

**Development of Alternatives
for the Revision of the
Wayne National Forest
Land and Resource Management Plan**

**Athens, Gallia, Hocking, Jackson, Lawrence, Monroe,
Morgan, Noble, Perry, Scioto, Vinton and Washington Counties,
Ohio**

October 2003

"The U. S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer."

Developing Alternatives - Summary

The Wayne National Forest Plan (*Forest Plan*) Revision process is entering the *Alternatives Development* stage. Alternatives address management issues in different ways. Each alternative represents a reasonable way to address the issues that are discussed in the document “Identification of Issues for the Revision of the Wayne National Forest Land and Resource Management Plan”.

These management issues were developed from:

- Experience gained from implementation of the current *Forest Plan* since it was completed in 1988
- Analysis of the current management situation of the Forest’s various resources
- New information that has become available since 1988
- Input from the public

The six issues that are guiding the *Forest Plan* Revision process are:

1. Watershed Health
 - Restoration of watersheds impacted by coal mining
 - Protection of streams and riparian areas
2. Vegetation Management
 - Providing a variety of habitats for animals and plants
 - Maintenance and restoration of the mixed-oak ecosystem
 - Control of non-native invasive species
 - Vegetation management tools including commercial timber sales, prescribed fire, and pesticides (e.g., herbicides, insecticides)
3. Recreation Management
 - Providing a variety of recreation opportunities
 - Off-road vehicle use
 - Protection of scenic values
 - Protection and interpretation of cultural/heritage/archaeological resources
4. Land Ownership
 - Land acquisition
 - Boundary line establishment and maintenance
5. Minerals Management
 - Leasing of federally owned mineral rights for oil and gas extraction
 - Management of national forest surface owned lands under which there are privately held mineral rights

6. Roadless Areas, Wilderness and Wild and Scenic River Recommendations

- Roadless Area inventory and evaluation
- Wilderness Area recommendation
- Wild and Scenic River recommendation

Forestland can be managed in many different ways. It can be managed strictly for preservation with only natural disturbances permitted, as national parks are managed. It can be managed to maximize fiber production, as is done on some industrial forestland. It can be de-forested and converted to residential, commercial or industrial use. The alternative management strategies that can be implemented on national forests are restricted to a more narrow range by laws and regulations regarding national forests, which require multiple use of these lands. Alternative range may be further restricted by public opinion about how best to balance competing demands on the national forests.

This paper describes what the Forest Service believes are the appropriate ways to construct alternatives that address the issues. Some issues or parts of issues are best addressed in same way across all alternatives. Other issues or issue components can reasonably be addressed in a variety of ways. Table 1 summarizes how the Forest Service believes the issues should be addressed in alternatives. Public input on alternative development and further analysis will determine if the alternative development strategy described here needs to be modified.

Alternatives that will be analyzed in detail in the Draft Environmental Impact Statement for the Revised Forest Plan will be reasonable ways to address all the issues. For instance, there will not be a set of alternatives to address the vegetation management issue and a separate set of alternatives to address minerals management. An example of a comprehensive alternative that could be developed is: emphasis on providing habitat for mature forest dependent species, a greater amount of allocation to management areas with no surface occupancy for oil and gas development, and emphasis on providing areas for semi-primitive non-motorized recreation. This alternative would have several features in common with all the alternatives considered in detail, such as updating watershed direction and not recommending any areas for wilderness designation.

Planning regulations require that one of the alternatives considered will be current *Forest Plan* direction (including amendments). This is defined as the “No Action” alternative. All other alternatives can together be referred to as “action” alternatives.

