

Chapter III

**RESPONSE TO ISSUES
AND CONCERNS**



CHAPTER III RESPONSE TO ISSUES, CONCERNS, AND OPPORTUNITIES

A. INTRODUCTION

A major step in the development of this Plan was the identification of issues, concerns, and opportunities related to management of the Malheur National Forest. Public issues and management concerns were identified through citizen participation including public meetings, requests for comments, and personal contacts with individual members of the public, owners of adjacent private land, other agencies, local industry and conservation groups, and Indian tribes. Over 30 potential issues were identified. Some were beyond the jurisdiction of the Forest Service, resolved by existing laws, or best handled on a case-by-case basis. These were not addressed in this planning process. The remaining issues and concerns were then grouped based on common elements and similarities. The reader is encouraged to read Chapter I and Appendix A of the Final Environmental Impact Statement for a more detailed description of development of the issues. In the remainder of this chapter, the background of the issues is summarized and the response of this Plan to those issues is described.

B. RESPONSE TO ISSUES

Economic Stability

How will management of Forest resources affect local communities?

Background:

The Malheur National Forest comprises about 39% of Grant County's acreage and 5% of Harney County's acreage, as well as small acreages in Baker and Malheur Counties. Because of the substantial acreages, distinct economic ties, and the people's use patterns, the Forest's primary zone of influence has been determined to be Grant and northern Harney counties. Industries and communities in adjacent counties are also affected by resource management policies on the Forest.

Malheur National Forest policies have a direct impact on local, dependent industries which, in turn, affect business income, wages, employment, and revenues to the counties. The principal industries in the Forest's zone of influence are wood manufacturing, agriculture (i.e., ranching), and retail trade. These three industries account for about half of all employment in the area. Another large part of the economy is government employment, and much of that is also based on timber and livestock management.

Forest management activities and the resulting outputs influence job opportunities, incomes, and the way of life of the approximately 15,000 residents in local communities. Changes in Forest outputs and activities will affect the social and economic life of the local population.

Economic and community stability are acknowledged to be very important, and social stability is strongest when the local industries are healthy. Some people equate stability with a sustained supply of Malheur National Forest timber adequate to meet the demands of local industry. Others believe that the counties have been too dependent on timber manufacturing, and that a more diversified economy should be cultivated, including growth in tourism.

The Malheur National Forest also plays a role in county finances through payment of 25% of its revenues to the counties. This money, of which 99% is from timber-generated receipts, has a significant effect on the finances of county schools and roads. In 1989, Grant County received \$8.7 million and Harney County received \$2.3 million from Malheur National Forest receipts.

Forest Plan Response:

Alternative I strives to maintain economic and community stability. Under this Plan a sufficient mix of resource uses will be provided to meet foreseeable demand for most resource uses. Range outputs will decline slightly from recent use; however, the ranching industry will be provided with sufficient access to Forest forage to maintain most herd levels. This will assist in maintaining an industry which contributes to the social stability of the area. The selected alternative also produces an average annual allowable sale quantity (ASQ) of 200 MMBF. As the timber industry health is of paramount concern, the following discussion portrays the relationship of timber supply to local economic stability.

From 1980-1989, the average annual timber sold on the Malheur NF was 219 MMBF (ASQ). The selected alternative will make available an amount that is slightly (9%) below this level. The average annual harvest over the same ten years was 174 MMBF. This period has included the worst recession since establishment of the local timber industry (65 MMBF of net sawtimber harvested in 1982) to the highest recorded harvest (281 MMBF harvested in 1986) in Malheur NF history.

However, from 1970 through 1989, the average annual timber sale level (net volume, similar to ASQ) was about 198 MMBF. Average annual harvest for this time was 168 MMBF. This 20 year period of time gives a clearer picture of the long term timber supply history on the Malheur NF, as the extremes that have occurred within the last 8 years are moderated.

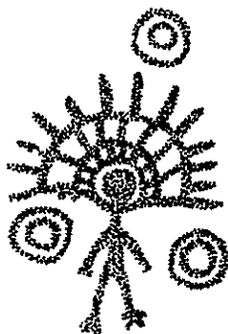
With only a slight decrease in the timber supply level over recent years (1980-89), and essentially the same as the long term average, a stable amount of raw material is projected to be available for timber industries within and adjacent to the Forest's zone of influence. This is expected to be a stable supply of timber in order to maintain local industries currently in place. This is virtually the same amount of timber that has been supplied annually over the last 20 years from the Malheur NF, and so should help to remain a cornerstone of a stable and predictable local economy. Competition is expected to intensify for the high quality, large diameter material (primarily ponderosa pine) available from the Forest during the life of this plan.

