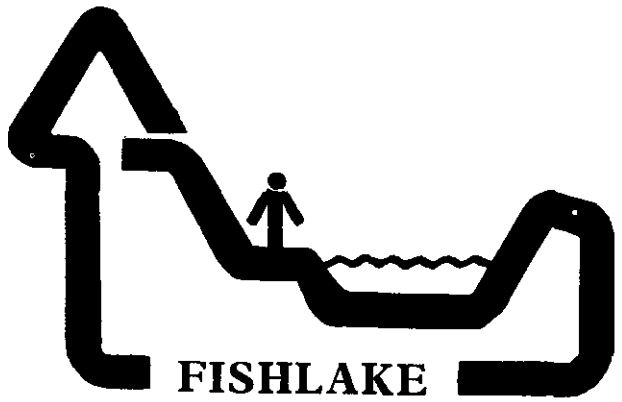


FISHLAKE
NATIONAL FOREST

A SUMMARY

of

FINAL E.I.S. And

LAND and RESOURCE

MANAGEMENT PLAN

INTERMOUNTAIN REGION

FOREST SERVICE

UNITED STATES

DEPARTMENT OF AGRICULTURE

SUMMARY

INTRODUCTION

The Final Environmental Impact Statement (FEIS) discusses the eleven alternatives developed in preparation of the Land and Resource Managment Plan (Forest Plan) for the Fishlake National Forest. The environment to be affected and the environmental consequences of implementing each alternative are also discussed. The EIS was published in draft form for public reviews and comment. Subsequently, a final EIS and Forest Plan which responds to the comments of the public has been prepared.

CHAPTER I - PURPOSE AND NEED

The Fishlake National Forest is located in central Utah surrounding the town of Richfield, which is about 140 airline miles south of Salt Lake City (See Vicinity Map, Ch. I - Fig. 1). The Forest contains about 1.5 million acres,crossing parts of the Wasatch, Awapa, Sevier, and Fishlake Plateaus, as well as all of the Tushar Mountains and Canyon and Pavant Ranges. Portions of these nine Utah counties are covered by the Forest: Beaver, Garfield, Iron, Juab, Millard, Piute, Sanpete, Sevier, and Wayne.

Planning is conducted under the authority of the Multiple Use-Sustained Yield Act of 1960, and the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the National Forest Management Act of 1976. Assessment of the environmental consequences of the alternatives considered in the development of the Forest Plan is done in conformance with the National Environmental Policy Act of 1969 and implementing regulations (40 CFR 1500 - 1508). The Forest Plan is being prepared to guide and direct the management of the Fishlake National Forest for the next 50 years.

The scope of the issues and concerns to be addressed in the Forest Plan and Draft EIS were identified from comments solicited through individual and group contacts, written responses, and from the Forest Service Staff. The comments were analyzed and condensed in 10 planning problems.

The planning problems are an integral part of the planning process. They are linked to the development and evaluation of the alternatives. They are listed in Chapter I and Appendix A. How they are addressed by each alternative is displayed in Chapter II in the DEIS.

CHAPTER II - ALTERNATIVES CONSIDERED

Eleven alternatives for managing the lands and resources of the Fishlake National Forest were evaluated in detail. A brief description of the alternatives follows. Alternative 11 is the preferred alternative.

ALTERNATIVES

CHARACTERISTICS	Alternative 1	Alternative 2	Alternative 3
THRUST	Retains present emphasis and direction. Funds and personnel remain at present level. Outputs allowed to fluctuate.	Emphasizes production of resources that produce income to government, such as; timber, range, minerals, developed recreation, and special uses.	Within a budget that is 10% less than the 1982 level this alternative emphasizes production of resources that produce income to government, such as: timber, range, minerals, developed recreation, and special uses.
COST Avg. 1st Decade	3,199,300	4,717,500	2,866,300
Av. Other Decades	3,199,000	5,431,300	2,866,000
Commodity Outputs	No significant change in timber, developed recreation, minerals, or special uses. About a 10% decrease in range.	Range remains about at present level, as do minerals and special uses. Developed recreation increases and timber outputs are doubled.	Timber, minerals, and special uses remain at about current levels. Range decreases slightly and developed recreation is about 1/2 current level.
Noncommodity Outputs	There is a slight decrease in dispersed recreation, slight decrease in water yield, and little change in wildlife and fish use.	There is a slight decrease in dispersed recreation, a slight decrease in water yield, and no significant change in wildlife and fish use.	There is a slight decrease in dispersed recreation, a decrease in water yield, and no significant change in wildlife and fish use.

CHARACTERISTICS	Alternative 4	Alternative 5	Alternative 6
THRUST	Emphasizes opportunities to improve water quality, fish and wildlife, dispersed recreation, & other amenity values over revenue producing resources.	To meet outputs called for in the intermountain Regional guide to reach tentative 1980 RPA National goals.	Emphasizes a mixture of market & nonmarket outputs in response to local issues, while providing protection to the environment.
COST Avg. 1st Decade	4,716,800	5,395,300	4,719,000
Avg. Other Decades	6,226,500	7,034,000	6,284,900
Commodity Outputs	Minerals & special uses remain constant, timber remains at current levels in 1st decade, then about doubles in following decades. Developed recreation decreases, & range decreases about five percent.	Minerals & special uses remain constant, range increases about 18 percent, timber harvest double current level in 1st decade then triples current level in other decades, and developed recreation increases significantly.	Range decreases about four percent, timber at current level in 1st decade then triples in other decades, developed recreation, minerals, and special uses remain at about current levels.
Noncommodity Outputs	Dispersed recreation use is decreased, as is water yield. Wildlife and fish use increases.	There is a slight decrease in dispersed recreation use. Water yield increases slightly, while wildlife and fish use increases about fifteen percent.	There is a slight decrease in dispersed recreation use. Water yield increases slightly as does wildlife and fish use.

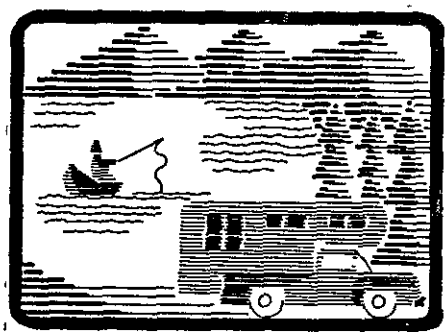
CHARACTERISTICS	Alternative 7	Alternative 8	Alternative 9
THRUST	Provides for maintenance of existing capital investments, will be made only in range management.	No Action alternatives designated to maintain resource outputs at their current level into the future.	Emphasizes a mix of market and nonmarket outputs in response to issues and concerns, and within the Forest's capabilities. Incorporates more favorable aspects of alternatives 4, 6, and 8.
COST Avg. 1st Decade	2,416,700	4,583,100	4,716,000
Avg. Other Decades	2,419,000	5,093,700	5,864,400
Commodity Outputs	Minerals and special uses remain at about current levels, timber harvest reduced 83 percent, range reduced about 12 percent, and developed recreation is cut about in half.	Resource outputs hold constant or slightly increase.	There is a slight decrease in developed recreation, a four percent decrease in range, a significant increase in timber in the out decades, and minerals and special uses remain constant.
Noncommodity Outputs	Dispersed recreation use decreases drastically and water yield decreases. Wildlife and fish use remains at about current levels.	Noncommodity outputs remain constant or increase slightly.	Dispersed recreation use decreases slightly. There is almost no change in water yield. There is about a 12 percent increase in wildlife & fish use.

