

Chapter 2

Summary of the Analysis of the Management Situation

Introduction

This chapter summarizes the management situation at the time these plan decisions were made. It focuses on the supply and expected future demand conditions for significant market and nonmarket goods and services, tied to the major issues and concerns. It also addresses the capability of the Forest to meet those demands. The benchmarks as well as updated information from the FEIS are used to provide information about the maximum and minimum biological and economic production opportunities of the Forest. The benchmarks are discussed in more detail in chapter 2 and appendix B of the FEIS. Also refer to the Winema National Forest, Analysis of the Management Situation, August 1985.

The last section of this chapter is a list of information and research needs, identified during this planning process.

Resource Supply and Demand Projections

This section summarizes anticipated supply and demand conditions for selected Forest goods and services. Economists consider "demand" to be a schedule of quantities of outputs that users are willing to take at a range of prices at a given time and given conditions of sale. The term "demand" is used in this section to identify a certain level of consumption at a particular point in time.

Few definitive studies have been made and sparse data is available to assess demand in the sense of the word as used for forest planning. Therefore, the assessment of both current and anticipated future use levels has been based on recent historical trends and some futuring expressions from various industries, organizations, and the public. Although estimates of demand are projected over several decades, these projections, like any projections, are expected to be less accurate in the distant future than in the near future.

Table 2-1 summarizes projected supply and anticipated demand for some of the key resources on the Forest.

**TABLE 2-1
Summary of Projected Supply and Anticipated Demand**

Resource (Unit of Measure)	Decade 1 1991-2000	Decade 2 2001-2010	Decade 3 2011-2020	Decade 4 2021-2030	Decade 5 2031-2040
Wilderness (1000's RVD)					
Maximum Potential	47	47	47	47	47
No Action Alternative	32	39	43	47	47
Forest Plan	31	37	43	47	47
Anticipated Demand	32	39	45	59	52
Nonwilderness Dispersed Recreation (1000's RVD)					
Nonroaded Recreation					
Maximum Potential	35	35	35	35	35
No Action Alternative	1	1	2	2	2
Forest Plan	3	3	4	4	5
Anticipated Demand	3	3	4	4	5
Roaded Recreation					
Maximum Potential	4283	4283	4283	4283	4283
No Action Alternative	205	259	300	348	404
Forest Plan	214	271	314	364	423
Anticipated Demand	214	271	314	364	423
Developed Recreation, Public Sites (1000's RVD)					
Maximum Potential	204	284	388	448	527
No Action Alternative	204	248	248	248	248
Forest Plan	204	284	388	448	454
Anticipated Demand	204	284	388	448	527
Timber Sale Program Quantity Millions of Cubic Feet					
Maximum Potential	43	34	34	34	34
No Action Alternative	32	32	32	32	32
Forest Plan	35	22	22	22	26
Anticipated Demand	25-36	-	-	-	-
Range permitted Grazing (1000's AUM)					
Maximum Potential	32	22	24	25	26
No Action Alternative	19	19	19	19	19
Forest Plan	13	13	13	13	13
Anticipated Demand	16	16	16	16	16

Local Timber Supply and Demand

This section discusses the past harvest on the Forest and the timber demand and supply in Klamath County. Table 2-2 shows the actual sawtimber harvest for the past 10 years on the Forest. The average annual harvest for the last 10 years was 165.7 MMBF. The average annual net growth taken from the 1981 inventory statistics is 118 MMBF per year. Since the current Klamath Basin Working Circle Timber Resource Plan was signed in 1978, timber harvest has averaged 160.9 MMBF per year. The programmed harvest in the Timber Resource Plan is 155.7 MMBF per year. The earned harvest effect of stand improvement projects above the original planned amount has increased the programmed harvest to 160.0 MMBF per year.

The annual harvest of ponderosa pine has averaged 80 MMBF for the last 10 years and 106 MMBF for the last five years. The harvest of lodgepole pine has greatly increased over historic levels in the last five years, because stands infested with the mountain pine beetle have been harvested.