Local counties are attempting to provide a more diverse economic base, including an emphasis on tourism. This will depend to considerable extent on encouraging visitors to enjoy the natural scenic and recreational attractions of the area as well as its historical features. The National Forest will figure prominently in any such plans. These efforts to create a more diverse economic base can only help the overall economy in the long run.

This Plan manages noncommodity resources at a level which maintains the rural, forested setting important to local lifestyles, as well as providing a strong foundation for diversifying the economic base of the affected communities. Approximately 40% of the Forest will be managed under guidelines which do not include scheduled timber harvest. Much of this area will provide a recreation setting relatively free of human intrusions. Many other areas will be managed to meet other concerns important to Forest visitors, such as scenic travel corridors and big-game habitat. We will work with partners to develop and enhance recreational use of the Malheur National Forest and promote tourism in the area.

Frequently publics have commented that payments to counties must not be reduced. Returns to counties for schools and roads depend on the price of timber as much as on the amount sold because payments are based on receipts rather than harvest volume. Ponderosa pine is the most valuable species on the Malheur National Forest, thus this species influences payments to counties. The portion of ponderosa pine offered for sale must be reduced. It simply is no longer available in the amounts necessary to sustain annual harvest at past rates. This alternative emphasizes future harvest of ponderosa by reverting 75,000 acres of currently mixed conifer stands back to ponderosa pine type over the next 50 years. In addition the selected alternative schedules commercial thins in many ponderosa pine stands. This "thins" the stands, allowing the remaining stand more room to grow, thus gaining some harvest now and more rapid growth of the remaining stand. Both these efforts will help support a strong economic base for the future.

The Forest Plan provides a balance between commodity outputs and amenity resources that will contribute to economic stability of dependent communities, while maintaining the natural character and recreational settings desired by many of our publics. Decisions contained in the Forest Plan will affect communities. The Forest Service will work with communities to address these effects within the framework of the Pacific Northwest Strategy.



What level of sustained annual yield of timber products should the Forest provide while still maintaining Forest productivity and meeting local, regional, and national needs? How much timber land should be managed for wood fiber production, what species should be favored, and what management methods should be used to achieve the desired harvest level and species mix?

Background:

The Forest has been providing timber products to the local and national markets for over 70 years. The average annual total sale program quantity of timber sold over the last 10 years (1980-1989) has been 228 million board feet (MMBF) per year. The Malheur National Forest 1979 Timber Resource Plan called for an average net sell volume of 230 MMBF per year over the same decade. An analysis of the Forest's ability to produce timber indicates that the Forest could supply up to 59.2 MMCF (326 MMBF) per year on a nondeclining harvest schedule.

This could have future implications for the local timber industry which is almost totally dependent on the Forest for its supply of raw material, especially in view of the Forest and Rangeland Renewable Resources Planning Act (RPA), and national and regional projections for rising demands and prices in future decades. Local mills are maintaining a competitive market position currently by producing a quality ponderosa pine product.

The primary timber-producing species are ponderosa pine, Douglas-fir, western larch, lodgepole pine, and true firs. In the past, the majority of the volume sold has been from mature, open, ponderosa pine stands (69% of the total volume sold), especially those found in fairly level, easily roaded areas. Available areas for timber harvest are increasingly found in steeper areas forested predominantly with Douglas-fir, western larch, white fir, and grand fir. As timber stands are brought under management, trees of all species would be harvested at ages ranging from 50-150 years to maximize the utilization of the wood fiber production potential of the forest. Many trees are currently harvested at ages of 200 years and older.

Management of the timber resource interacts with every other resource on the Forest. The interrelationships are sometimes complementary, sometimes competitive, and sometimes mutually exclusive. Rising demands for other resource uses are increasing the complexity of timber management. The desire for old-growth habitat by groups such as the Izaak Walton League, Audubon Society, Oregon Department of Fish and Wildlife, Oregon Natural Resource Council, and Grant County Conservationists to meet the needs of specific plants and/or animal species or for other reasons would reduce the timber volume available to respond to national and regional demands and to maintain or expand the wood products industry in the community.