CHARACTERISTICS	Alternative 10	Alternative 11
THRUST	The Fishlake National Forest's share of the outputs called for in the High Productivity alternative in the draft 1985 RPA program, emphasizing the production of commodity outputs such as timber, range, developed recreation, and minerals.	Emphasizes a mix of market and nonmarket outputs in response to issues and concerns, and within the Forest's capabilities. Similar to alternative 9 except where local line officers have made changes to resolve local issues.
COST Avg. 1st Decade	6,232,900	4,766,600
Avg. Other Decades	7,405,400	5,863,700
Commodity Outputs	Both range and timber show significant increase, developed recreation decreases slightly, and minerals and special uses remain constant.	There is a slight decrease in developed recreation, a four percent decrease in range, a significant increase in timber in the out decades. Minerals and special uses remain constant.
Noncommodity Outputs	There is a decrease in dispersed recreation use, an increase in water yield, and an increase in wildlife and fish use.	There is a slight decrease in dispersed recreation use, no change in water yield, and an increase in wildlife & fish use.

CHAPTER III - AFFECTED ENVIRONMENT

This chapter describes the current condition of each resource and the environment to be created or affected by implementing any of the alternatives. The future demand for forest resources and the ability to supply that demand are summarized. Information in this chapter was drawn primarily from the Analysis of the Management Situation, which is available for review at the Forest Supervisor's Office in Richfield, Utah.

Recreation



Current recreation use on the forest is estimated at 1.3 million Recreation Visitor Days (RVD's). The current recreation opportunity spectrum classification of Forest lands is 88 percent semi-primitive motorized and roaded natural, 11 percent semi-primitive nonmotorized, and 1 percent rural. Demands for motorized forms of dispersed recreation are expected to grow more rapidly than demands for nonmotorized forms.

There are 19 campgrounds, 9 picnic sites, 1 boating site, and one Visitor Information site. Many of these sites are approaching the end of their service period. Current use is estimated at 250 thousand RVD's. There are numerous summer homes both on private land within the Forest and on Forest land under special use permit.

The demand for developed recreation is expected to exceed supply by about 1990. This demand is expected to reach 384 thousand RVD's by 1990 and 684 thousand RVD's by 2030. The maximum potential supply of developed recreation is 375 thousand RVD's by 1990 and 1,057 thousand RVD's by 2030.

While the demand for dispersed recreation should not exceed the total supply by 2030, there is congestion at favorite areas which is leading to a degradation of the social setting.

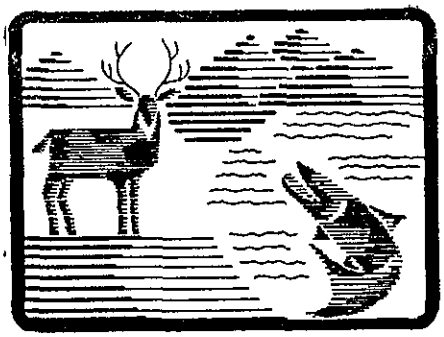
There are 897 miles of trails on the Forest, many of which are in a deteriorated condition.

There have been 1,230 archeological sites recorded on the Forest. An estimated 15,000 to 20,000 sites remain undiscovered. Two of the located sites are on the National Register of Historic Places.

Wilderness

The 1984 Utah Wilderness Act (Public Law 98-428) designated no wilderness areas on the Fishlake National Forest. Prior to the Utah Wilderness Act of 1984, the Forest planning process had developed an inventory of lands meeting the minimum definition of wilderness and qualified for wilderness evaluation per NFMA Regulation 219.17. The inventory contained 36 roadless areas, totalling 735,320 acres Forest-wide.

Wildlife and Fish



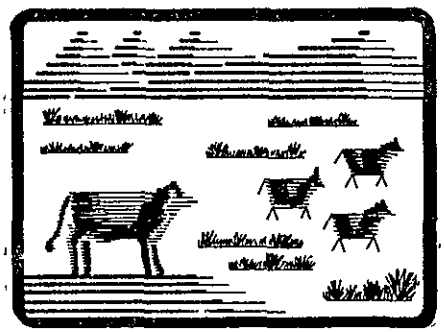
The Forest's broad elevation range with extremes of climate and vegetation produces a wide range of wildlife habitat. Management programs in the past were directed toward improving big game winter range and improving habitat diversity.

Elk and deer numbers are below the calculated carrying capacity of their habitat on the Forest. Deer numbers may reach the carrying capacity of their range by 1990, but at the current rate of increase, elk will not reach the capacity of their habitat on the Forest until after 1990. Demand for big game hunting exceeds the supply, and the gap between the two continues to widen.

No critical habitat has been formally classified for any threatened and endangered species on the Forest.

Over 380 miles of streams and more than 4,200 acres of lakes and reservoirs provide habitat for 16 species of fish. Sixty three percent of the streams are rated as being in poor condition, 33 percent in fair condition, and 4 percent in good condition. The lakes are estimated to be producing at 65 to 70 percent of their potential. Both structural and non-structural means are possible for improving fish habitat. Demand for fish and wildlife resources is expected to continue increasing.

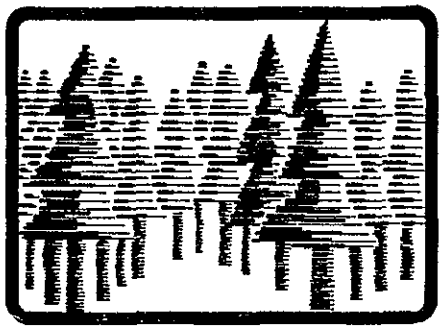
Range



The Forest has 76 grazing allotments covering about 1.3 million acres. Of this area about 639,856 acres, or 49 percent, are presently classified suitable for livestock grazing. Suitable grazing acres vary, depending on the class of livestock being grazed. Since 1943 sheep grazing has decreased to about 25 percent of former animal unit month numbers, and cattle to about 81 percent. Demand for grazing exceeds available capacity and is expected to continue doing so.

Several factors suggest that numbers of permitted livestock will have to be reduced in the future to achieve fair to good range conditions. These factors are: 1) low productivity areas in poor condition, 2) many past range improvements are nearing the end of their useful life, 3) conversion from sheep to cattle results in fewer suitable acres, and 4) an increased concern about the condition of riparian areas.

Timber



Approximately 770 thousand acres of the Fishlake's 1.4 million acres, or 55 percent, are forested. Of these forested acres, about 50 percent or 386,635 acres, are tentatively suitable for timber production. The Forest is selling between 2.5 and 3.0 MMBF annually.

The maximum long term sustained yield is 13.5 MMBF, which is primarily conifer. The forest lacks a major market for aspen. Nearly 236 thousand acres of aspen could be managed for timber with development of a market. Average annual production of timber over the last 29 years is 1.7 MMBF. Within this period there have been large fluctuations in annual harvest, ranging from a high of 6.6 MMBF in 1973 to a low of 120 MBF in 1967. Demand for timber is expected to slowly increase throughout the planning period.

The estimated maximum amount of firewood that can be supplied on a sustained basis, once the dead accumulation is gone, is 108,620 cords. Demand for firewood is estimated at 17,000 cords annually.

Based on these estimates, it appears that a continuous supply of firewood will be available for both personal and commercial users. However, access may become a problem.

Christmas tree harvest over the last decade averages about 6,000 trees annually. In the last three years annual Christmas tree sales have been near 10,000 trees.

