potential natural diversity of plant communities with appropriate horizontal and vertical structure needed to provide the shade, food, shelter, and microclimate characteristics for aquatic and terrestrial species. Rehabilitation of past and future impacts (both natural and human-caused) may be necessary to protect resource values and facilitate recovery of riparian structure and functions.

Vegetative communities within the riparian corridor are productive and diverse providing for a rich variety of organisms and habitat types. The vegetative community within the riparian corridor is predominately forested.

The forest contains multiple canopy layers, which provide diverse habitat structure as well as thermal and protective cover for wildlife. Snags used by birds, bats, and other small animals are abundant. Dying and down trees are common, often in naturally occurring patches. Non-forest communities and open forest canopies (created by flooding, wind damage, wildland fire, insect infestation, disease, restoration, and vegetation management) may be seen.

These areas are suitable for timber management. Vegetation management activities take place to maintain, restore, and/or enhance the diversity and complexity of native vegetation; rehabilitate both natural and human-caused disturbances; provide habitat improvements for aquatic- and riparian- associated wildlife species (including migratory birds); provide for visitor safety; or accommodate appropriate recreational uses. Silvicultural treatments including timber and vegetation removal may occur within the riparian corridor. Prescribed fire can be used within the corridor to create or maintain the composition and vitality of fire-dependent vegetative communities (e.g., canebrakes).

The landscape character is naturally evolving or natural appearing, but occasional enclaves of a "rural" landscape character may occur with pastoral settings and recreation developments (such as a swim beach at a campground). Livestock grazing may occur. Where livestock grazing currently exists, efforts are taken to minimize impacts on stream banks, water quality, and other riparian resources through the use of Arkansas' BMPs and forest standards.

Both dispersed and developed recreation opportunities are present within these corridors. Although recreational areas and facilities may create long-term impacts on riparian corridors, allowances are made in this MA since a majority of recreation within the national forests occurs in or near water bodies. Hiking, dispersed camping, hunting, and fishing are typical activities available within the corridors. Visitors may encounter developed camping areas, boat launches, and fishing piers. Current recreation areas and facilities are managed to minimize impacts on stream banks, shorelines, and water quality. New recreation facilities are developed in accordance with Executive Orders 11988 and 11990 to minimize impacts on the riparian resource. Environmental education and interpretation about the aquatic component and riparian corridors may be provided to increase awareness of the value of riparian dependent resources.

Desired conditions for aquatic systems within the riparian corridor stream systems are dynamic in nature; that is, stream systems normally function within natural ranges of flow, sediment movement, temperature, and other variables. The geomorphic condition of some channels may reflect the process of long-term adjustment from historic watershed disturbances. The combination of geomorphic and hydrologic processes creates a diverse physical environment, which in turn fosters biological diversity. The physical integrity of aquatic systems, stream banks,

and substrate (including shorelines and other components of habitat) is intact and stable. Where channel shape is modified (e.g., road crossing), the modification preserves channel stability and function and is implemented in a manner that produces the least impact to the riparian corridor.

The range of in-stream flows is maintained to support channel function, aquatic biota and wildlife habitat, floodplain function, and aesthetic values. Water uses and other modifications of flow regimes are evaluated in accordance with the National Forest Service In-Stream Flow Strategy and site-specific analysis.

Water quality remains within a range that ensures survival, growth, reproduction, and migration of aquatic- and riparian-associated wildlife species. It contributes to the biological, physical, and chemical integrity of aquatic ecosystems. Water quality meets or exceeds state and federal standards. Water quality (e.g., water temperatures, sediment reduction, dissolved oxygen, and pH) is improved where necessary to benefit aquatic communities.

Floodplains properly function as retention storage areas for floodwaters, sources of organic matter to the water column, and habitat for aquatic- and riparian-dependent species. Modification of the floodplain is infrequent but may be undertaken to protect human life and property or to meet other appropriate management goals (e.g., restoration). There may be evidence of some roads, trails, and recreation developments. Some wetland habitats may show signs of restoration.