The management methods which would provide the largest amount of wood fiber to meet national demands would provide this wood fiber primarily in smaller diameter mixed conifer species. Although the local and sub-regional timber industry is anticipating and planning for this shift in product, some industry members express concerns because their mills are currently set up to process large diameter trees and they have a more favorable market position with ponderosa pine. Local residents, hunters, and forest visitors desire the appearance of mature, ponderosa pine stands and express concerns about the appearance and success of clearcuts on the Forest. County and State officials and private landowners emphasize the need for intensive management of the existing mixed conifer understory, particularly to reduce the losses related to western spruce budworm and other insect damage.

Competing demands for forest resources are exemplified by the demand for wilderness and roadless areas which preclude timber management. This is described in a separate issue.

Forest Plan Response:

This Plan schedules harvest on 835,970 acres (80% of those lands that were available and tentatively suitable for timber management). From these acres, an average annual ASQ is planned to be 34.8 MMCF (200 MMBF) over the next 10 years. An additional 3.6 MMCF (11 MMBF) per year of non-chargeable volume is expected to be harvested annually over the next decade in the form of salvage cutting, cull logs, and miscellaneous products such as firewood and posts and poles.

This 38.4 MMCF (211 MMBF) average annual total sale program quantity (ASQ, or chargeable volume, plus non-chargeable volume) is a decrease of 17 MMBF over the quantity sold during the past 10 years (1980-1989).

Timber outputs will be monitored and controlled on a cubic foot measure. The board foot volume associated with the cubic foot volume (i.e., the board foot/cubic foot conversion ratio) varies from stand to stand depending on the size and form of trees. Both board foot and cubic foot measure are displayed here since the board foot measure continues to be a customary unit of measure.

Of the ASQ, 16.1 MMCF per year (92 MMBF), or 46%, is expected to be ponderosa pine species. A significant component (about 30%) of this volume will be commercial thinnings. This is an immediate decrease of approximately 59 MMBF over the average annual pine (151 MMBF) volume offered from fiscal years 1980-1989. This decrease will bring the mix of species offered for sale closer to the mix reflected in the standing timber inventory. As intensive forest management occurs on forested lands managed for timber production, the amount of ponderosa pine offered for sale is expected to further decrease to 13.3 MMCF by 2039, 35% of the total sale volume. From the tenth decade on, ponderosa pine volume will increase to an average of 22.7 MMCF, an average of 59% of the total sale volume for decades 10 through 15.

Many publics, including the State of Oregon, emphasized the need to reduce even-aged management and placed a stronger emphasis on uneven-aged management. Our analysis shows that uneven-aged management techniques can be used to complement other resource objectives such as visuals, wildlife and riparian. For example, clearcutting (even-aged management) in riparian areas does not meet the riparian objective of providing stream stream shading, whereas selective cutting of individual trees or groups of trees (uneven-aged management) can occur while still meeting the riparian objective of stream shading. This is just one example of where uneven-aged management harvesting techniques can complement other resource objectives.

During the first decade, 64,242 acres (22%) will emphasize uneven-aged management, and 214,930 acres (78%) will emphasize even-age management.

Of the land scheduled for timber harvest, approximately 56% will be managed for a full yield of timber. Over the next 10 years, approximately 6,301 acres of two-storied stands will be harvested annually using overstory removal harvest methods. During this time approximately 3,330 acres will be harvested annually using clearcut harvest methods. This method of management is expected to be fully compatible with the multiple use management goals for those lands. The lands on which less-than-full-yield timber management occurs reflect modifications for resources such as riparian habitat, visual corridors, and uneven-aged management or even-aged management in the General Forest Management Area to produce more ponderosa pine volume in later decades. Under this management, growth on commercial forest lands would be increased from an average of 21 cubic feet per acre per year to 39 cubic feet per acre per year by the year 2039.

The ASQ includes volume scheduled from inventoried roadless areas and volume scheduled elsewhere on the Forest. If the volume scheduled from inventoried roadless areas cannot be sold, that volume will not be replaced by volume scheduled elsewhere. Volume scheduled from inventoried roadless areas is estimated to be 18.6 MMCF (108 MMBF) or 5.4% of the ASQ in the first decade. During implementation, the specific volume from roadless areas will be determined through site specific analysis. If the volume cannot be sold, the Plan may be amended.

Over the past decade, there have been serious insect epidemics and several forest fires on the Malheur. In view of these events, there are many people who suspect that the timber inventory for the Forest has been significantly reduced, thereby casting doubt on the ASQ calculation. However, the ASQ cannot be recalculated until 1996, when the new Forest-wide inventory is complete. In the interim, preliminary data from that inventory will be available in 1992. This preliminary information will be used to determine whether the Forest has sufficient volume to meet its assigned yearly harvest levels.