Localized infestations of mountain pine beetle in ponderosa pine and Engelmann spruce beetle in Engelmann spruce have inflicted light losses for several years. A moderate infestation of spruce budworm is present primarily in Douglas fir on the Beaver District. Dwarf mistletoe infects much of the Douglas fir and ponderosa pine.

Water

Forest lands produce an average of 611,000 acre feet annually. Of this, about 80 percent is delivered to the Great Basin and 20 percent to the Colorado River Basin.

Demand for water in the Sevier River and Colorado River already exceeds supply. As the population increases and development continues, demand for water will increase. The potential of the Forest to increase water yield by feasible means is limited. The

Fishlake has only scattered timber resources and much of its aspen type is on potentially unstable soil. The prospect of increasing water yield by vegetative manipulation (timber harvest) is very poor. In types below the conifer and aspen belt, vegetative manipulation lacks the potential to produce increased yield.

The mountains in Central Utah, including all of the Fishlake Forest, have been a target area for cloud seeding since implementation of a seeding program by the State of Utah in 1973-74. The results for the primary target in central and southern Utah indicate increases in the January-March precipitation ranging from 8 to 14 percent.

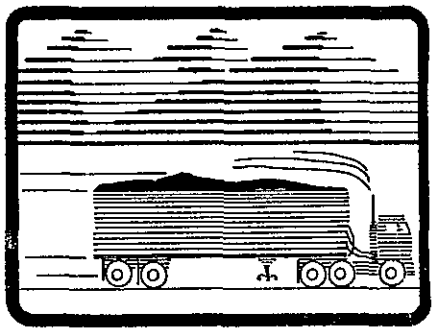
Domestic use of water in 22 communities surrounding the Forest amounts to about 8,500 acre feet annually. An additional 285 acre feet are used annually by livestock grazing on the Forest.

There are about 34,600 acres of riparian area on the Forest that range from good to very poor condition. Monitoring has shown that water quality on the Forest is high, and that in all but a very few isolated instances is better than state standards for classification of waters for intended uses. Sediment is probably the most common pollutant on the Forest. However, nutrient enrichment with nitrogen and phosphorous is creating some recreational and aesthetic problems in Fish Lake due to the excess plant growth, a large part of the enrichment is created by natural sources in the lake basin. A sewer system is now in place which reduces wastes associated with recreational use from entering the lake.

Approximately 2,500 water uses have been identified on the Forest, and a Forest goal is to obtain water rights needed to meet National Forest objectives, including quantification of instream flows.

No waters on the Forest have been classified as "Outstanding Natural Resources." Therefore, special protection measures have not been identified.

Minerals



Approximately 99 percent of the Forest is open to mineral exploration and development under the mining and leasing laws. Lands not open are scattered across the Forest. Major mineral producers are a coal mine near the northeast corner of the Forest which yearly produces about 2.2 million tons and a cement plant and associated mining operation near the northwest corner of the Forest which produces about 0.65 million tons of cement annually. A significant geothermal resource is currently being developed near Sulphurdale.

The Marysvale volcanic field, along the southern portion of the Forest, has the potential for base and precious metal development. The Salina Canyon area contains a Known Coal Recoverable Resource Area, and the west side of the

Forest is in the Overthrust Belt. Thus there is a good potential for mineral development on the Forest in the future. Future technology, changes in economic conditions, new discoveries, and changing needs will determine where and which minerals are developed.

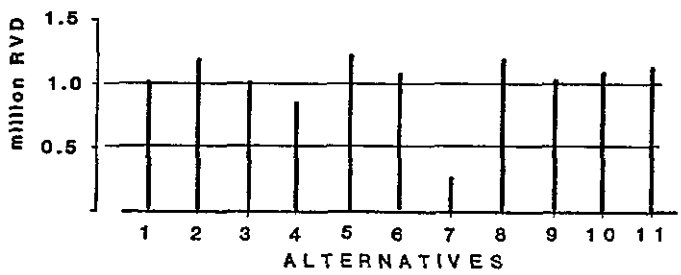
CHAPTER IV - ENVIRONMENTAL CONSEQUENCES

Direct and Indirect Environmental Effects

Environmental consequences are the anticipated effects of applying management practices to land areas. Consequences vary for each alternative because different mixes of practices produce different levels of resource outputs.

Environmental consequences of implementing the alternatives are described in physical, biological, social, and economic terms. These consequences are both direct and indirect. Direct effects occur at the same time and place as the initial management activity. They may be measured in how they change the predicted activity or output from the present level of activity as measured by the Current Program Alternative. Indirect effects often result from the interaction between Forest resources and management activities. They occur either later in time or at a different location, but are nevertheless foreseeable.

Recreation



Operation and maintenance of developed sites and facilities would decrease for alternatives 1, 3 and 7 until quantities that could be managed and funding became balanced. Each of the other alternatives would provide for some degree of increase in developed sites in addition to operation and maintenance of existing sites and facilities. The ranking of alternatives for greatest to least increase by the second decade is 5, 2, 8, 11 and 9, 10 and 6 then 4. This ranking applies only to developed site outputs operated with public funds.

Alternative outputs for use outside of developed sites would be greatest in alternative 5 then 11, 9, 4, 6 and 10. Alternatives also ranked for second decade but with mostly static or declining outputs are 8, 2, 1, 3 and 7.

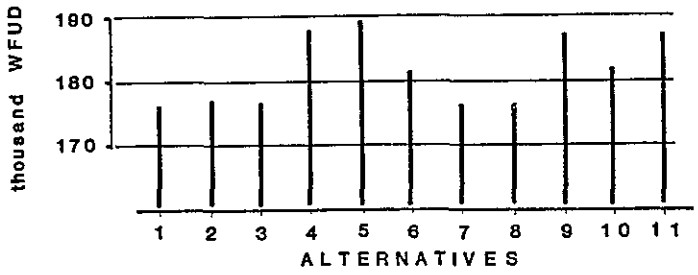
Relocation or shifting of recreational activities would occur because most of the alternatives do not meet projected demand. Alternative 5 would meet demand and alternative 11 (the preferred alternative) would provide for 94 percent of demand in the second decade. The other alternatives range from 89 percent down to 20 percent in meeting projected demand. Thus some of the alternatives would cause significant social effects because of shifting recreation from the Forest to other areas.

Higher funding levels proposed in all alternatives except 1, 3, and 7 will lead to increased survey, inventory, and interpretation. This will lead to increased knowledge about the cultural resources on the Forest. However, those alternatives with more activity indirectly may cause more disturbance, either intentional or unintentional, of cultural resources due to increased activity and number of people on the Forest.

Wilderness

The Utah Wilderness Act of 1984 (PL 98-428) designated no wilderness areas on the Fishlake National Forest. All Alternatives were formulated in conformance with this act. Of the 735,320 acres of potential wilderness inventoried as part of this planning process, it is estimated that about 720,000 acres will remain available for wilderness consideration when the plan is revised.

Wildlife



Under all alternatives the habitat of threatened and endangered species will be managed so that present population levels will be maintained or increased. Habitat sufficient to maintain minimum viable populations of all Management Indicator Species will be provided by all alternatives.