The biological integrity of aquatic communities is maintained, restored, or enhanced. Aquatic species distributions are maintained or are expanded into previously occupied habitat. The amount, distribution, and characteristics of aquatic habitats for all life stages are present to maintain populations of indigenous and desired non-native species. Habitat conditions contribute to the recovery of species under the Endangered Species Act. Species composition, distribution, and relative abundance of organisms in managed habitats are comparable to reference streams of the same region. However, the Arkansas Natural Resource Agency may stock some streams with non-native fish.

Relationship with Other Management Areas

Where riparian area functions and values are found to occur in areas allocated to other management areas through the previously mentioned methods, the direction for Riparian Corridors MA should take precedence. Any area that meets the riparian area definition on Page 2-71 is mapped and managed as Riparian Corridors MA (3.I). These areas are reallocated to Riparian Corridors MA (3.I) in subsequent LRMP amendments.

Streamside management zones (SMZs) are administrative areas surrounding surface water features designated to comply with Arkansas' BMPs and reduce the potential for sedimentation of aquatic habitats because of erosion from land management activities. Guidelines for SMZs may require designated areas that correspond to

riparian corridors. When these overlap, the management activities should be determined by the riparian prescription in conjunction with the protection objectives of the SMZs' designations.

Priorities

- ▶ Identify roads and trails that should be reconstructed or decommissioned to reduce sediment and improve watershed condition within corridors.
- ▶ Include erosion and sediment control measures in all ground-disturbing project plans.

Objectives

MAOBJ.12 Map acres of other land meeting riparian definitions to incorporate in MA 3.I. **Performance Indicator:** acres mapped annually.

MAOBJ.13 Treat up to 300 acres per decade to meet the habitat needs of riparian area species groups. **Performance Indicator:** Number of acres treated per decade.

Monitoring

Within the Riparian Corridors MA (3.I), monitor and evaluate:

- ▶ Number of acres harvested.

3.J Pastures and Large Wildlife Openings

Emphasis

This management area is allocated to approximately 7,072 acres across the Ozark-St Francis National Forests. This area is unsuitable for timber production. The objective is to provide permanent forage and cover for livestock and wildlife.

Desired Condition

The desired future condition for pastures is to provide optimal forage and cover for livestock and wildlife species. Pastures should be in a grass/forb condition with little woody encroachment. The desired condition for pastures is that soil productivity is maintained and optimum forage is provided. Where it is practical, native forage is favored over exotic improved pasture. The reduction of invasive species and those of poor forage quality is desirable.

The landscape character will range from natural appearing to pastoral/agricultural. Wildlife openings and fields will provide for non-motorized recreation opportunities. Improved pastures generally do not provide for recreation opportunities although they may provide scenic interest in the landscape. Human activities may be evident

in some places. Some methods to keep pastures open include the use of a prescribed fire interval of one to three years, grazing, bush hogging, and haying. These lands are classified as unsuitable for timber production.

3.K Wildlife Emphasis Area

Emphasis

This MA is allocated to approximately 15,712 acres on the Buffalo Ranger District of the Ozark National Forest adjacent to the Gene Rush Wildlife Management Area. This area is suitable for timber production.

This management area is established to provide optimal wildlife habitat to benefit both game and non-game wildlife species (e.g., elk, deer, turkey, quail, Neotropical migrant birds, and small mammals), and to enhance consumptive and non-consumptive recreational opportunities as they relate to these and other wildlife species that benefit from a mix of early- and late-successional habitat management.

In addition to providing for quality habitat for such mammals as deer and black bear, this MA would expand the range of the Arkansas' population of elk from adjoining Arkansas Game and Fish Commission lands (Gene Rush Wildlife Management Area) onto Ozark National Forest lands. This expansion is encouraged by managing for oak and pine woodlands, creating medium-sized openings and pastures, and providing additional water sources where needed.

Oak and pine woodlands are prescribed on appropriate sites through thinning and prescribed fire to maintain widely spaced trees. On north and east slopes with high site indices, appropriate forest prescriptions are used. These prescriptions are aimed at providing optimal habitats to support populations of the plant and animal species associated with these communities, and to provide a very high likelihood that all species within these habitats continue to persist on National Forest System lands.