Timber harvest on all lands will result in a mosaic of forage and cover, providing temporary forage for wildlife and livestock, and will promote vegetative diversity. Trees will be selectively removed to maintain visually pleasing viewshed corridors.

Big-game Habitat

What level of big-game habitat should be provided to meet the needs for desirable big game herds?

Background:

Elk populations prior to 1970 were relatively stable but low. During the past decade, populations have steadily increased to a current summer population of about 6,600 elk; about one-third of which reside on the Forest during the winter period.

Mule deer populations have fluctuated during the past 40 years and are currently on a downward trend in two of seven game management units (GMUs) which include the Forest. Management of big game winter range for elk will provide for the wintering needs of mule deer as well since mule deer winter range is minimal on the Forest and overlaps with elk winter range. Mule deer winter ranges occur principally on lower elevation private lands adjacent the Forest

Ranchers on private land adjacent to the Forest are concerned about the movement of elk off the Forest to those private lands. The increased potential of the Forest to carry larger populations of elk will also increase the potential for more elk to winter on private land. The State management objective for big game populations for game management units, which occur on the Malheur National Forest, is to supply winter range for approximately 2,800 elk. Management of big game herd levels is the responsibility of the Department of Fish and Wildlife while the USDA Forest Service manages the habitat occurring on the Forest.

The wildlife issue of most concern to the public deals with elk habitat for elk hunting opportunities. Most of the dispersed recreation use occurs on the Forest during the deer and elk hunting seasons. Most local, and many regional and statewide residents and hunter's groups, are concerned about forest management activities and their effect on elk numbers and hunting opportunities. Most hunters are not only concerned about population numbers but are also concerned about the length of the hunting season, opportunities for success, and whether hunting will be on a limited entry basis that would reduce their hunting freedom.

Big game management and timber management are interrelated. Habitat quality for big game populations is determined by cover quality, size and spacing, and by forage and road density (disturbance) factors. Timber management activities have improved, and can further improve, the balance and distribution of cover and forage. Elk population numbers have increased, probably responding to available forage and controlled hunts.

Oregon Department of Fish and Wildlife (ODF&W) population objectives for the elk herds, hunter success rates, and the need to limit hunting opportunities in certain units are related to the anticipated effects of forest management on the habitat. For example, in addition to total population objectives, ODF&W has objectives for bull-to-cow ratios for each herd at the end of the hunting season. To avoid overharvesting bulls, the Forest Service must limit access (by closing roads) or ODF&W must regulate the number of hunters. The Forest activity that most affects the management actions of ODF&W to meet its population objectives is the control of access for hunters using motorized vehicles.

Forest Plan Response:

Big-game habitats will be managed to maintain deer and elk populations at approximately the State's population management objective levels. The application of the elk habitat effectiveness model (Thomas et al. 1988) and cover standards, will be used to balance cover quality, cover spacing forage, and security (open road densities) to achieve elk habitat effectiveness objectives on elk summer and winter range areas. Effective vegetation manipulation and road management techniques will contribute to a slight increase through time of the Forest-wide habitat effectiveness for elk. Any increases in elk populations are expected to be regulated and managed by the State through implementation of hunting regulations.

Presently, some elk herds move off the National Forest to winter on private land adjacent to the Forest. The amount and distribution of cover, snow depth, weather disturbance (human activities), and elk preference for forage, all influence elk use of public or private lands. The increased potential of the Forest to carry larger populations of elk will also increase the potential for more elk to winter on private land. Forage improvements on the winter range could increase the carrying capacity and retain more elk on National Forest lands when balanced with sufficient cover and reduced road densities.

This Plan establishes three big-game habitat management areas; summer range (primarily Management Area 1), winter range (Management Area 4A) and wildlife emphasis areas (Management Areas 20A, 20B and 21). Minimum standards have been established in each of these three habitat areas for HEI and satisfactory and total cover.

During the last year the Forest has collected new data which indicated that implementation of satisfactory cover standards may be extremely difficult, to impossible, in some drainages. The Forest Plan yield tables were calculated on 1980 data and ground conditions have changed since that time. Insects and disease have increased to epidemic levels. Although the yield tables were updated to 1990 conditions, this new data suggests that much of what was considered cover in the modeling process does not meet the definition of cover on the ground. This is in part due to the impacts from epidemic insects and disease infestations and in part due to the natural ecological potential of the land. In some areas nonforested lands such as scablands naturally limit the ability of the land to become big game cover.