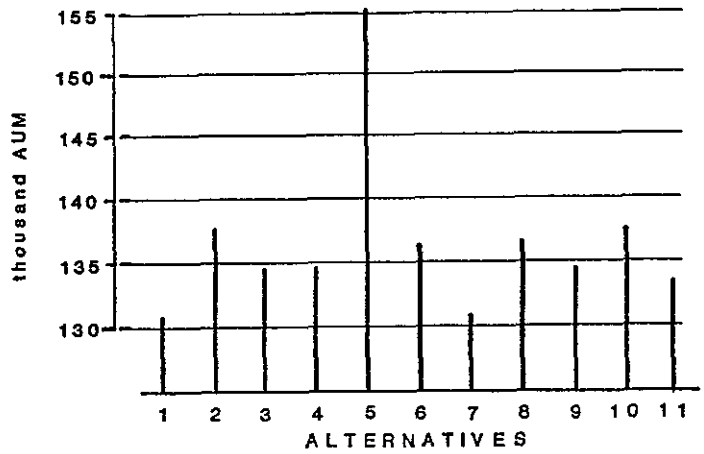
All alternatives meet or exceed the UDWR objectives for mule deer and elk populations. Habitat for mule deer and elk is increased beyond current amounts under all alternatives. Alternative 4 provides for the most significant improvement in quality and quantity of big game habitat due to high levels of direct wildlife habitat improvement. Alternatives 6, 5, 10 and 2 also provide large increases in big game habitat as the result of increased forage from range habitat improvements. Alternative 7 provides the least increase in big game habitat due to a reduced budget for habitat improvement projects.

Alternatives 5 and 10 could result in an initial negative impact to riparian areas due to increased levels in timber harvest and livestock grazing activities. Alternatives 2, 5, 6, 9, 10 and 11 could increase stream sedimentation initially because of expansion of the road construction program.

Habitat for resident trout would increase under alternatives 4, 5, 6, 9, 10 and 11 due to high funding for aquatic habitat improvement projects. Habitat for resident trout would be maintained under all other alternatives. Current habitat for Bonneville cutthroat trout is maintained under alternatives 3 and 7

and increased under all other alternatives. No alternative will meet projected demand for fishing opportunities by the end of the planning period.

Range



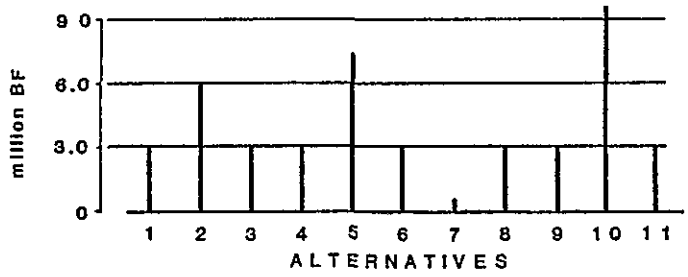
Alternatives 5 and 10 would increase grazing capacity over present levels as the result of increases in funding for range improvement projects. Although alternatives 1 and 7 would maintain current funding levels for range improvements, they would result in significant reductions in grazing capacity. Alternatives 2 and 8 would result in no change in grazing capacity. All other alternatives would result in minor reductions in grazing capacity over time.

Competition between livestock and wildlife for forage on winter ranges would be greatest under alternative 7 which has the lowest combined range and wildlife budget for revegetation projects.

Alternatives 1 and 7 would have little funding available for control of noxious farm weeds.

Significant new infestations of thistle could be expected under these alternatives.

Timber



The average annual harvest of timber over the 50 year planning period would remain at the present level of 3.0 million board feet (MMBF) in alternatives 1, 3 and 8.

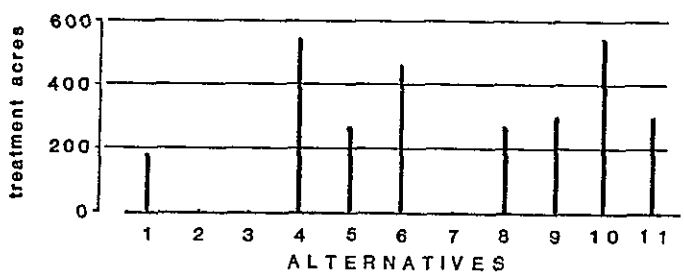
Alternative 7 would provide the lowest average annual timber harvest with 0.5 MMBF harvested per year. Alternatives 2, 5, and 10 would provide for an average annual timber harvest of 11.0 MMBF. Alternatives 4, 6, 9 and 11 would provide for timber harvest levels above present levels after the first decade.

Alternatives 2, 5, 6, 9, 10, and 11 would increase the level of timber harvest and would reduce the risk of timber losses to insects, disease and fire. Alternative 7 would reduce the harvest level and therefore would increase the risk of loss.

The greatest amount of firewood would be available in alternatives 4 and 2; both would exceed demand in all decades. Alternatives 1, 3 and 8 would not meet demand for firewood in any decade.

Alternative 5 would not meet demand in the first decade. In the low budget alternatives and in the first decade of alternative 5, insufficient funds would be available to administer the charge firewood program. If funds were available to administer the program, firewood supplies could meet demand in any alternative.

Water and Soil



Water leaving the Forest would meet state water quality standards under all alternatives. All alternatives would protect municipal watersheds as a result of coordination with city, county, and state agencies.

Water yield increase opportunities are limited on the Forest. Alternatives 5, 6, 8, 9, 10 and 11 have the greatest potential for increasing yield as the result of expanded timber harvest. Alternatives 3, 4 and 7 provide least opportunity to increase water yield.

None of the alternatives would eliminate the backlog of watershed treatment projects by the National target date of the year 2000. Alternatives 4, 6 and 10 would eliminate the backlog by the end of the planning period (year 2030). Alternatives 3 and 7 provide for no watershed treatment.

Alternatives 4, 5, 6, 9, 10, and 11 provide for the greatest reduction in onsite soil erosion. Alternatives 3 and 7 provide for the least reduction in erosion.

Alternatives 2 and 3 could increase sediment delivery to some streams due to increases in soil and streambank disturbing activities. Alternatives 5, 6, 9, 10 and 11 could produce initial increases in sediment delivery, but would result in a net decrease in sediment delivery by the end of the planning period. Alternative 4 would result in a continuous decrease in sediment delivery.

Minerals

Locatables:

Existing mining claims are not affected by the alternatives. Approximately 99% of the Forest is open to operation under the General Mining Law of 1872 and this remains constant throughout all alternatives.

Leasables:

The Forest contains no lands which are formally withdrawn from operations under the mineral leasing laws. However, access constraints are imposed to mitigate potential adverse effects to other resources. Existing leases are not affected by the alternatives.

Using a geologic potential scale of high-medium-low, the Forest contains approximately 909,500 acres considered to have a medium potential for occurrence of oil and gas resources. None of the Forest is considered to be of high potential. Of the medium potential area, alternatives 5, 6, and 10 include the least amount of lands which would be highly constrained by access restrictions. Alternative 2, 4, and 7 contain the largest areas where a high degree of restriction on access would be imposed on oil and gas operations.

Approximately 81,534 acres of the Forest have been identified as having a high to moderate potential for development of the coal resource. Subject to area wide constraints and multiple use coordination requirements, all of these lands are acceptable for further consideration for coal leasing and do not vary by alternative.

Of the 183,560 acres of Forest lands identified as having a potential for leasing of geothermal resouces, there is no variation between alternatives.

Salables:

Potentially developable deposits of common variety mineral materials occur throughout the Forest. The area available for materials disposal is the same in all alternatives.

Lands

Special Uses:

Requests for the use of national Forest lands for special purposes are received from private individuals and organizations and other Federal, State, and local governments. Permitted uses and the rate of applications for new uses are independent of the alternatives. Differences between alternatives include the ability to administer existing permits and process new applications. Special uses would be permitted in each alternative on lands where they are compatable with the management direction for the area. Alternatives 1, 3 and 7 pose the greatest risk of adverse environmental impact because of inadequate funding to properly administer permits.