Improved pastures and wildlife openings composed of native species and other non-invasive species are created and maintained to provide year-round forage and to reduce wildlife impacts on private lands. Travel corridors mostly made up of fire lines and roads are used to connect opening where appropriate.

Desired Condition

The area is dominated by grass and herbaceous understories with widely spaced large oaks or pines. Light reaching the forest floor is ample to support a widely diverse and abundant herbaceous component. Stand densities are reduced through repeated thinning to achieve the desired light levels, and repeated fires including growing season burns to control hardwood understories. Prescribed fire is used in the establishment phase until desired objectives are met. Regeneration will occur in this type by withholding fire for a number of years and allowing oak advanced regeneration to become established. A final removal of the overstory may or may not occur.

This oak community type is an oak overstory with herbaceous/shrub understory providing high species diversity. It is shaped primarily by the use of frequent fires and thinning with open areas occurring from natural events and constructed and maintained openings and pastures. Evidence of forest management activities (e.g., tree stumps, logging roads) may be seen as a result of thinnings. Pine forest community types may comprise a portion of this area and will receive the same treatments as the hardwood areas. Rare communities and associated species would continue to exist in the area including disturbance dependent communities requiring active management.

Improved pastures are constructed and maintained to provide year-round forage for wildlife. They will consist of cool and/or warm season grasses and a variety of forbs. Lime and fertilizer are used to improve vigor and nutrition in pastures. Ponds are constructed to provide water for wildlife. These treatments will provide improved habitat condition for a variety of wildlife including elk, bear, deer, turkey, rabbits and a variety of non-game species.

Habitat associations being emphasized include xeric oak associates, fire dependent species, and early-successional habitat associates. The conditions provided are suitable for elk, prairie warbler, quail, wild turkey, and whitetail deer. This will provide a high likelihood that species within these habitats will continue to persist on National Forest System lands.

Scattered within the Wildlife Emphasis MA are small vegetative communities more applicably managed with pine, oak, and mixed forest woodland types with high quality forest products prescriptions. Although wildlife management is the overriding theme of this management area, these other management prescriptions may be utilized.

The landscape character is open with a prairie-like ground cover with sparse overstory intermixed with openings, pastures, and ponds with closed canopy forest mainly on north and east slopes. Evidence of man's involvement is moderately evident. These areas will provide a variety of recreational opportunities, mostly non-motorized. The sights and sounds of human activities along main travel corridors is evident in many parts of these areas. Visitors are able to choose from a wide variety of non-motorized dispersed recreation opportunities such as hiking, mountain bike riding, horseback riding, rock climbing, enjoying nature study, hunting, and fishing.

Priorities

- ▶ Work with Arkansas Game and Fish Commission (AGFC) and other partners to provide elk habitat.

MONITORING

Monitoring and Evaluation

The concept of adaptive management is foundational for planning and forest plan implementation in a dynamic environment. Regulations require that forest plans be revised periodically [36 CFR 219.10(g)]. However, forest plans may need to be more dynamic to account for changed resource conditions (such as large storms or insect outbreaks), new information, new findings of science, and/or new regulations or policies. An effective monitoring and evaluation (M&E) program is essential for determining when these needs may exist and leading to quick resolution of a need for change. M&E provide information to determine whether programs and projects are meeting forest plan direction, and whether the cost anticipated to implement the forest plan coincides with actual costs. M&E is required by NFMA implementing regulations [36 CFR 219.12(k)] to determine whether requirements of the regulations and Forest Plan are being met.

M&E are separate, sequential activities. Monitoring involves collecting data by observation or measurement. Evaluation involves analyzing and interpreting monitoring data. The information gained from M&E is used to determine how well the desired conditions, priorities, objectives, and outcomes of the Forest Plan have been met. M&E keeps the Forest Plan up-to-date and responsive to changing conditions and issues. This process provides the feedback mechanism for adaptive management. The results are used to identify when changes are needed to either the Forest Plan itself or the way it is implemented.