In those instances where minimum standards are not attainable due to natural conditions (i.e., scablands or nonforest), insects and disease conditions or past management activities, then the highest possible cover percentage and index value will be created or maintained. Site-specific project analysis will address both short-term and long-term effects, particularly in the case of cover where short-term options to treat stands for insects and disease will improve forest health in the long-term. The Forest Supervisor will review and approve all recommendations to drop below cover and HEI standards as well as a strategy to reach standards within a reasonable length of time.

In February 1990 "The Blue Mountain Elk Initiative" was initiated. The primary goal of the proposal is to work in partnership with the Oregon and Washington State Wildlife Agencies, communities, private landowners, and interested groups and individuals for the benefit of elk management in the Blue Mountains.

To determine the effectiveness of elk habitat management prescriptions, standards, and guidelines during plan implementation, the three Blue Mountain Forests will develop and implement a coordinated monitoring program. Elk habitat condition, including road density, cover quality (satisfactory and marginal), cover size and spacing, forage quality and quantity, and any other appropriate factors, will be evaluated on a project basis and monitored on a watershed basis. The Oregon Department of Fish and Wildlife will be invited to cooperate in the development and execution of the monitoring and evaluation program. This program will be initiated within one year of Plan implementation for the three Blue Mountain Forests. The results will be evaluated yearly. Appropriate adjustments to the three Forest Plans will be initiated within three to five years if warranted.

The Forest will work with the State and other entities thru the Blue Mountain Elk Management Initiative, to address questions of public and private land interaction with elk habitat management, and other potential strategies for minimizing impacts on elk habitat during plan implementation, project design and execution, and monitoring.

During the next ten years, we anticipate that studies at the Starkey Experimental Forest and Range will yield new insights into the relationships between management of forest land and elk. The decisions we are making in this plan are, for the most part, reversible. New information that becomes available as part of the Starkey studies can be incorporated into the next land management plans, or by amendment to this plan if considered necessary.

Riparian Areas

What effect will forest management activities have on riparian areas, what level of fisheries habitat productivity should be maintained, what level of timber harvest is compatible with riparian values, and what level of livestock grazing can be provided while managing for riparian-dependent resources?

Background:

Although they occupy only 4% of the Forest's land base, riparian areas are the most productive and biologically diverse areas on the Forest. These areas provide important fish and wildlife habitat and often contain very productive timber stands and productive, lush forage in grazing allotments. Their gentle topography makes riparian areas attractive for road location and, in the semiarid west, the combination of water and riparian vegetation attracts recreationists. Because of the variety and sometimes conflicting nature of these concentrated uses, riparian areas have the greatest potential for resource-use conflict on the Forest.

National environmental groups (Izaak Walton League, Audubon Society, Sierra Club Oregon Trout, etc.) believe that overgrazing and unregulated livestock use of these areas results in a loss of streamside vegetation, increased water temperature, excessive bank erosion, and accelerated sedimentation of gravel fish-spawning areas. These groups have raised riparian management concerns to a National level, often calling for elimination of grazing. They urge that these areas receive special attention in land management planning. This is reflected in the special mention of riparian area management in the NFMA regulations.

Locally, environmental groups, Indian tribes and the Columbia River Inter-Tribal Fish Commission, and other agencies such as Oregon Department of Fish and Wildlife and the Environmental Protection Agency share these concerns to varying degrees.

Riparian area forage production and livestock access to water are critical to the grazing allotments on the Forest and degraded riparian areas do not benefit the permittees. On the other hand, local ranching operations would be adversely affected by significant reductions in permitted grazing levels. The Grant County Resource Council and the Oregon Watershed Improvement Coalition also recognize the importance of healthy riparian areas and advocate coordinated uses of these areas which include grazing.

Current inventories of Class I-IV streams on forest indicate 4,580 miles in all stream classes. The majority of these streams are in a condition which will meet the needs of the riparian-dependent resources. However, approximately 235 stream miles have been inventoried as being in an undesirable desirable condition. Less than desirable characteristics of these streams include: extensive areas of unstable eroding streambanks, lowering of the water table, and lack of adequate stream surface shading. Although uncontrolled logging practices, roads adjacent to streams, insect outbreaks, and fire can influence shading and streambank stability, the largest impacts on stream temperature and stability on the Malheur National Forest appear to be due to a reduction of hardwoods caused by ungulate grazing. With few exceptions, the majority of the gullies on the Forest are also the result of the loss of the stabilizing root system caused by a reduction in the hardwood community.