Transportation and Utility Corridors:

The designation of potential transportation corridors and windows remained constant across the alternatives. The main difference in transportation planning caused by the different alternatives is the size of the areas with nondevelopment prescriptions that would limit transportation facility construction. The following table shows the approximate acreage of these areas by alternative.

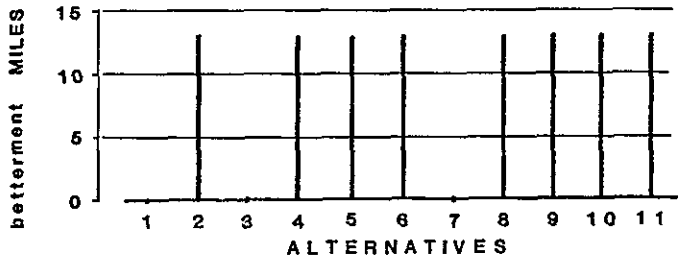
Alt.	1	2	3	4	5	6	7	8	9	10	11
M Ac.	188.2	360.0	276.0	565.1	86.7	149.4	753.2	147.7	168.6	108.9	130.4

Avoidance areas that are constant in all alternatives are the existing Partridge Mountain Research Natural Area and the valley of Fish Lake. Those that vary between alternatives are the proposed Research Natural Areas and nonmotorized prescriptions.

Special Areas:

One 1,200 acre Research Natural Area, Partridge Mountain, exists on the Forest.
The preferred alternative recommends that two additional areas located in the Tushar Mountains, Fish Creek and Bullion Canyon, be considered for establishment as RNA's through the establishment report process. Until a decision is made through this process they will be managed to retain their pristine character.

Facilities



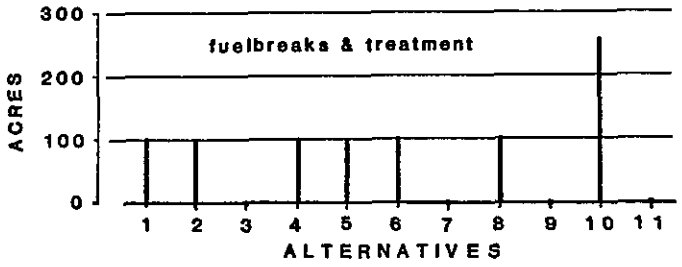
Alternative 10 is the only alternative with a facilities budget sufficent to adequately repair and maintain all existing facilities. Under alternatives 2, 4, 5, 8, 9 and 11 the number of existing administrative sites would be reduced in order to maintain the remaining facilities. Existing facilities would continue to deteriorate under alternatives 1, 3, 6 and 7 despite reduction in the number of sites maintained.

Alternative 10 would provide for the development and annual maintenance of an efficient, safe, and environmentally sound road system. Under all other alternatives some deterioration of existing roads would occur. This deterioration would be most rapid under alternatives 3 and 7, which would provide for maintenance of only 25 percent of the road system annually. Alternatives 2, 4 and 6 would provide for maintenance of 50 percent of the road system annually in the second through fifth decades.

The other alternatives would provide for road maintenance at or slightly above maintained current levels of 30 percent annually.

No alternative would provide for bridge replacement or reconstruction. Alternatives 2, 4, 5, 6, 9, 10 and 11 would provide some money for maintenance and repair of existing structures. Bridge deterioration would be expected under the other alternatives.

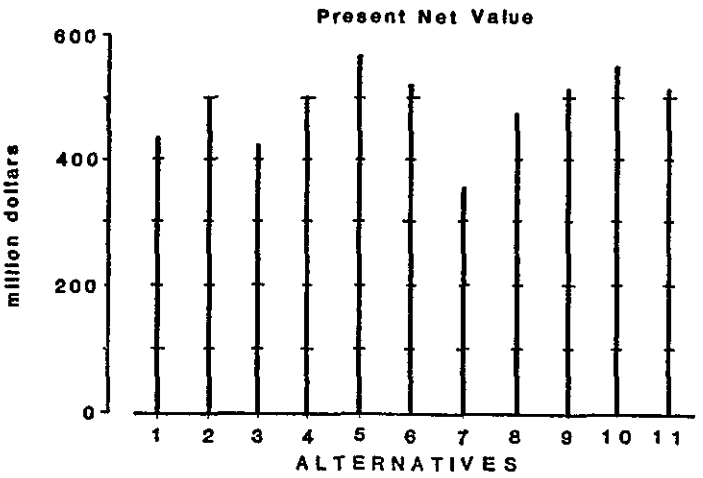
Fire Protection



Fire suppression capability is essentially a function of funding available for fire protection. Under alternative 7, the lowest funding level, an estimated 1,300 acres of national Forest land would burn each year. Under alternative 3 funding an estimated 820 acres would burn annually. All other alternatives would allow 160 acres to burn each year.

Fuel loading is not considered a major problem on the Fishlake National Forest. Alternative 10 would provide for treatment of 260 acres of natural fuels each year. Alternatives 1, 2, 4, 5, 6 and 8 would each provide for treatment of 100 acres per year. No fuels treatment would occur under alternatives 3, 7, 9 and 11.

Economic Effects



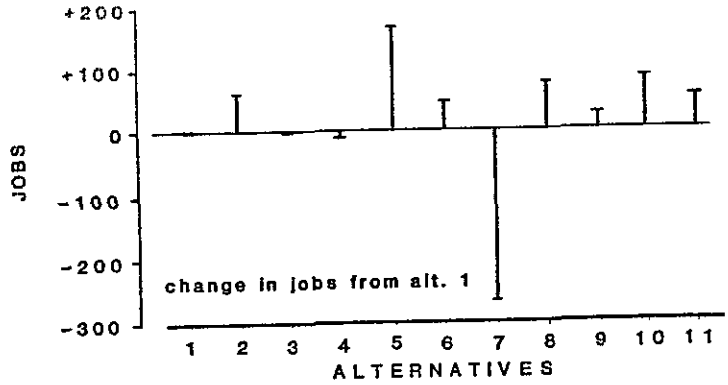
The planning process, specified in the National Forest Management Act regulations, requires consideration of economic efficiency as a basic principle of planning. The main criterion used in economic efficiency analysis is present net value. It is defined as discounted benefits less discounted costs, including only those outputs to which monetary values can be assigned. All values used were estimates of "willingness to pay." They were assigned to timber, livestock forage, developed and dispersed recreation, minerals, and water yield outputs.

All alternatives had a positive present net value, thus are considered economically efficient. The ranking of the alternatives using the present net value criterion (discounted at four percent) is: Highest 5, 2, 9, 4, 11, 8, 1, 3, 6, 10, and 7 lowest.

Some resources could not be valued either explicitly or implicitly through association with other resources. Examples of such benefits include research benefits of designated research natural areas, the value to future generations of protecting and preserving cultural resources, the benefits of maintaining viable populations of animal species not related to recreation use, and the vicarious satisfaction derived by some individuals who desire the establishment of designated wilderness areas yet who have no intention of visiting these areas.

Economic parameters used in this planning effort can only serve as relative indicators of the benefits to society that would accrue under each alternative. They can't be interpreted as absolute indicators of total societal benefits.