**TABLE 2-2
Timber Harvest by Species (MMBF)**

Fiscal Year	Ponderosa Pine	True Fir	Douglas Fir And Others (1)	Lodgepole Pine	Total
1979	77.6	30.4	9.4	9.4	126.8
1980	63.2	26.3	11.2	16.7	117.4
1981	39.1	9.5	10.0	18.6	77.2
1982	21.2	12.7	7.7	5.1	46.7
1983	68.5	17.0	22.2	16.9	124.6
1984	91.9	26.8	34.8	36.1	189.6
1985	89.0	27.7	12.8	50.3	179.8
1986	102.3	53.7	13.0	85.9	254.9
1987	102.4	52.3	24.9	98.7	278.3
1988	145.3	51.8	25.4	39.6	262.1
Total	800.5	308.2	171.4	377.3	1,657.4
10-Year Average	80.0	30.8	17.1	37.7	165.7
5-Year Average 1984-88	106.5	42.5	22.2	62.1	232.9
The Timber Management Plan programmed harvest is 155.7 MMBF per year, and potential yield is 172.2 MMBF per year.(2)					

(1)Includes convertible products (products that could be sawtimber but instead are post, poles, and rails, for example), firewood, and cull when no other species is specified.

(2)Figure does not include a potential yield on the 135,000 acres of former Klamath Indian Reservation lands acquired in 1974. Harvests under the previous ownership averaged 27 MMBF per year at the time of purchase. If added to the potential yield, this results in a level of 199.2 MMBF per year. It is not known whether this represents a reasonable estimate of potential yield for the Forest.

SOURCE: Winema National Forest Cut and Sold Reports, USDA Forest Service, Winema National Forest, unpublished annual reports.

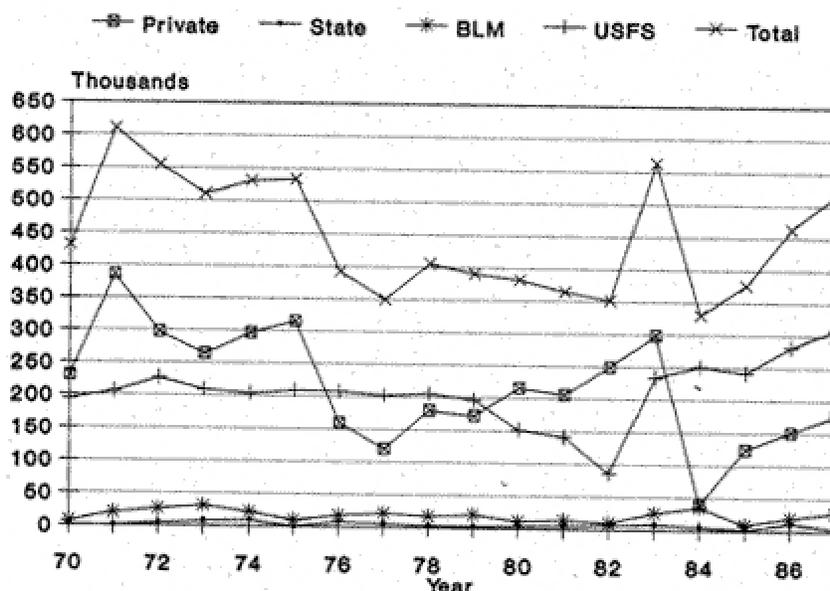
Under the 1978 Timber Resource Plan, all lodgepole pine harvest was considered to be part of the "Allowable Sale Quantity (ASQ)," then called the "Programmed Harvest Level," and was considered chargeable for accounting purposes. Under the Forest Plan, the ASQ does not include lodgepole pine that is dead or dying as a result of the mountain pine beetle activity. This dead lodgepole pine will not be considered chargeable against the Forest Plan ASQ. It, however, makes a significant contribution (estimated at 40 MMBF/year) to the Forest timber supply.

Demand for national forest timber has been high for the last three years. Purchasers are harvesting available timber faster than new timber contracts can be sold. As a result, some purchasers have few sales left to harvest.

Generally, industrial forestlands in the area are not managed for a nondeclining flow of timber. Most are managed with an emphasis on profitability. It is anticipated that a decrease in harvest on industrial forestlands will be necessary in the next two decades to allow young stands to mature.

Figure 2-1 shows the long-term trends of timber harvest from lands in Klamath County. Harvest levels were highest in the early 1970's, and they declined until 1984. In 1985, the trend reversed, and is now increasing rapidly.