There is generally a consensus that improving streams and watersheds, which *are in an undesirable desirable condition is beneficial for all resources and user groups.* The issue centers around the cause of the decline, the specific methods and treatments used for improving the health of the stream systems, and the rate of improvement. There are opportunities for increasing the rate of improvement in riparian zones; however, these would reduce the amount of forage available for livestock grazing and timber outputs.

Forest Plan Response:

Riparian areas will be managed primarily to maintain and enhance their riparian characteristics. Roads, skid trails, grazing, timber harvest, and other soil-disturbing activities within and adjacent to these areas will be controlled and monitored to ensure that they are subordinate to riparian-dependent resources. This will occur through the implementation of Forest-wide and management area standards for riparian areas (Management Areas 3A and 3B).

Riparian habitat recovery projects will be planned, designed, and implemented so that all riparian areas in an undesirable condition will be improved to a desirable condition within 30 years for non-anadromous riparian areas (Management Area 3A) and 15 years for anadromous riparian areas (Management Area 3B).

Allotments have been identified which have riparian areas in unsatisfactory condition. A schedule for updating all allotment management plans on the Forest has been prioritized to update allotments with riparian areas in unsatisfactory condition first (see Appendix A). Riparian objectives will be set for each allotment management plan, management actions needed to meet the objectives will be identified, a time frame established for recovery, and the monitoring needed to determine if the desired rate of improvement is occurring.

Under extensive management (Strategy C), riparian forage utilization standards include utilizing grasses in satisfactory riparian condition to 45% and 0 to 35% in unsatisfactory riparian condition. Shrub utilization in satisfactory riparian condition may be 40% and up to a maximum of 30% in unsatisfactory riparian condition.

A riparian inventory will be undertaken for key parameters, such as stream surface shade, streambank stability, and streambank vegetation. All existing data such as Forest fisheries habitat stream surveys, Oregon Department of Fish and Wildlife data, and other existing sources will be used if appropriate and not outdated. In 1989 a riparian/aquatic survey was initiated on the Forest. The initial focus was to concentrate on those streams currently being studied while updating the allotment management planning documents for the priority allotments on the Forest.

The riparian timber management strategies are designed to maintain shade, provide for streambank stability, provide for a future supply of large woody debris, maintain a filter strip to prevent sediment from reaching the streamcourse, and most important to ensure that timber harvests are subordinate to riparian-dependent resources.

Within riparian areas, uneven-aged timber management will be emphasized with single tree selection in the ponderosa pine type and group selection in the mixed conifer and lodgepole pine types. Scheduled harvest may occur on Class III streams outside a 66 foot interior corridor. Timber harvest (non-scheduled) may occur on all other riparian areas if needed to accomplish specific riparian resource objectives. All timber harvest in riparian areas will be subordinated to riparian-dependent resources.

Watershed improvement projects will be applied to an average of 172 acres per year (see Appendix A, Activity Schedule, A-7). Watershed improvement projects are listed on the Watershed Improvements Needs (WIN) inventory, which is a comprehensive list of all known sites needing improvement. These recovery projects rehabilitate old burns, depleted ranges, closed timber sales with problem sites, abandoned mines, unstable streambeds and channels, localized erosion problems and others.

Fish habitat improvement will be achieved by both riparian vegetation management and instream structural habitat improvements. Riparian vegetation management will be accomplished by livestock allotment management, timber management, and wildlife habitat improvements. Strategies for allotment management plans and timber management have been discussed previously. Wildlife habitat improvement projects in riparian areas will increase the abundance of aspen and other riparian hardwoods, thus improving fish habitat benefits. Improvement in the abundance and diversity of riparian vegetation, with the associated geomorphic recovery of the stream channel, will account for the larger part of the expected increase in fish habitat capability over time.

> Structural work will be done to accelerate riparian improvement, as well as to provide direct habitat improvement. Structures can be used to stabilize stream-banks, and/or to raise the water table, both of which can accelerate the reestablishment and growth of riparian vegetation. This type of work will be done under watershed and fish habitat rehabilitation. Fencing to control ungulate grazing/browsing in the riparian area is also a tool to achieve faster vegetation recovery. Structures are also used to provide habitat features which are limited in the stream channel. For example, where pools with depth and cover are limiting rearing capacity during summer low flow and winter conditions, structures can be used to provide more of this type of habitat.

The schedule of habitat improvement work is shown in Appendix A, Activity Schedule, A-6. Funding for this work will come from a variety of sources. Knutsen-Vandenberg (K-V) funds, generated by timber sale receipts, will provide the largest single source. Funding from the Bonneville Power Administration for anadromous fish habitat enhancement is expected to continue through the early 1990's. In addition to appropriated funds, cooperative funding from other agencies and groups will also be sought.