Social Effects



Changes in population, income, and employment were calculated for each alternative using an input-output model called IMPLAN. The largest predicted change was a minus 2.8 percent in alternative 7. Alternatives 5 and 10 have a predicted increase in income and employment. Alternative 8, the no-action alternative, was used as the datum, so it had no change. In order of least to greatest decrease in employment, the alternatives are arrayed as follows: 2, 11, 6, 9, 1, 3, 4, and 7. While a 2.8 percent decrease in income and employment might not significantly effect the Forest's zone of influence over all, it could have significant adverse effects on those Human Resource Units highly dependent upon the outputs of the Forest.

Each alternative will yield different returns to the Treasury and vary in returns from fuelwood and sawtimber production.

By law, 25 percent of the revenues collected by the USDA Forest Service must be returned to the states to be used for schools and roads in the counties where National Forest System lands are located. A far more significant source of funds to the state and the local counties comes from the Minerals Leasing Act of 1920.

Making the assumption that the counties will receive 25% of the funds available from the Mineral Leasing Act, estimates of receipt shares to counties by alternative indicate that alternative 10 returns the highest amount to the counties over the next five decades. Alternative 7 returns the smallest amount.

The Forest policy of equal opportunity for use and employment for all persons will continue under all alternatives.

Irreversible or Irretrievable Commitments of Resources

An irreversible commitment of resources is one that results from actions altering an area such that it is prevented from returning to its natural condition for an extended period of time, or one that utilizes non-renewable resources, such as cultural resources and minerals. Approximately 300 acres of surface disturbances are involved Forest-wide to extract limestone, quartzite, shale, coal, clay, gravel, and miscellaneous rock for construction purposes.

Soil loss, or onsite erosion, is also an irreversible commitment of resources. Alternatives 1, 2, 3, 7, and 8 have the least amount of reduction in onsite erosion, that is, the greatest soil loss. Management direction in the prescriptions is designed to minimize soil loss.

Irretrievable commitments of resources include lost production or lost use of renewable resources due to the mix of decision. The opportunity to use the resource is foregone during the time it is committed to other uses or periods of non-use. Productive timber that is not harvested and subsequently lost by mortality is an example of an opportunity foregone. The commitment could be reversed by changing management direction to provide for harvesting the renewable resource. The highest loss of timber to mortality would be in alternative 7. The least loss would be in alternative 10.

Adverse Environmental Effects That Cannot Be Avoided

Implementation of any of the alternatives will result in some adverse environmental effects that cannot be avoided. However, the application of the standards and guidelines is intended to limit the extent and duration of these effects.

Management prescriptions were designed to provide outputs, goods, and services within the constraints of maintaining the sustained yield of recreation, water, timber, forage, and wildlife without impairing the long-term productivity of the land.

Mitigation measures included in the management area prescriptions in Chapter IV of the Forest Land and Resource Management Plan are intended to minimize the adverse unavoidable effects. There are, however, some adverse effects that can't be avoided in the eleven alternatives. Some of the key ones are summarized as follows:

Unavoidable vegetation loss, soil compaction and streambank damage from construction and reconstruction activity.

Visual character changes of the Forest scene from management activities including timber harvesting and recreation special uses, and mineral and energy development.
Short-term displacement of wildlife during logging.
Temporary and local reduction of air quality from dust raised by logging and other management activities.

The intensity of these adverse effects may be partially mitigated, but they can't be avoided entirely.

The greatest potential for unavoidable damage to watersheds occurs in alternatives 2, 5, and 10. Alternatives 3 and 7 do the least to halt watershed deterioration that is presently occurring. The remaining alternatives come closest to avoiding adverse effects to watershed by various combinations of remedial work and moderate levels of development activity.

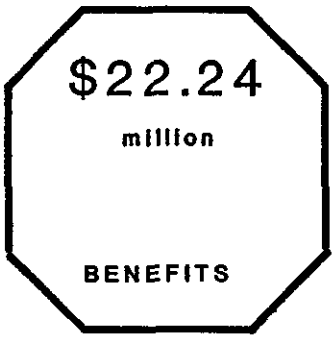
Short-Term And Long-Term Productivity

Management of the Forest is a complex venture pitting the present demand for goods and services against the need to maintain long-term productivity of the resource base. The proposed action and alternatives to it all meet the requirement of the Multiple Use-Sustained Yield Act of 1960 to provide for the "achievement and maintenance in perpetuity of a high level of annual or periodic output of the various renewable resources of the National Forests without impairment of the productivity of the land." The long-term productivity of the land is maintained or improved in all alternatives while producing outputs, goods, and services throughout the planning period.

Alternatives 2 and 5 have the highest level of short-term uses, as reflected by acres of vegetative treatments, and therefore result in higher levels of short-term consequences such as visual impact, fire hazard, and soil disturbance. The remaining alternatives are shown in decreasing order of short-term uses: 8, 6, 4, 3, 9, 11, 1, 7, 10.


PROPOSED
PLAN

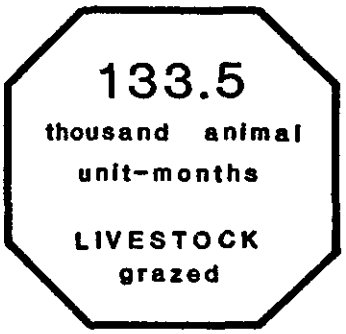

1.4
million acres
NATIONAL FOREST
system land

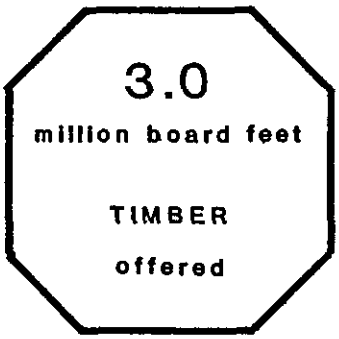

$22.24
million
BENEFITS

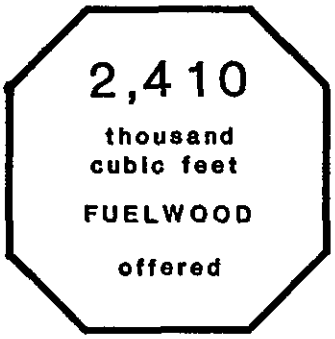

$4.77
million
TOTAL FOREST
BUDGET


1.14
million
visitor days
RECRECATION
use

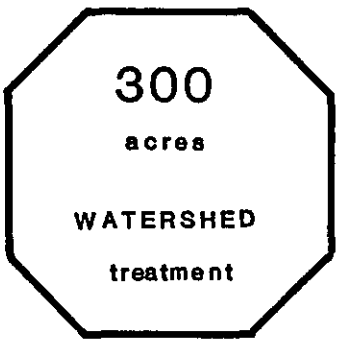

187.9
thousand
user days
WILDLIFE & FISH

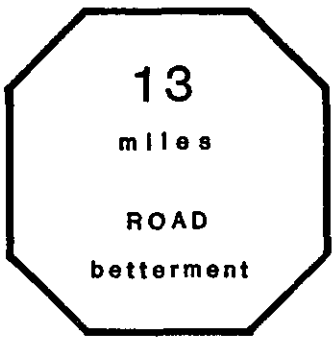

133.5
thousand animal
unit-months
LIVESTOCK
grazed


3.0
million board feet
TIMBER
offered


2,410
thousand
cubic feet
FUELWOOD
offered


200
MINERAL
leases
and permits


300
acres
WATERSHED
treatment


13
miles
ROAD
betterment


1.4
million acres
under
FIRE
MANAGEMENT

FOREST PLAN HIGHLIGHTS

The Land and Resource Management Plan (Forest Plan) provides the direction for future management of the Fishlake National Forest. The preferred alternative identified in the Draft Environmental Impact Statement (DEIS) was developed as the Forest Plan after modification due to public comment.