Monitoring Strategy

Mandatory monitoring is included first in the monitoring summary tables (Appendix I) followed by specific forest plan monitoring. Forest Plan M&E measures accompany many plan components in Chapters 1 and 2. This includes actions, outcomes, or resources to monitor, the frequency of monitoring, and reporting timelines. Chapter 1 includes monitoring items for monitoring of desired conditions. Chapter 2 includes performance indicators to measure Forest Plan objectives, desired conditions, and monitoring for management areas. Chapter 3 includes Forest Plan standards.

Some monitoring requires a high degree of precision and reliability, usually within ten percent. Other monitoring may be moderate (within 30%) or low (within 50%). Most of the performance measures tied to objectives (Chapter 2 of the Plan) are derived from corporate databases (e.g., those that track timber sales, prescribed burning, and other vegetation management activities) that have a high level of precision and reliability. Initially, the precision and reliability of some of the monitoring data concerning the major forest communities listed in Chapter 1 of the Plan will not be optimal, due to the transition from a long-standing vegetation inventory protocol (Continuous Inventory of Stand Conditions or CISC) to a new one that incorporates these newly-recognized ecological communities.

Monitoring adherence to the design criteria (standards) in Chapter 3 includes many diverse activities such as contract compliance inspections, implementation monitoring reviews of selected projects, individual specialist reviews of project compliance with particular sets of standards, health and safety inspections (of buildings, bridges, etc), and interdisciplinary reviews of selected environmental assessments (EAs). Two or more of these means will monitor implementation of some standards. The primary means of reporting and evaluating compliance with design criteria will be the results of implementation monitoring reviews and individual specialist reviews. Both types of reviews will have moderate to high degrees of precision and reliability.

This Forest Plan does not specify particular protocols for each element of the monitoring program. Such protocols are well established for most monitoring elements; however, protocols are subject to change as new findings emerge, new technologies become available, and/or partnerships with other agencies and organizations produce improved methods or procedures for monitoring. Each specialist responsible for one or more monitoring elements maintains and, as needed, appropriately adjusts the monitoring protocol(s). Specific monitoring protocols are defined in the task sheets, which are detailed and specific. Monitoring elements and task sheets may be modified and prioritized to guide monitoring activities over the course of Forest Plan implementation.

An annual evaluation report that summarizes monitoring results and findings will be prepared and made available to the public. The emphasis of this report will be on those results of monitoring that indicate how well objectives have been met, how well standards have been followed, what progress is being made toward desired conditions, what expenditures have been made to implement the Forest Plan, and what changes to the Plan may be needed. This report will not present information every year about each monitoring element in the Forest Plan because some monitoring activities are not conducted every year, and others may not yield results that need to be reported annually. The comprehensive evaluation reports called for by the 2005 NFMA planning rule (36 CFR 219) will be prepared every five years.

The monitoring summary tables located in Appendix I show the relationships between Forest Plan priorities, objectives, standards, and desired conditions. The tables indicate the nature of monitoring elements and monitoring details. The monitoring summary tables are for information only and may be modified as needed to address changes in needs, priorities, availability of personnel, and funding.

Monitoring Framework

Many approaches to Forest Plan monitoring are currently being used throughout the Agency. However, each monitoring chapter must 1) meet the legal requirements of the planning regulations, 2) be consistent with corporate data standards and protocols, and 3) be developed by an interdisciplinary team that addresses the ecological, social, and economic dimensions of forest management in an integrated manner.

To meet these objectives, the Ozark-St. Francis National Forests monitoring framework has four components:

- ▶ Forest Plan (Chapters 1, 2, and 3) provides desired conditions, strategies, and design criteria (standards) that provide broad, strategic guidance.
- ▶ Monitoring and Evaluation Task Sheets that provide specific, technical guidance.
- ▶ An Annual Monitoring Schedule that outlines specific tasks for the current year.
- ▶ An Annual Monitoring Evaluation Review that provides a forum to review current year findings and identify specific modifications, if necessary.