Roadless Areas

Should some or all of the Forest's roadless areas remain roadless, be opened to roaded development, or be recommended to Congress for wilderness classification?

Background:

The Forest currently has 18 separate undeveloped areas comprising 180,948 acres. Some people enjoy the recreation experience available in areas which have many characteristics of wilderness but fewer restrictions. Such areas can be characterized as providing semiprimitive nonmotorized or motorized recreation opportunities. Maintaining the undeveloped character would mean excluding such areas from regulated timber harvest and road construction. In areas providing for motorized use, off-road vehicle use may continue; mineral exploration and extraction could continue in both types of area.

Areas maintained in an undeveloped state would also be eligible for future wilderness consideration. National and Regional environmental groups such as the Wilderness Society, Native Plant Society, and Oregon Natural Resources Council are philosophically opposed to development of these areas stating that in many cases there is no need for development and they should remain undeveloped rather than foreclose on future wilderness possibilities. One of these areas, Pine Creek, was analyzed in this planning process for potential inclusion in the National Wilderness System because it was designated for further planning review by the RARE II Final Environmental Impact Statement. These same groups as well as local environmental groups, some hunters, and some local residents favor roadless management of these areas because they believe it protects sensitive plant species, wildlife habitat, water quality and other amenity values, better than management geared toward consumptive uses.

Others such as the mining and timber industry associations and businesses, many local residents, and local governments state that the management of these areas has been in limbo long enough. They want to develop access and the resources in these areas to end the uncertainty about their availability. They state that the resources in these areas need to be managed so that they can contribute to local industrial and economic needs. They believe that wildlife habitat can be improved and the vegetation will be in a more vigorous condition if the resources are managed for consumptive uses (primarily wood fiber production).

There are approximately 119,950 acres of tentatively suitable land in the RARE II areas. These same acres provide 92,408 acres of old growth. Timber management activities could occur on 107,658 acres. Of these available acres, 101,205 acres would be considered suitable for timber harvest and would provide a first decade annual allowable sale quantity of 28 MMBF (4.9 MMCF) and a long-term sustained yield capacity of 5.74 MMCF/yr.

Forest Plan Response:

No new wilderness is recommended. Three of the current roadless areas, Malheur River, Flag Creek, and North Fork Malheur River have, however, been affected by the 1988 legislation adding two rivers to the National Wild and Scenic River Act. The rivers, the Malheur and the North Fork Malheur, both have scenic segments, only the Malheur River has a wild segment. Acres within wild river designation will have no timber harvest and no road building. Acres within scenic river designation may be available for timber harvest and road construction after development of river management plans.

Approximately 79,854 acres (44% of the current roadless area inventory) will be managed with no scheduled timber harvest and no additional roads (through semiprimitive motorized or nonmotorized and the wild portion of the wild and scenic river allocations). These acres consist of two roadless areas in their entirety and parts of six others. These include: Aldrich (8,609 acres); Shaketable (8,997 acres); parts of McClellan Mountain (18,717 acres), Bear Creek (former North Fork Malheur River) (2,710 acres); Malheur River (3,066 acres); Glacier Mountain (14,578 acres); Myrtle-Silvies (9,855 acres); and Greenhorn Mountain (13,322 acres). Greenhorn Mountain is also known as Vinegar Hill-Indian Rock Scenic Area, Management Area 7, (See Appendix J, Allocation of RARE II Lands).

Approximately 23,674 acres in, or adjacent to, two other roadless areas will be managed with a "wildlife emphasis - with scheduled timber harvest" prescription. These include 14,629 acres in the Dry Cabin Wildlife Emphasis Area (Management Area 20A), and 9,045 acres in the Utley Butte Wildlife Emphasis Area (Management Area 20B).

Also, 22,076 acres in, or portions of, four roadless areas will be managed with a "wildlife emphasis - no scheduled timber harvest" prescription (Management Area 21). These areas include the Jump-Off Joe area (4,006 acres); Baldy Mountain (5,380 acres); Dixie Butte (6,895 acres); and Nipple Butte (5,795 acres). In these areas timber harvest will be allowed only if it is needed to meet wildlife objectives.

While roads in the wildlife emphasis areas, with and without scheduled timber harvest (Management Areas 20A, 20B, and 21), will be allowed, additional road construction will be minimized. In these areas all roads will be obliterated or closed to vehicle traffic once project activities are completed.