The environmental impacts associated with implementation of the Forest Plan are dealt with in the FEIS.

The Forest Plan will guide management of the Forest for the next 10 years and will be revised at least every 10 to 15 years or whenever conditions or demands have changed significantly. The specified details, including the standards and guidelines by which work will be done, and the site specific application of the various projects on each management area, are found in the complete document. This next section of the summary outlines the existing situation and the recommended decisions in the Forest Plan for the more significant activities of the Fishlake National Forest.

MAJOR POINTS OF THE FOREST PLAN

RECREATION

Opportunities and Use

1. Existing Situation

   a) Annual average (1979-1983) recreation visitor days (RVD's) has been 1.3 million.
   b) Recreation opportunity classes by acreage are 61 percent Semi-primitive Motorized, 26 percent Roaded Natural, 12 percent Semi-primitive Non-motorized, and less than 1 percent Rural.
   c) Estimated use by opportunity classes is 60 percent in Roaded Natural, 23 percent in Rural, 16 percent in Semi-primitive Motorized, and 1 percent in Semi-primitive Nonmotorized.
   d) Ratio of motorized to nonmotorized activities will only change slightly.
   e) Use is expected to double in the next 20 years and be 2.9 times present use by 2030.

2. Recommended Decision

a) Demand for motorized recreation opportunities will be met.
b) Operation and maintenance of the trail system will increase substantially.
c) Trail construction or reconstruction is planned for approximately four miles of trail each year.
d) One trail head facility will be developed in the first decade.
e) A Travel Management Plan will be prepared in 1986.

Developed Public Recreation

1. Existing Situation

a) Public sites include 19 campgrounds, 9 picnic sites, 1 boating site, and 1 visitor center for a total of 30 sites with a capacity of 3,700 people at one time (PAOT).
b) Private sector sites include 3 resorts and 127 recreation residences that accommodate 1,500 PAOT.
c) Many facilities within the public sites are near the end of their service life. Heavy maintenance and replacement has been infrequent or non-existent. Water systems generally do not meet health standards and need upgrading or replacement.
d) Projected use will exceed present supply during the first decade. The need for developed sites is estimated to be more than twice present capacity before 2030.

2. Recommended Decision

a) Funding for operation and maintenance of existing facilities will be increased.
b) All water systems will be upgraded to meet State standards.
c) Five developed recreation sites will be reconstructed in the first decade.
d) One new campground will be constructed in the Johnson Valley area in the first decade.

WILDLIFE AND FISH

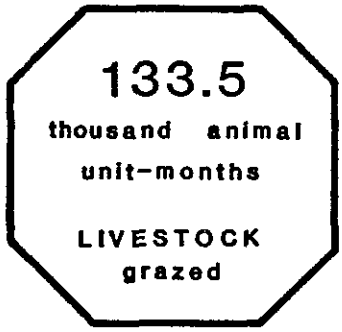
1. Existing Situation

a) Specific population estimates for fish are not available.
b) The average stream habitat condition for streams that have been surveyed is less than 50 percent of optimum.
c) Nearly half the lakes on the Forest, representing 80 percent of the total lake surface area, are producing trout below their potential.
d) Fishing use on the Forest is expected to increase by 130 percent from 1980 to 2030.
e) Trout production and fishing opportunities in Forest lakes and streams could be increased significantly by improving aquatic habitat condition.
f) Population numbers of deer and elk are below the carrying capacity of their critical ranges.
g) Bald eagles, peregrine falcons, and Rydberg's milkvetch are endangered species found on the Forest. The Utah prairie dog is a threatened species found on the Forest.
h) Wildlife recreation demand exceeds the supply and will likely do so through the next decade.
i) Future wildlife transplants are anticipated.
j) Wildlife and fish recreational use-benefits rank as one of the highest in the state.
k) There are over 300 wildlife and fish species on the Forest.

2. Recommended Decision

a) The Forest will increase its emphasis on aquatic habitat improvement.
b) The Forest will continue to improve habitat for the sensitive Bonneville cutthroat trout.
c) The Forest will increase fishing opportunities by 34 percent by the end of the first decade.
d) The Forest will increase its emphasis on riparian area protection and improvement.
e) No significant change in management of Bald eagles and Rydberg's milkvetch is anticipated.
f) The Forest will provide for its share of the sites for relocation of the threatened Utah prairie dog (as spelled out in the proposed recovery plan).
g) Management indicator species habitat will be monitored to determine changes in population trends and habitat trend.
h) Deer and elk numbers will be allowed to increase to numbers commensurate with the carrying capacity of available habitat.
i) Habitat manipulation on winter range will be done in conjunction with range management.

RANGE



1. Existing Conditions

a) Permitted grazing use has declined from 224,188 AUM's in 1943 to approximately 137,053 AUM's in 1986.
b) Current demand for grazing use exceeds available capacity.
c) Over 1.3 million Forest acres are included in grazing allotments. Approximately 639,856 acres are suitable for livestock grazing.
d) There are 76 range allotments with 59 under some form of intensive management.
e) Structural and non-structural improvements have been implemented on a majority of the allotments to improve grazing conditions and improve management potentials.
f) No wild horses and burros exist on the Forest.

2. Recommended Decision

a) Investments in structural and non-stuctural improvements are planned to sustain planned grazing capacity on priority allotments.
b) Maintenance of structural improvements will be the primary responsibility of range permittees unless facilities are in a non-maintainable condition.
c) Maintenance work on non-structural improvements will be continued to sustain grazing capacity on lands which have been previously treated.
d) The maximum potential level of forage production will not be attainable under future direction because of multiple resource coordination and protection requirements.
e) Implementation of this plan will result in about a 4 percent decrease in permitted livestock numbers in the second decade.
f) There will be increased emphasis on managing riparian areas to protect associated resource values.
g) Noxious weed control will continue to prevent the spread of weeds to adjacent lands and to reduce losses in resource values.

TIMBER

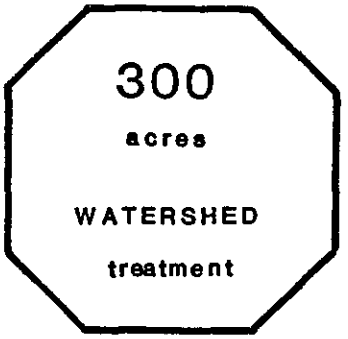
1. Existing Situation

   a) For several years the Forest has experienced light losses from localized infestations of mountain pine beetle, Engelmann spruce beetle, and spruce budworm.
   b) Losses from disease, such as rots in spruce and aspen, and dwarf mistletoe in Douglas fir and ponderosa pine, are widespread.
   c) Large acreages of mature and overmature timber have potential for heavy losses from insects and disease.
   d) Due to a depressed timber market, annual harvest has dropped from just over 2 million board feet to slightly under a million board feet. The Forest has been offering between 2 and 3 million board feet (MMBF) annually.
   e) Firewood sales from 1979 to 1983 averaged nearly 17,000 cords per year.
   f) Annual Christmas tree sales are near 10,000 trees annually.
   g) The aspen resource is receiving little intensified timber management as the Forest lacks a major market for aspen.

2. Recommended Decision

   a) This plan allows an annual harvest of 3.0 MMBF in the first decade and 8.3 MMBF during the balance of the planning period. It also allows for intensified management of nearly 240 thousand acres of aspen pending development of a market. Emphasis will be on development of a stable aspen market.
   b) The potential for epidemic insect and disease infestations will be reduced by managing mature and overmature acreage, thereby improving age class distribution.
   c) The Forest will meet the annual firewood demand up to 19,280 cords (2,410 MCF) in decade 1 and 25,600 cords (3,200 MCF) over the remainder of the planning period.
   d) Christmas tree production will be emphasized where not in conflict with other resource uses or commercial Christmas tree industry.