Table 1. Summary of How Alternatives Address the Issues.		
Alternative Components by Issue	Varies by Alternative	Same for All Alternatives
Watershed Protection		
Update direction for abandoned mined lands restoration		X
Update direction for protection of riparian areas		X
Vegetation Management		
Desired future conditions regarding extent and location of forest-type and grasslands, age-class distribution, and canopy closure	X	
Areas allocated to even-aged management, uneven-aged management and no timber management	X	
Update direction and treatment objectives for the maintenance and restoration of the mixed oak ecosystem	X	
Update direction for the control of non-native invasive species		X
Projected levels of vegetation treatments	X	
Recreation Management		
Areas allocated to all-terrain vehicle (ATV) and off-highway motorcycle (OHM) trails		X
Clarify projected mileages of trail construction		X
Areas with semi-primitive non-motorized recreation experience objective	X	
Land Ownership		
Update direction to provide for growth and development of communities within the proclamation boundary		X
Minerals		
Management areas with no surface occupancy (NSO) stipulation	X	
Provide direction for determining NSO stipulation for specific tracts within management areas that generally do permit surface occupancy		X
Remove analysis process discussion of Amendment 8		X
Update direction for surface management of lands with underlying reserved and outstanding minerals rights		X
Update direction for management of coal resources		X
Roadless Areas, Wilderness, and Wild and Scenic Rivers		
No areas recommended for wilderness designation		X
No river segments recommended for Wild, Scenic or Recreation River designation		X

National Forest Planning

National forest planning is similar to city or county planning—determining which uses will be permitted or emphasized, where, and under what restrictions. There are four basic components to forest planning:

- Deciding what the desired conditions are for the planning area
- Delineation of management area boundaries on the forest
- Defining forest-wide and management area specific direction
- Defining a monitoring and evaluation strategy, and updating forest plan direction as monitoring results and changing conditions or demands dictate

Desired Future Conditions

The Forest Service has the responsibility of managing the Wayne National Forest to provide a combination of wildlife and plant habitats, natural resource protection and production, and recreational opportunities that best meets the needs of people now and in the future. Through participation in the *Forest Plan* Revision process, the public and the Forest Service work together to identify how we want the Forest to be now, and into the future. This can be compared to the process of city or county planning: to design city zoning, there must first be agreement among the public and planners on some general vision for the future of the city.

Management Areas – Dividing the Forest into management areas is comparable to city or county zoning. Each management area emphasizes specific uses and defines a unique desired condition. The primary emphases for the management areas in the current *Forest Plan* are summarized in Table 2.

Forest-wide and Management Area Direction – Forest-wide and management area direction can be compared to zoning restrictions—providing the “what” can be done and the “how”, to go with the “where” of the management areas. Some direction is called “Forest-wide” because it applies to the entire Wayne National Forest. An example is protection of archeological resources, which are protected in the same way in every management area. Some other management direction applies only to a specific management area. For example direction regarding all-terrain vehicle trails only applies to the management areas that permit such trails. Table 3 describes key management direction associated with each management area in the current *Forest Plan*.

Monitoring and Evaluation/Updating Plan Direction

Forest Service managers recognize that natural ecosystems and social and economic systems are more so complex that they can never be entirely understood or predicted. Management decisions cannot be postponed until understanding is perfect, both because complete knowledge will never occur, and because deciding to do nothing is still a management decision. Forest plans incorporate monitoring regimes to determine if management is being implemented as intended, and if that management is having the intended results. Forest plans are intended to be modified (amended or revised), as monitoring, changing public demand, or new information indicate the need to do so. It is also useful to consider that we are working with very resilient ecosystems: the trees that today cover the Wayne have grown back following extensive and often repeated clearing for settlement, farming, mining, and harvest for fuelwood and timber.

Table 2. Management area direction in the current Forest Plan.	
Management Area	Primary Emphasis
2.1	Streamside forest – protect scenic and recreation values
2.2	Roaded natural non-motorized recreation, uneven-aged timber management
2.3	Low density off-road-vehicle trails, uneven-aged timber management
3.1	Even-aged/short rotation timber management
3.2	High density off-road-vehicle trails, even-aged/short rotation timber management
3.3	Even-aged/longer rotation timber management
6.1	Semi-primitive recreation, uneven-aged timber management
6.2	Natural forest – protection, only natural disturbance; semi-primitive non-motorized recreation
7.1	Developed recreation – campground, picnic areas, etc.
8.1	Research Natural Areas (RNAs) – protection to provide baseline information for research
8.2	Special areas - protection
9.2	Candidate RNAs and special areas - protection

Table 3. Management Area (MA) acreages and some key management area direction in the current *Forest Plan*.