**FIGURE 2-1
Timber Harvest by Ownership for Klamath County**



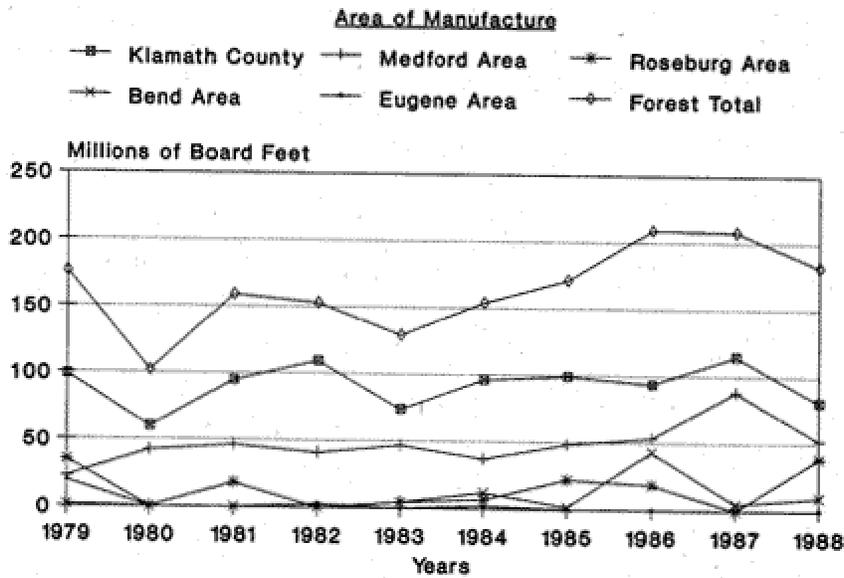
Klamath County is a net importer of logs. In 1976, imported logs exceeded exported logs by 189.2 MMBF. In 1982, imports exceeded exports by 124.9 MMBF. In 1985, imports exceeded exports by 40.9 MMBF, a 67 percent decrease from 1982. These imports originated primarily in Lake County, Oregon, and in northern California.

In 1976, only 51 percent of the logs milled in Klamath County were harvested in Klamath County. That number increased to 56 percent in 1982 and 66 percent in 1985. At the same time, production of mills in Klamath County dropped from 570 MMBF in 1976 to 411 MMBF in 1982 and increased slightly to 420 MMBF in 1985. The high production in 1976 showed the milling capacity of Klamath County under favorable economic conditions, whereas the low production in 1982 represented the effects of a generally poor economy on the timber industry. The 1985 milling figure represented a modest increase for the timber industry.

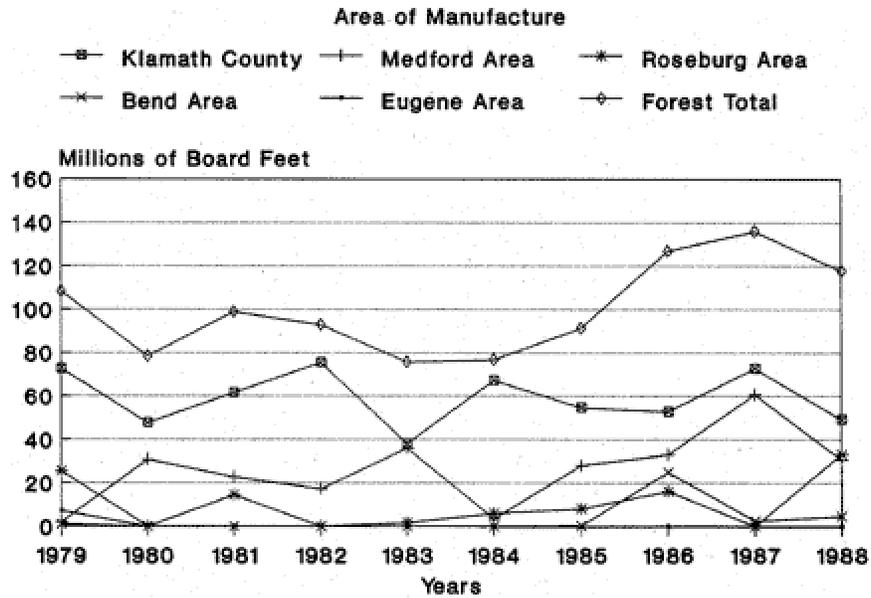
In summary, Klamath County greatly depends on outside sources for logs. About one-third of the logs milled in Klamath County are harvested outside Klamath County. About 25 percent of logs harvested in Klamath County are milled in adjacent counties. The Forest supplies nearly 43 percent of the logs milled in Klamath County.