WATER AND SOIL



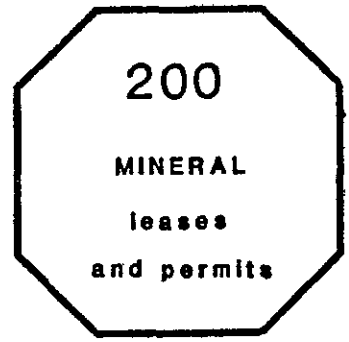
1. Existing Situation

   a) Approximately 611,000 acre-feet of water leave the Forest each year, all of which meets State water quality standards.
   b) Soil and water resource improvement work is proceeding at a slow rate because of limited available funding.
   c) There is an increasing demand for hydropower projects
   d) The Forest is identifying instream flow requirements.
   e) Water rights claims are being filed with the State. This includes claims in areas under adjudication as well as other watersheds.
   f) Soil survey is being done as a part of the National Cooperative Soil Survey. A final survey report has been published for the Juab County portion of the Forest.

2. Recommended Decision

   a) Water yield may increase by 177 acre-feet per year without any significant impairment to water quality.
   b) Soil and water resource improvement work will increase to 300 acres per year in the first decade and to 414 acres per year beyond the first decade.
   c) The Forest will continue to protect instream flow values to maintain stable stream conditions and favorable water flows.
   d) There will be increased emphasis on riparian area management.
   e) Filing water rights claims with the State will continue. The Forest will work with the State in all adjudications that affect the Forest.
   f) There will be an increased effort to complete soil survey work in cooperation with other agencies involved in the National Cooperative Soil Survey program.

MINERALS



1. Existing Conditions

   a) Approximately 99 percent of the Forest is open to mineral exploration and development under the mining and leasing laws.
   b) Significant amounts of gold, silver, copper, lead, zinc, mercury, alunite, uranium, and sulfur have been produced, mainly from the Tushar Mountains.
   c) An uncommon form of kaolin clay is mined from three sites within the Forest.
   d) Coal is the only leasable mineral produced on the Fishlake. The reserves are approximately 1693.6 million tons, which underlie approximately 220,527 acres within the Forest. There is one active coal mine on the Forest.
   e) Oil and gas exploration has been by various seismic methods and exploratory drilling. An average of 267 miles of seismic exploration per year was permitted between 1977 and 1981. Fifteen wildcat wells have been drilled on the Forest since 1958, but no discoveries made.
   f) The potential for geothermal resources exists in an area beginning near Cove Fort and extending eastward to the west edge of the Sevier Plateau near the town of Monroe. Three wells drilled on the Forest near Sulphurdale in 1983-84 hit high pressure steam. Plans are being formulated to begin utilization in 1985 and to continue exploration activities.
   g) The Forest contains significant amounts of sand and gravel, building stone, and lightweight aggregate.

2. Recommended Decision

   a) The Forest will remain open to mineral exploration and development while protecting critical resource areas.
   b) Considerable oil and gas activity is expected through 1997. No lands are withdrawn from operations of the mineral leasing laws. Approximately 6 percent of the Forest is restricted to leasing with no surface occupancy; 38 percent with moderate restrictions (seasonal stipulations) on access; and 56 percent with low restrictions (standard stipulations).
   c) Coal activity is expected to increase gradually in the future. Additional leasing is expected in the northeast corner of the Forest.
   d) Increased geothermal activity is expected with power producing facilities coming on-line in the near future.
   e) Exploration for uranium is expected to continue, with most activity in the Tushar Mountains.
   f) Exploration for heavy metals will continue.

g) Demand for limestone may increase significantly when the Intermountain Power Plant begins operations.
h) Demand for molybdenum is predicted to be high, which may lead to activity in the Tushar Mountains.

LANDS

1. Existing Situation

a) Energy development will continue to place demands upon the Forest for special use permits.
b) Requests for electronic site permits will continue at a high level.
c) The land exchange program with private landowners will continue at the present low level of activity because of limited National Forest land available or suitable for exchange.
d) The largest single landowner within the National Forest is the State of Utah.
e) The Forest right-of-way program has been active in recent years. However, 139 rights-of-way are still needed for existing roads and trails.
f) Most interior boundaries between National Forest and other ownerships have not been surveyed and posted to standard.

2. Recommended Decision

a) Demand for most energy related special use permits will be met. However, requests for transmission line permits outside of prescribed utility corridors will be evaluated on a case-by-case basis.
b) Additional electronic sites will be identified and designed.
c) An aggressive right-of-way program will be continued until all existing system roads and trails are covered to insure public access.
d) Large land exchanges with the State of Utah will be pursued to consolidate both federal and state lands.
e) The landline location and property boundary posting program will continue at present levels.

FACILITIES

1. Existing Situation

   a) The Forest owns 85 buildings, 50 percent of which are over 40 years old.
   b) There are one thousand four hundred and eight miles of system roads on the Forest, 930 miles of which are primitive. Also, an estimated 2,000 miles of "non-system" roads exist.
   c) The arterial and collector road system is in place, but much of it is in substandard condition.

2. Recommended Decision

   a) Reduce the number of guard stations and related structures from 12 sites to 7. Develop trailer pads in lieu of permanent structures. Upgrade water and sanitation systems at 7 sites.
   b) Implement Forest-wide Transportation and Travel Plans to manage Forest roads.
   c) Improve 13 miles of system road annually (if funding can be obtained).
   d) Low standard roads will be used for resource management and closed when no longer needed.

FIRE MANAGEMENT

1. Existing Situation

   a) Fires occurring within the Beehive Peak Fire Management Area (275,000 acres) are managed in accordance with predetermined prescriptions.
   b) Appropriate suppression response is made to all other wildfires.
   c) The Forest has an offset agreement with the State of Utah for identified lands in Sevier County.
   d) Limited use is being made of prescribed fire.

e) The 10-year average (1974-1983) fire occurrence is 35 fires per year (26 lightning and 9 person-caused). Average annual acreage burned for the same period is 3,134 acres.

2. Recommended Decision

a) The entire Forest will be a Fire Management Area with all wildfire managed in accordance with predetermined prescriptions.
b) The Fishlake offset agreement with the State of Utah for designated lands in Sevier County will be continued.
c) Expand the use of prescribed fire to reduce fire hazards in heavy natural fuel areas while accomplishing other resource objectives.

COST TO THE GOVERNMENT

1. Existing Situation

a) The Forest's average current budget is 3,199.3 thousand dollars per year for the first decade. This funding level would cause a decline in outputs and services over time.
b) The Forest's average current program level of funding is 4,583.1 thousand dollars per year for the first decade. Funding would have to increase to this level to maintain the current level of outputs and services.

2. Recommended Decision

a) The Forest plan's proposed average funding level is 4,766.6 thousand dollars per year for the first decade. To achieve an orderly transition into this plan the funding for 1986 is proposed at 4,000.8 thousand dollars, 1988 is 4,637.2 thousand dollars and 1995 is 5,396.1 thousand dollars.
b) Items proposed for the largest increases in funding are: wildlife at 300 percent of current, range at 190 percent of current, soil and water at 180 percent of current, lands at 175 percent of current, and recreation at 140 percent of current.

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