MA	Acres	Percent of Forest	Even-aged Timber Mgmt./ Rotation Age*	Uneven-aged Timber Mgmt.*	No Timber Harvest**	ORV Use Permitted	No Surface Occupancy Oil/Gas
2.1	8,263	3.5		X			
2.2	12,773	5.4		X			
2.3	19,850	8.4		X		X	
3.1	57,266	24.2	X/80				
3.2	25,034	10.6	X/80			X	
3.3	74,881	31.6	X/120				
6.1	12,656	5.4	X/120				
6.2	18,543	7.8			X		X
7.1	1,222	0.5			X		X
8.1	94	0			X		X
8.2	2,901	1.2			X		X
9.2	3,403	1.4			X		X
Totals	236,886	100.0	72%	17%	11%	19%	11%

* Current Plan direction established in Amendments 11 and 13 permits only thinning and selection harvests, which essentially implies all management will be toward uneven-aged forest.

** Limited harvest may occur in these management areas to promote the primary objectives of these areas. For instance some timber salvage could occur in developed recreation areas to enhance public safety.

Alternative Range by Issue

This section describes how the Forest Service believes the alternatives should address the issues. Based on monitoring, analysis of the Forest's resources, and public input, direction in the current *Forest Plan* that may need to be changed has been identified. Some issues or parts of issues are best addressed in the same way across all alternatives. Other issues or issue components can reasonably be addressed in a variety of ways. A summary of the rationale for the proposed alternative range is provided. Additional information is available in other documents in the planning record including the Identification of Issues, the Analysis of the Management Situation, Species Viability Evaluations, and the Social and Economic Assessment of the Wayne National Forest.

1. Watershed Health

All action alternatives will include the same updated direction for watershed management including:

- Establish goals and objectives to guide the Forest's abandoned mine lands restoration program.
- Clarify terms and definitions used in riparian area management.
- Update guidelines for delineation of riparian areas.
- Establish desired future condition and goal statements, and Forest-wide standards and guidelines to protect, restore, and improve riparian structure and function, and riparian-dependent resources.

Watershed health includes treatments to protect and restore in-stream conditions and the associated riparian areas. Active stewardship of the land and water within the Wayne National Forest is fundamental to protecting and restoring watershed health. Management activities that protect and improve upland and riparian areas benefit aquatic resources within and downstream of the Forest's boundaries.

Restoration of abandoned mine lands has been ongoing. Management emphasis has shifted from treatment of eroding uplands to the treatment and elimination of acid mine drainage. Current *Forest Plan* direction on abandoned underground coal mines does not reflect this shift in emphasis.

Project implementation and monitoring has indicated that current *Plan* direction for protection of streams, riparian areas and floodplains can be improved by including management direction to better protect and restore their structure and function in the landscape. In addition to providing clearer definitions and delineation methods for these resources, *Forest Plan* direction could be enhanced by incorporating conservation approaches for species whose continued viability is potentially a concern, and by updating wetland and stream restoration guidance.

2. Vegetation Management

Alternatives will be considered for desired future conditions (DFC) and treatments of forested area ranging between the current *Forest Plan* (before Amendments 11 and 13) and the *Forest Plan* as currently amended. The ranges of DFC and treatment levels in the current *Forest Plan*, before and after amendments, are summarized in Tables 4 and 5. Greater areas of some types of treatments, such as thinning harvest and prescribed fire may be considered, if necessary to move toward desired future conditions. Alternatives will provide updated direction and various levels of treatments to provide both various mixes of wildlife habitat, and different levels of emphasis on the restoration and sustainability of the mixed oak ecosystem.