These components are explained in Table 2-11.

Table 2-11: Explanation of Monitoring Framework.

Description of Forest Plan Monitoring Summary Tables (Appendix I)	Monitoring Task Sheets	Annual Monitoring Schedule	Annual Monitoring Evaluation Review
Broad and Strategic. Provide the monitoring requirements in the Forest Plan. Focus on what needs to be monitored. Provide Overall Monitoring Strategy (What will be monitored, Estimated time frames for reporting, and Precision and Reliability)	Focused and Technical. Describe how, where, and when to achieve the monitoring. Provide the specific methods, protocols and analytical procedures. Intended to be flexible/can be modified in response to new information, updated procedures, emerging issues, and budgetary factors without amending the Forest Plan.	Specific, Technical, and Prescriptive. Identifies precisely what will be monitored, where, when, and by whom for the current or upcoming year. (usually prepared by the Forest ID Team).	Specific, Technical, and Prescriptive. Forest ID Team will review the current year’s monitoring and evaluation results at the end of each calendar year. Based on these findings, they will recommend to the Forest Leadership Team necessary changes (if any) to the Forest Plan, or Forest Service Manual or Handbook.

Information Management

There will be a tremendous amount of monitoring information collected over time. Information will be handled using the following criteria to ensure that information can be easily retrieved, shared with publics and/other stakeholders, or used by agency managers to make improved decision: (1) Management of the collection and storage of data (2) Evaluation and interpretation of data (3) Sharing of information internally and externally.

Manage the Collection and Storage of Data

The interdisciplinary team review will work with Forest Service employees and cooperators to see that data is collected using standard methods and is entered into the appropriate databases. Data will be designed and collected according to appropriate data standards and entered into corporate databases such as Automated Lands Program (ALP), Natural Resource Inventory System (NRIS), or Geographic Information System (GIS). The information can then be accessed and analyzed to generate products such as monitoring reports that would be available for internal and external review.

Evaluation and Interpretation of Data

Evaluation is the process of transforming data into information. It is a process of synthesis that brings together value, judgment, and reason with monitoring information to answer selected questions. Successful adaptive management depends on this information in moving the Forest toward desired conditions.

The Forests' ID team will review the current year's monitoring and evaluation results at the end of each calendar year. Based on these findings they will recommend to the Forest Leadership Team necessary changes (if any) to the Forest Plan, Monitoring Guide, or Forest Service Manual or Handbook.

Sharing of Monitoring Information and Findings

Information gathered through monitoring will be summarized in various reports (most notably the annual Monitoring and Evaluation Report) and publication to share internally and externally with cooperating agencies and organizations, interest groups, policy makers, and the public.

Annual Monitoring and Evaluation Report

The annual M&E report provides an opportunity to track progress toward the implementation of the Revised Forest Plan decisions and the effectiveness of specific management practices. The focus of the evaluation is to provide short- and long-term guidance to ongoing management. The M&E report should include components such as:

- ▶ Forest accomplishments toward desired conditions and outputs of goods and services.
- ▶ Forest Plan Amendment Status.
- ▶ Status of other agency/institution cooperative monitoring.
- ▶ Summary of available information on MIS or comparable species.
- ▶ Summary of large scale or significant projects or programs.
- ▶ Update of research needs.
- ▶ Public participation/disclosure plan.

Monitoring Summary Table

The Monitoring Summary Table in Appendix I lists the major items to be monitored. The focal point for each monitoring item is the monitoring need. Each monitoring item comes from one or more monitoring needs (legal requirements, desired conditions or objectives. See Table I-1 for definitions.

SUITABLE AND UNSUITABLE LAND USES

As provided for in 36 CFR 219.4(a)(4), the national forests and grasslands are suitable for a variety of uses except when specific areas are determined not to be suitable. Table 2-12 shows where specific uses are "suitable" or "not suitable" on the OSNFs. Suitable uses are subject to standards and other direction in the design criteria portion of the Plan.