Before timber harvesting and road building takes place in any former RARE II roadless area, an area transportation analysis will be completed for it and the surrounding area.

Approximately 2,646 acres of the Dixie roadless area will be allocated to the General Forest Management Area. However, these acres will be managed to emphasize recreation winter potential opportunities.

Those areas not selected for unroaded management were assigned to a variety of management emphases. Developmental activities will occur in all these areas to varying degrees. In some areas the activities will occur over much of the land area, significantly reducing its roadless character. In other areas, varying amounts of undeveloped land area will remain.

The Pine Creek area will be managed primarily to maintain big-game winter range habitat. The remainder of the area will be managed primarily to protect bald eagle winter roosts and maintain old growth.

Road Management

How can road management be used to make timber harvest, big game habitat needs, and recreation opportunities more compatible?

Background:

Currently, there are an estimated 8,570 miles of Forest Service roads on the Forest. Under Alternative F (the Preferred Alternative in the Draft Environmental Impact Statement), approximately 870 miles of roads would be constructed and 1,360 miles of road reconstructed by timber purchasers during the first decade of the Forest Plan (1990-1999). Of this total, 200 miles would be built in roadless areas that are assigned to timber production.

The Malheur National Forest, in conjunction with the Oregon Department of Fish and Wildlife (ODF&W), has four Cooperative Travel Management Areas. These seasonal road closures are designed to protect wildlife habitat, minimize harassment of wildlife, maintain adequate buck and bull escapement, and promote nonmotorized hunting. These management areas are under the "green dot system" during the hunting seasons, with enforcement through the State Police and ODF&W. Total national Forest land affected by these seasonal closures is approximately 172,000 acres.

The Oregon Department of Fish and Wildlife, and the public have expressed concerns about the lack of a specific road and access management policy for the Forest as a whole and for some resources in particular. General concerns include a belief that road densities are too high, that local roads should be closed and put back into resource production immediately following timber harvest, and that in many cases road construction and maintenance standards were too high.

The greatest concern is the road management policy in relation to big-game habitat and hunting. Specific desires expressed included permanently or seasonally closing roads to enhance big game summer and winter range. Included in this was increasing elk habitat effectiveness, providing elk escapement areas, and providing for a nonmotorized hunting experience.

Forest Plan Response:

Under this Forest Plan 618 miles of new road would be constructed by timber purchasers during the Plan period (1990-1999). Of this total, 70 miles will be built in roadless areas that are assigned to timber production. This represents a 252-mile decrease from Alternative F (the preferred alternative in the Draft Environmental Impact Statement). In addition, road reconstruction by timber purchasers will approximate 1,320 miles during the Plan period. By 1999, roads on the Forest will approximate 9,188 miles. Approximately 2,688 miles (30%) of these will be closed to vehicle traffic or obliterated and removed from the transportation system.

Access management planning will strive for 1.5 mi/mi² on summer range and 1.0 mi/mi² on winter range unless these densities do not allow for a healthy and productive forest as envisioned in the desired future condition, or interferes with access to private land. At a minimum, road densities of 3.2 miles per square mile in summer range, 2.2 mi/mi² in winter range (Management Area 4A) and 1.5 mi/mi² in wildlife emphasis areas (Management Areas 20A, 20B and 21), will be achieved by 1999. These densities will be monitored on a watershed basis (see Appendix I).

Road density concerns will be addressed through the access management plan which will establish road management objectives for each road on the Forest. The existing road system will be reviewed to identify roads to be closed or obliterated because they no longer contribute to integrated land management objectives. The status of all roads will be determined by integrated land management analysis, incorporating objectives for big-game habitat needs (including security needs), high quality recreation opportunities, timber harvest and removal, and firewood cutting opportunities. This will be an open process with public involvement, meeting the full intent of NEPA.

Forest goals, objectives, and standards have been strengthened and expanded in the Forest Plan to emphasize that roads will be planned, designed, constructed and maintained to the minimum level necessary to meet the needs of all resources. Chapter IV provides direction on how these objectives will be accomplished and how the transportation system will be managed.

The standards specify that the forest will be managed to meet stated elk habitat effectiveness objectives. In order to meet these objectives, selected roads will be physically closed with barriers, opened to use by permit only, opened to use for Forest Service administration only, opened seasonally only, or obliterated.

A Forest travel management plan will be developed, and updated annually to document travel management restrictions. Travel on roads will be monitored to establish compliance with restrictions and ensure that travel management objectives are being met.