Figures 2-2 and 2-3 show the total log flow and the ponderosa pine log flow for the last 10 years based on the Winema National Forest's timber sell.

**FIGURE 2-2
Winema National Forest Log Flow**



**FIGURE 2-3
Winema National Forest Ponderosa Pine Flow**



The graphs indicate that the portion of the Forest's sell being purchased by Klamath County industry has remained fairly constant at 100 MMBF for all species and at 60 MMBF for ponderosa pine. The portion of the sell purchased by industry outside Klamath County increased as the sell increased. Currently, industry outside Klamath County purchases about 50 percent of the Forest sell. This is a major increase in the volume of Klamath County timber being milled outside the county. It appears that local purchasers have been willing to bid competitively for the average historical use indicated in the graphs.

Regional Timber Supply and Demand Projections

The principal projections used in developing long-range plans and programs for management of the national forests are contained in the 1979 Resources Planning Act Assessment and 1984 Program Supplement. These projections focus on the long-term timber supply and demand situation and do not necessarily recognize current short-term regional fluctuations.

Livestock Grazing Supply and Demand

Rangelands and grazing on the Forest will continue to play only a minor role in the economic growth of Klamath County.

There are approximately 335,000 acres of inventoried suitable rangelands divided into 25 grazing allotments on the Forest. Livestock allotments are assigned to permittees through grazing permits. In 1984, cattle and sheep together accounted for 13,055 animal unit months grazed on the Forest. This was 69 percent of the permitted number of animal unit months. All nonuse of available grazing over the past decade has been nonuse requested by the permittee. The desire to run full-permitted numbers on Forest grazing permits is low to moderate. Some form of nonuse is now being requested by 30 percent of the cattle permittees. Sheep operations appear to be similar to those of cattle in that 33 percent of sheep permittees are running reduced numbers. Little interest has been shown in developing intensive range management programs on the Forest. The capacity of the Forest to provide forage available for livestock is expected to exceed permitted use and demand.

Recreation

Recreation use of national forests has been increasing nationwide, and the Forest is no exception. Total use and receipts continue to grow each year. More important than the growing number of users are changes in user preferences and use patterns. These changes affect participation rates in activities and the type of facility or area desired.

The following anticipated trends were compiled from many sources, including the "Report of the Task Force on Outdoor Recreation Resources and Opportunities," 1988; "Oregon State Parks Visitor Survey," 1988; and the "Good Sam's Survey," 1988:

The majority of recreation use on the Forest will continue to be concentrated at recreation complexes. Multifamily and group camping units will continue to be popular.

Additional facilities such as showers and full trailer hookups will continue to be requested. Barrier-free access to facilities will be necessary for the elderly and the physically challenged.

The use of recreation camping vehicles will continue to increase, and campers will be looking for campsites which are available outside the normal camping season.

The majority of our customers will live within a one- or two-hour drive of the Forest.

The desire to recreate in a natural appearing environment, even if highly developed, will remain strong. Many visitors will continue to place a high value on scenic qualities at recreation sites and along major travel routes.

Nature programs and interpretative trails will continue to be popular.

The recently completed Pacific Northwest Outdoor Recreation Consumption Study (Hospodarsky 1989) was used as the basis for projecting future recreation demand on the Forest.

Projections were based on forecasted socio-demographic factors like population, median age, and income levels. Projected activity growth rates for south-central Oregon were used to estimate future demand by activity for the Forest. The demand projections for the next two decades are shown in table 2-3. The growth rates used assume that facilities will be constructed to handle demand as it increases. Those activities with the highest predicted growth rates are day hiking, riding bicycles on roads, nonmotorized boating, wildlife viewing, and RV camping. These activities are expected to increase more than 4 percent per year.