Table 2-12: Suitable Uses on the Ozark-St. Francis National Forests.

Management Area	Timber Suitability	OHV Use	Motorized Trail Construction	Livestock Grazing	Mineral Leases
1.A Designated Wilderness	Not Suitable	Not Allowed	Not Allowed	Not Suitable	Withdrawn
1.B Wilderness Additions	Not Suitable	Not Allowed	Not Allowed	Not Suitable	Withdrawn
1.C Designated Wild and Scenic Rivers	When Justified	Not Allowed in Wild Sections Allowed in Rec. and Scenic-Designated Roads and Trails	Not Allowed in Wild Sections Allowed in Rec. and Scenic Sections	Suitable No New	Withdrawn from Wild Sections. CSU/NSO for Scenic Sections. CSU for Recreational Sections*
1.D Recommended Wild and Scenic Rivers (sections all scenic)	When Justified	Allowed-All sections are Scenic	Allowed-All sections are Scenic	Suitable No New	CSU/NSO for Scenic Sections
1.E Experimental Forests	When Justified	Designated Roads and Trails	Not Allowed	Not Suitable	Controlled Surface Use
1.F Research Natural Areas	Not Suitable	Not Allowed	Not Allowed	Not Suitable	No Surface Occupancy
1.G Special Interest Areas	When Justified	Designated Roads and Trails	Allowed When Justified in SIA Plans	Not Suitable	No Surface Occupancy
1.H Scenic Byway Corridors	Suitable	Designated Roads and Trails	Allowed	Suitable No New	Controlled Surface Use
2.A Ozark Highlands Trail	When Justified	Not Allowed	Not Allowed	Not Suitable	No Surface Occupancy

Table 2-12: Suitable Uses on the Ozark-St. Francis National Forests. (Continued)

Management Area	Timber Suitability	OHV Use	Motorized Trail Construction	Livestock Grazing	Mineral Leases
2.B State Parks	When Justified	Designated Roads and Trails	Subject to terms in Special Use permit	Not Suitable	No Surface Occupancy
2.C Developed Recreation Sites	When Justified	Allowed in Designated Areas	Allowed when in support of adjacent trail systems	Not Suitable	No Surface Occupancy
2.D Upper Buffalo Dispersed Recreation Area	Suitable	Not Allowed	Not Allowed	Suitable No New	Controlled Surface Use
2.E Wedington Unit Urban Recreation Area	Suitable	Not Allowed	Not Allowed	Suitable	Controlled Surface Use
2.F Indian Creek Dispersed Recreation Area	Suitable	Designated Roads and Trails	Allowed	Suitable No New	Controlled Surface Use
3.A Pine Woodland	Suitable	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use
3.B Oak Woodland	Suitable	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use
3.C Mixed Forest	Suitable	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use
3.D Oak Decline Restoration Areas	Suitable	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use
3.E High Quality Forest Products	Suitable	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use
3.F Old Growth Area	Suitable	Designated Roads and Trails	Allowed	Suitable No New	Controlled Surface Use
3.G Crowley's Ridge Upland Hardwood	Suitable	Not Allowed	Not Allowed	Suitable	Controlled Surface Use
3.H Mississippi River Bottomland Hardwood	Suitable	Not Allowed	Not Allowed	Suitable	Controlled Surface Use

Table 2-12: Suitable Uses on the Ozark-St. Francis National Forests. (Continued)

Management Area	Timber Suitability	OHV Use	Motorized Trail Construction	Livestock Grazing	Mineral Leases
3.I Riparian Corridors	Suitable	Designated Roads and Trails	When Justified	Suitable	Controlled Surface Use
3.J Pastures and Large Wildlife Openings	When Justified	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use
3.K Wildlife Emphasis Area	Suitable	Designated Roads and Trails	Allowed	Suitable	Controlled Surface Use

Note: "When Justified" is used to identify a management area that is neither "exclusively suitable" nor "exclusively not suitable." The suitable use designation is made at the project level and is subject to laws, regulations, plan direction, and standards.

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