Table 4. Comparison of the desired future condition of forest age classes between the Forest Plan (before amendments) and the Forest Plan (after amendments).		
Age Class	DFC <i>Plan</i> (Before) Percent of Suitable* Acres	DFC <i>Plan</i> (After) Percent of Suitable* Acres
0-9	8.2	
10-39	24.7	
40-79	32.4	
80-99	7.5	
100+	7.6	
Uneven-aged	19.5	100**
* When the current Forest Plan was completed in 1988, 71% (210,723 acres) of the Forest was classified as suitable for timber production, and 29% was classified unsuitable.		
** The amended Forest Plan does not actually state this change in desired age class distribution, but it can be inferred from the types of harvesting techniques that are to be employed. See following table.		

Table 5. Comparison of the projected annual harvest (by harvest category) between the Forest Plan (before amendments) and the Forest Plan (after amendments).		
	<i>Plan Before Amendments</i> (Acres)	<i>Plan After Amendments</i> (Acres)
Average Annual Acres of Clearcut Harvest	410	0
Average Annual Acres of Shelterwood Harvest	100	0
Average Annual Acres of Commercial Thinning Harvest	60	50
Average Annual Acres of Selection Harvest	280	450

All action alternatives will include updated direction for the control of non-native invasive species, and the re-establishment of native species such as American elm and American chestnut, as disease resistant varieties become available.

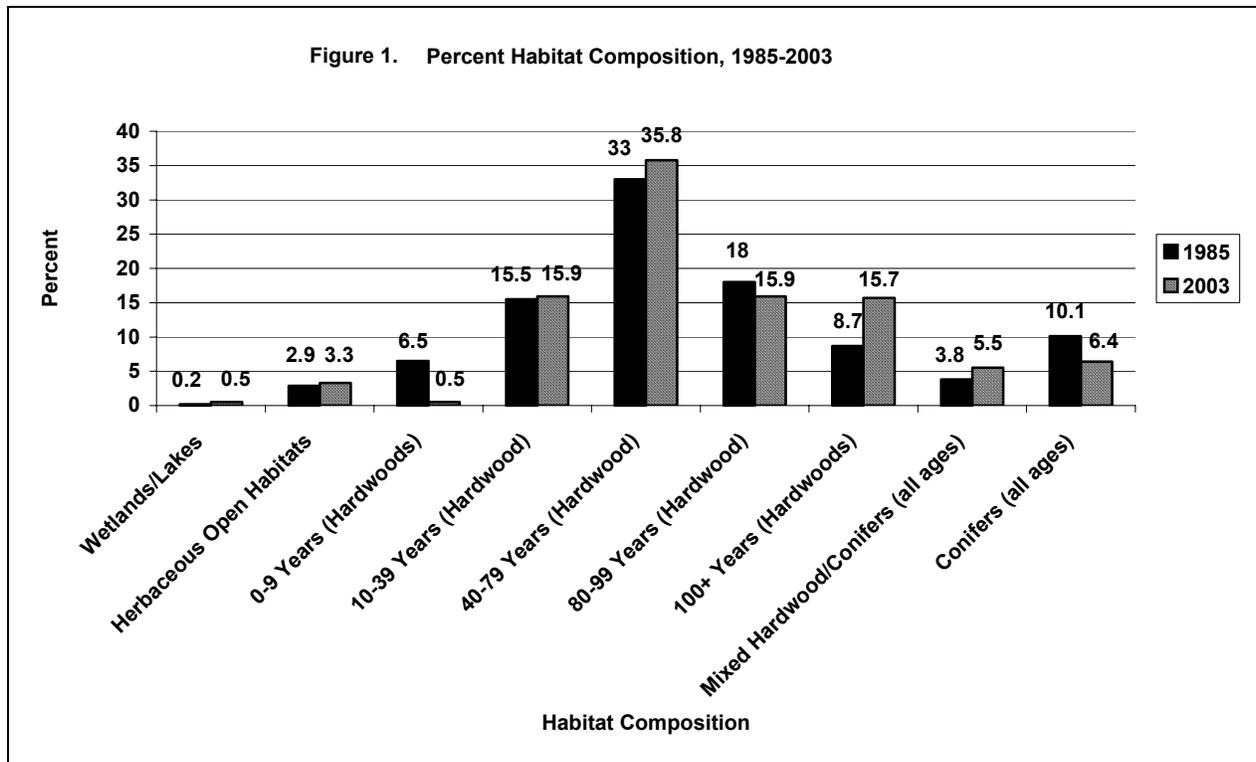
The key laws and regulations governing vegetation management require that national forests provide well-distributed habitats to maintain viable populations of native and desired non-native animals and plants. In response to this requirement the Forest Service has worked with expert panels to identify species whose continued viability may be at risk now or in the future. A “species viability evaluation” (SVE) for each of these species has been prepared. The SVEs validate current *Forest Plan* direction in that a variety of habitats is needed to provide for the species for which there may be viability concerns. Habitats needed by species with viability issues include healthy streams and riparian areas, grasslands, young forest, middle-aged forest, and mature forests.