TABLE 2-3
Current Use and Projected Recreation Demand by Activity
(RVDs)

Activity	1988	2000	2010
Developed Camping	119,400	182,500	260,000
Undeveloped Camping	50,700	75,100	104,700
Picnicking	13,900	18,700	23,900
Swimming	11,000	15,000	19,300
Motorized Boating	16,000	20,100	24,200
Nonmotorized Boating	5,400	9,600	15,500
Sight-seeing/VIS	22,300	32,900	45,600
Hiking and Backpacking	20,800	27,700	35,700
Bicycle Riding	600	1,100	1,900
Horseback Riding	2,900	3,500	4,100
Snowmobiling/Cross-country Skiing	12,700	17,100	22,100
Sports	800	1,200	1,700
Gathering Forest Products	28,000	31,600	34,800
Resorts, Organization Sites, and Cabins	108,500	116,600	123,800
Fishing	23,900	26,600	29,200
Hunting	19,200	20,300	21,400
Wildlife Viewing/Photography	19,000	24,100	29,400
Total	475,100	623,700	797,300

Information Needs

This section lists the information, inventory, and research needs that have been identified for the Winema National Forest. This recognizes gaps in data or scientific knowledge that would be desirable to fill prior to preparation of the next Winema National Forest Land and Resource Management Plan. The

concept used to organize and develop these needs recognizes that biological, physical, and socioeconomic ecosystems are the foundation for the planning process. This list may expand if additional needs are identified through monitoring and evaluation (see chapter 5 of the Forest Plan).

Of the many ecosystems found in wildlands, several were identified as having particular current importance in forest planning. Old growth, mule deer and other wildlife habitats, riparian/aquatic areas, and human interactions within the Forest environment are examples where more information would be desirable to test planning assumptions as future plans are developed.

Information needed to address these concerns fall into five general categories: interaction/processes, long-term productivity, cumulative effects, socioeconomic, and wildland-community relations.

Interactions/Processes

This category includes information leading to a better understanding of interactions within and between ecosystems, effects of one resource on others, and the physical, biological, social, and political processes that influence these interactions and resources.

Inventory the shortnosed sucker and the Lost River sucker to determine occurrence, distribution, and abundance on the Forest.

Clarify the relationships between recreation settings, use, and opportunities and other resource uses.

Improve knowledge of the distribution and habitat requirements of wildlife associated with old-growth forests.

More precisely determine habitat requirements (localized for the Winema National Forest) of management indicator species such as pileated woodpeckers, pine marten, and spotted owls that depend on direct land allocations. Habitat area required per breeding unit needs to be better determined; habitat suitability indexes need to be developed.

Determine the habitat requirements of wildlife species which may be used as indicator species in future planning cycles, may require direct land allocation, or may need special management (includes goshawk, black bear, fisher, water ouzel, and cougar).

Inventory and better define the habitat, environmental, and propagational requirements of sensitive plants and animals.

Provide opportunities for research, studies, and monitoring of influences that forest management activities may have on predation of wildlife and domestic livestock. Provide opportunities for testing and monitoring of control methods to evaluate their effectiveness

More specifically determine the limiting factor(s) for mule deer and Rocky Mountain and Roosevelt elk populations (include analysis of impacts of timber management activities).

Understand the relationships between old-growth characteristics and ecological and visual diversity, associated plant and wildlife species, and the maintenance of natural gene pools.

Assess the effects of landscape patterns of timber harvest and road construction on biological diversity (including management indicator species) and stability of special habitat areas such as research natural areas.

Record the influence of previous stand history, disturbance frequency and intensity, and rehabilitation efforts on rates and direction of succession.

Assess fish productivity of various stream and lake habitats and the effects of management activities on fisheries potential. Determine sediment types and levels that affect fish habitat components.

Verify stand characteristics required to provide snow intercept thermal cover for big game.

Assess the results of stream rehabilitation projects on fish population dynamics, public perception of landscape and recreation quality, and stream hydrology, for example.

Develop effective methods of uneven-aged management to produce optimized resource benefits.

Obtain up-to-date reliable information on the application of uneven-aged management under local conditions.

Document the spatial and temporal pattern of wildfire intensity as influenced by management activities.

Develop strategies that minimize soil disturbance and compaction during harvesting.

Derive on-Forest rates of woody material accumulation and decay, and better establish how that should influence our management.

Increase knowledge of site/moisture relationships in harvested areas (microwatersheds).

Improve total tree biomass information that is needed to evaluate whole-tree harvesting practices.