While it is required that national forests provide for **viability** of all species, it is obvious that **optimum** habitat or viability cannot be simultaneously provided for all species. For instance providing optimum habitat for grassland species would require converting all forested areas to grasslands, and maintaining those areas in grass cover. This would not provide for viability of any of the species that require forested habitat.

Before European settlement forest habitat was much more extensive than at present. It is estimated that Ohio was about 95% forested before 1800, dropped to about 10% forest cover by 1940, and has since increased to about 30% forest cover now. The entire eastern hardwood forest has followed this same trend. Habitat diversity was present over the extensive pre-settlement forests, and provided for the viability of the plant and animals species that evolved with them. Habitat diversity occurred because of the combination of varying ecological conditions and disturbance factors. These included natural disturbances such as wind and ice storms, insect and disease outbreaks, and beaver. In addition to natural disturbances, Native Americans also modified habitats for thousands of years through disturbances including fire, and clearing for agriculture, with subsequent abandonment of fields and forest re-growth.

Present-day forest managers are charged with providing habitat for viability of remaining animal and plant species on a much smaller forested land base, so that it may not be feasible to simply permit natural disturbances to provide all the habitat variety required for viability of all native species.

It is argued by some that the alternative range should be extended to include an alternative with no commercial timber harvest. This assumes that the needs of early succession habitat-dependent species can be adequately met by openings occurring as a result of natural disturbances, or that these needs can and should be met on lands other than the Wayne National Forest. Figure 1 indicates that early succession habitat has virtually disappeared on the Wayne since even-aged management was suspended on the Forest around the mid-1990s.



While the structure of the forest is important, research indicates that size of habitat patch and the arrangement of habitat across the landscape are also important considerations for viability. At least some of the species dependent on each of the forested age-class groupings are reported to be sensitive to the size of habitat patch, with larger patches providing better habitat. For instance the suggested minimum area to provide for successful breeding of the cerulean warbler are blocks of mature forest at least 1700 acres in size. Similarly, the prairie warbler needs areas of shrubland habitat at least 8-10 acres in size, scattered within larger blocks of forest. Species viability evaluations showed that an option to consider would be to consolidate mature, interior forest and regenerating forest into larger blocks. This would maximize the utility of the resulting habitat for both mature forest and early successional shrubland species.

Starting about 1920, fire suppression has largely eliminated fire from Ohio’s forests. As a result of the lack of fire and increasingly dense overstories, fire-intolerant and shade tolerant species, especially maple, cherry and tulip popular have become predominant in the understories in much of the Forest. With continued fire suppression and no other active management, much of today’s oak forest will gradually convert to the more fire-intolerant and shade-tolerant species.

Extensive ecological change is caused by non-native invasive species (NNIS). Such species have been transplanted outside their original range, so they often lack natural controls, such as diseases, predators or parasites. This allows them to out-compete, and in some cases nearly completely replace, more sensitive native plant and animal species. Worldwide, NNIS are considered to be the second-leading threat to biodiversity; only habitat loss is a greater threat. Forty-two plant species that have been targeted by the State of Ohio, The Nature

Conservancy, or Region 9 of the USDA Forest Service as currently or potentially invasive may occur on the Wayne. These invasive plants include kudzu, purple loosestrife, multi-flora rose, Japanese honeysuckle, garlic mustard and tree-of-heaven. These plants often completely dominate their niche (e.g. understory shrub layer or herbaceous layer) crowding out native wildflowers, hindering native tree regeneration, and altering wildlife habitat.

The most significant invasive insect is the gypsy moth, which has been identified within the National Forest. The gypsy moth often causes heavy defoliation and extensive tree mortality. Its preferred hosts are oaks, so it has the potential to exacerbate the ongoing decline of oaks relative to more fire-intolerant and/or shade-tolerant species.

3. Recreation Management

As noted in the Identification of Issues paper, the most contentious recreation issue addressed in the current *Forest Plan* is management of off-road-vehicles. Public comment indicates there is still much interest in how ORVs are managed on the Wayne. The ORV management strategy of the current *Plan* still reflects a broad public consensus about how best to balance demand for ORV use on the Forest, with the impacts such use can have on resources and other users. Therefore, it is not envisioned that alternatives to the current allocation of Management Areas 2.3 and 3.2 (totaling about 19% of the Forest) to ORV use, nor the current requirement that ORV use be limited to trails designated for their use, will be considered.

All action alternatives will update the objectives section of the *Plan* that projects miles of trail to be constructed, including opportunities for mountain biking. All the action alternatives will also add direction to consider converting roads targeted for closure to four-wheel drive routes. Finally, the action alternatives will add direction to deter illegal ORV use through improved trail design, signing, user education, and law enforcement.

The one facet of recreation that would vary among the action alternatives is the area with an objective of providing semi-primitive non-motorized recreation experiences. These areas are located in Management Areas 6.1 and 6.2 in the current *Forest Plan*. These, or similar management areas, could vary in the action alternatives, both to meet different wildlife habitat goals, and to provide different levels of opportunity for semi-primitive non-motorized recreation.

4. Land Ownership

The action alternatives will not vary from current *Plan* direction in terms of recognizing the critical importance of continued land acquisition to increase the proportion and consolidation of national forest ownership within the proclamation boundaries. The action alternatives will

consolidate land ownership direction currently found in various sections of the Plan, appendices, and amendments and the Forest's Lands Program Strategy. The principles in this direction will remain:

- Acquire land only from willing sellers
- Work with local communities to facilitate reasonable development
- Strive to survey, mark and maintain National Forest/private land boundaries

Despite an active land acquisition program, the Wayne still has one of the most fragmented ownership patterns of any national forest: currently 24% National Forest ownership within the proclamation boundary of the Marietta Unit; 27% within the Athens Unit; 33% ownership within the Ironton Ranger District; and 28% for the Forest as a whole. The fragmented ownership pattern of the Wayne complicates resource protection and management. It also results in a high total mileage of boundary lines between national forest and private ownership, currently nearly 2000 miles.

While the Wayne's land acquisition program continues to be the subject of considerable public and political interest, analysis of local property tax statistics indicates that National Forest ownership does not reduce tax bases and school funding as compared to undeveloped privately-owned forested land.

5. Minerals Management

Mineral resources direction in the current *Forest Plan* includes:

- Availability of federally owned mineral rights.
- Delineation of areas where no surface occupancy (NSO) is permitted for oil and gas development (i.e. extraction is limited to directional drilling from outside the NSO area).
- A three-step oil and gas leasing/development process, in Plan Amendment 8.
- Provision of access to owners of privately owned (outstanding and reserved) minerals rights underlying national forest surface ownership.
- Management of federally and privately owned coal rights.
- Management of non-energy minerals.