Long-Term Productivity

This section includes studies leading to better understanding of ecosystem needs in order to maintain various aspects of long-term productivity.

Determine user (visitor) needs and expectations for recreation opportunities.

Inventory wildlife habitats: riparian, wetlands, old-growth forests, snags, and lodgepole pine by biological, chemical, and physical characteristics.

Obtain better on-Forest and downstream information on baseline channel condition, water quality, and fish habitat. Continue to obtain long-term trends in channel condition, water quality, and fish populations.

Conduct research and studies relating to soil fertility and fertilization, plant-nutrient relationships, pumice soils, and the effects of soil-disturbing activities on productivity.

Complete a new timber inventory of the Forest.

Determine the desired amount and distribution of seral stages to be maintained within each of the Forest's plant associations. Determine how the Forest should manage for biological diversity. Use research natural areas for baseline information and monitoring.

Determine the effects of forest fragmentation on ecosystem integrity and function, including viability of vertebrate species.

Determine the effects of management practices on the incidence and severity of pathogens and insects as they affect the condition of the Forest over time.

Evaluate the effects of soil compaction on long-term productivity.

Improve understanding of interaction of soil, seedlings, and environment as it affects reforestation and site productivity.

Explore and document mechanisms for managing soil organisms and the importance of these organisms to ecosystem development and stability and long-term productivity.

Assess the effects of certain harvest practices and residue treatments on long-term productivity.

Derive successful methods to reforest land now classified as not reforestable within five years.

Understand the role of fire in the nitrogen and carbon cycles that maintain long-term productivity. Understand the role of fire in providing vegetative conditions desirable for range, wildlife, visual quality, and other resource areas.

Cumulative Effects

This section includes studies to examine the cumulative effects of naturally occurring and human-induced activities on various aspects of selected ecosystems and resources.

Develop indicators or criteria to predict when recreation user patterns may change as a result of intensive forestry practices.

Determine wildlife and fish species reactions to patterns of habitat created or altered by management and natural succession.

Gather additional information on forage values of bitterbrush and on methods to improve winter range and fawning forage bases for mule deer.

Gather additional information both on- and off-Forest on activities that are affecting the mule deer population.

Determine the effects of human disturbance and livestock competition on wildlife species.

Determine and understand the effects of land management activities on threatened and endangered species.

Assess the potential effects of predation of management indicator species on each other in small fragmented habitat units (for example, is predation by marten and barred owls detrimental to pileated woodpecker populations in limited habitat?).

Evaluate the effects of planting genetically selected stock on stand growth and yield, pathogen and insect population dynamics, and forage nutritional quality for wildlife, for example.

Determine the cumulative effects of timber management activities (timber harvest, road construction, and site preparation) on water quality and stream stability and fish habitat.

Evaluate the cumulative effects on soil productivity by ground-based timber harvest equipment.

Evaluate the effects of fire exclusion on the structure and function of ecosystems.

Socioeconomic Analyses

Additional studies are needed to increase our understanding of the economic and social effects of many planned wildland activities.

Measure and predict the effects of changes to wildland landscapes on recreational values, both in economic and social terms. Conduct a marketing survey of recreation to determine the needs, desires, and expectations of the recreating public. Accurately assess the recreation demand for and use of nongame wildlife on the Winema National Forest.

Understand the effects of long-term changes in site productivity for a range of resources on local and regional economy.

Wildland/Community Relations

The relations and interactions between wildlands and the human communities within and around them need to be better understood.

Evaluate the patterns of resource theft and develop techniques for reducing such losses to acceptable levels.

Develop strategies that reduce risk of wildfire and recognize adjacent community values and concerns.

Regional Needs

Increase understanding of biological diversity and how the Winema National Forest functions as a part of the whole.

Better comprehend the importance of old-growth ecosystems on the biological diversity of the Pacific Northwest.

More thoroughly understand the effects of forest management and wood residue management on long-term site productivity and nutrient cycling for tree growth, wildlife populations, and fish populations.

More appropriately quantify the economics of fire fighting, fuel hazards, and risks commensurate with resource values.

Derive methods to quantify smoke emissions more accurately.

Obtain and/or consolidate additional data on the effectiveness of Best Management Practices.

Obtain more information on global warming trends and how management activities in the Pacific Northwest and the Winema National Forest contribute to this issue.