Table 6. Summary of how the action alternatives address the minerals issue.		
Minerals Management Direction	Alternatives Same	Alternatives Vary
Administrative availability of federally owned minerals	X	
NSO by management area		X
Direction for NSO determination on specific tracts	X	
Remove process discussion	X	
Update surface management direction for access to outstanding and reserved rights	X	
Update management direction for coal rights	X	

The entire federally owned mineral estate (primarily oil and gas) is administratively available for leasing under the current *Forest Plan*. Law and regulation direct that federally owned minerals should generally be available for leasing, and that administrative availability is to be withdrawn only under special circumstances, such as in designated wilderness. There is currently no wilderness on the Forest, and it is not anticipated that there will be any recommendation for wilderness designation considered in the revision (see Issue 6 discussion). Therefore, alternatives to current direction on administrative availability of federally owned minerals are not envisioned.

Current *Forest Plan* direction is that NSO is applied to Management Areas 6.2, 7.1, 8.1, 8.2 and 9.2, totaling about 11% of the Forest. This is a key management decision, as it is the most protective management strategy for surface resources, short of withdrawing availability completely. Directional drilling is generally considered to be impractical by local oil and gas producers at current prices and with locally available experience, equipment and technology. Action alternatives will be considered that modify the area of NSO. Key factors that will be considered in NSO management area alternatives will be:

- laws and regulations promoting the availability of federal energy minerals for development
- the need to protect certain surface resources with NSO
- existing and potential development of outstanding and reserved mineral rights and current federal leases in areas considered for NSO

Direction will be added for determining where NSO should be applied to specific tracts, within management areas that generally do permit surface occupancy. All action alternatives will include direction that NSO will be applied to tracts where surface occupancy could not be accommodated without resulting in unacceptable damage to surface resources. Criteria for NSO on these tracts will include factors such as steep slopes, location in a floodplain, presence of cultural sites, presence of endangered or threatened plants or animals, and lack of public access.

The extensive oil and gas leasing process discussion of *Forest Plan Amendment 8* will be removed. Energy and environmental analysis regulations, and Forest Service manual and handbook direction, change often. It is preferable to simply state that pertinent laws, regulations and Forest Service direction will be followed in determining which tracts to consent to lease for oil and gas, and it is envisioned that all action alternatives will include such direction.

Current *Plan* direction regarding outstanding and reserved rights is limited to stating that the Forest Service is required by law to provide reasonable access for the exercise of such rights. Direction will be added in all the action alternatives to better indicate how to balance the need to provide access to privately owned mineral rights with the need to protect publicly owned surface resources.

There is little direction in the current *Plan* regarding federally owned coal rights. There is a potential for increased interest in such rights, given the current emphasis on domestic energy production and rising energy prices. Therefore, direction will be added in the action alternatives for management of federally owned coal rights, and for those privately owned rights beneath federal surface ownership. The Surface Mining Control and Reclamation Act of 1977 (SMCRA) prohibits surface coal mining on the Wayne, subject to valid existing rights or the exclusions in Sections 522 and 528 of the Act.

Demand for non-energy minerals on the Forest is minimal and is not expected to increase substantially. Therefore, no change in current direction for non-energy minerals is proposed.

6. Roadless Areas, Wilderness and Wild and Scenic River Recommendations

Alternatives that would include recommendations for wilderness designation, or recommendations for designation of Wild, Scenic or Recreation Rivers, are not envisioned.

The Forest was found to have no roadless areas in 1988. A new analysis in 2003 has determined that there are still no areas on the Wayne that meet roadless area standards. There is little potential to create areas on the Wayne that would meet roadless criteria because the Forest is extensively roaded, with most roads under state, county or township jurisdiction. Additionally, national forest and private surface and mineral rights ownership is very intermingled.

It should be noted that alternatives will be considered for the amount of area allocated to a recreation objective of semi-primitive non-motorized (SPNM). Alternatives will also be considered that vary in terms of area allocated to no timber management and no surface occupancy for oil and gas development.

The Forest's rivers have been studied to determine eligibility for Wild or Scenic River designation. These studies have not found any rivers to possess the outstandingly remarkable characteristics defined in the Wild and Scenic Rivers Act.