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Forest Service Handbook 1909.17 – Economic and Social Analysis Handbook

Chapter 30 - Social Analysis

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Changes in the availability or in the permitted uses of forest resources can be of great importance to residents of affected communities, to commercial users, to recreationists, and to the public at large. Social impact analysis is one of the tools the Forest Service uses to identify the effects of proposed actions on these forest publics. This chapter sets forth basic principles, techniques, and general guidance for conducting social impact analysis.

30.1 - Authority

1. The National Environmental Policy Act of 1969 (NEPA) requires integrated use of the natural and the social sciences in all planning and decisionmaking that affect the human environment. The human environment includes the natural and physical environment and the relationship of people to that environment (40 CFR 1508.14). NEPA requires that unquantified environmental amenities and values receive the same serious consideration as economic and technical factors.

2. Forest Service land management planning regulations require the integration of social science knowledge into the forest and regional planning process (36 CFR 219.5).

3. Forest Service Manual section 1973.03 mandates social impact analysis if potential social effects of agency policies or actions are important to the decision.

30.2 - Objectives

The objectives of conducting social impact analysis are to:

1. Inform agency decisionmakers and publics of the variety of potential social effects that might occur as a result of agency actions.

2. Identify potential public needs and concerns that resource managers must consider in their decisionmaking.

3. Assess the effectiveness of program planning, implementation, and social impact mitigation.

30.4 - Responsibility

1. Social Science Analysts. Social Science Analysts should work with other specialists using an interdisciplinary approach to:

a. Plan the depth and focus of environmental analysis, the analytical tasks and standards, the public participation plan, and other analysis tasks.

b. Identify social science information needs and collect, organize, and interpret necessary data.

30.5 - Definitions

The following are concepts used in this chapter. Other applicable definitions are in other chapters of this handbook; 40 CFR 1508; FSM 1905; FSH 1909.17, section 05; and FSH 1909.15, section 05.

1. Area of influence. A delineated geographic area that includes the population most affected by past, present, or proposed actions of a Forest Service Unit. Depending on circumstances, an area of influence may be local to inter-national in its scale. An area of influence used in estimating economic and social effects of an action is also called an impact analysis area.
2. Community cohesion. The degree of unity and cooperation evident in a community as it defines problems and attempts to resolve them.
3. Community stability. A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.
4. Comparison community. A community whose experiences with actions are similar to those presently proposed for another community and whose experiences may be helpful in predicting and mitigating possible adverse effects of the proposed actions.
5. Environmental analysis. (FSH 1909.15, sec. 05).
6. Impact, social (also social effect). A change in social and cultural conditions which directly or indirectly results from a Forest Service action (FSM 1973).
7. Infrastructure. A set of basic public and commercial facilities and support services. Common elements include schools, stores, streets, housing, parks, telephones, water service, police and fire protection, hospitals, and social services.
8. Institutional analysis. An examination of institutions within an area of influence and their expected responses to Forest Service actions.
9. Interdisciplinary team. A group formed to use an interdisciplinary approach to ensure the integrated use of the natural and social sciences and environmental design arts in planning and decisionmaking, as required by the National Environmental Policy Act (FSH 1909.15, sec. 11.7).
10. Lifestyle. (FSH 1909.17, sec. 05).
11. Minority. (FSH 1909.17, sec. 05).
12. Mitigation. (40 CFR 1508.20).

13. Public involvement. (FSM 1905; FSM 1620).
14. Site-specific. A term applied to an action such as a timber harvest, mineral development, or road or water project that involves a limited, often well-defined geographic area.
15. Social analysis. The collection and evaluation of information about the social context and social effects of Forest Service activities.
16. Social category. A classification of people with a common social characteristic, such as age, nationality, occupation, hobby, outlook, or educational level.
17. Social group. People who cooperate to pursue common interests and to attain mutual goals.
18. Social and economic overview. A document or organized file that describes a Forest Service Unit in its social, economic, and historical context.
19. Social impact analysis. A component of the environmental analysis process that uses social science information and methodology to determine how present programs or proposed actions affect humans.
20. Social organization. The structure of a society described in terms of roles, relationships, norms, institutions, infrastructure, and/or community cohesiveness and stability.
21. Social science analyst. A person who does social science analysis, such as an agency social scientist, a designated social science coordinator, or an outside contractor.
22. Social variable. An indicator used to measure the social impact of Forest Service management alternatives. Examples include population statistics, types of institutions, and personal opinion as reflected in attitudes or as demonstrated by behavior.
23. Subculture. A distinctive pattern of beliefs, values, norms, and customs shared by a portion of the population, often because of a common age, ethnic heritage, occupation, or religious or ideological orientation.
24. Value, social. A shared standard of preference or desirability, such as good health, honesty, success, and prosperity, or the desire to develop natural resources or to preserve natural beauty.

30.6 - Role of Social Impact Analysis in Environmental Analysis

Much social impact analysis in the Forest Service is the work of interdisciplinary teams responding to National Environmental Policy Act and National Forest Management Act requirements. Social impact analysis is usually an important component in the analysis of such actions as legislative proposals, major agency policy changes, land management planning, and site-specific projects with human impacts. Environmental analysis, including social impact

analysis, is a flexible process that permits variations in activity sequence and revision of earlier work as the analysis proceeds. The social information required for each analysis varies with the type, complexity, and social importance of the proposed action. In each analysis, use valid existing documentation to avoid duplication of efforts (FSH 1909.15, sec. 11.4). Exhibits 01 and 02 show how social impact analysis tasks are integrated with environmental analysis in the analysis of site-specific proposals and in land management planning.

30.6 - Exhibit 01

<u>How Social Analysis Tasks Are Integrated with the Environmental Analysis Process</u>		
A Analysis Activities in a Convenient Sequence 1/	B The NEPA Process. (40 CFR 1500 to 1508)	C Related Social Analysis Tasks (FSM 1970)
Scoping	Study the proposed action to determine its nature and importance, the extent of environmental analysis required for an informed decision, and possible action alternatives. Plan the analysis process, select analysis, determine analysis appropriate interdisciplinary skills; and invite the participation of potentially affected persons, groups, and communities.	Initiate social effects analysis when the potential effects of agency policies or actions are important to the decision. Conduct a preliminary investigation to identify or validate issues, select key variables for areas, and assess data needs and sources. Help identify public and agency concerns and management opportunities.
Collecting and Interpreting Data	Data and analysis included should be commensurate with the importance of the expected environmental effects. If desired, develop a social overview document or file to present this information.	Depth of analysis depends on importance of expected social effects.
Formulating Alternatives	Develop reasonable alternatives, including "no action," the proposed action, and viable action alternatives.	Assist in formulating alternatives that respond to all important public and agency social concerns. Consider effects on lifestyles; attitudes, beliefs, and values; social organization; population and land use, and civil rights.

30.6 - Exhibit 01 - Continued

A Analysis Activities in a Convenient Sequence 1/	B The NEPA Process. (40 CFR 1500 to 1508)	C Related Social Analysis Tasks (FSM 1970)
Estimating Effects	Discuss possible effects of the action and its alternatives, including direct, indirect, and cumulative effects and their significance. Include both beneficial and adverse social, economic, physical and biological effects, and possible mitigation measures.	Estimate social and economic changes that would result from each alternative. Report effects by alternative on forest users, by forest-dependent communities, urban areas, others who value the forests, women and minorities civil rights, and consumers.
Selecting a Preferred Alternative	Evaluate and compare alternatives. Identify the agency's preferred alternative, if one exists.	Help evaluate and compare the social and economic effects of each alternative so that these are considered along with other factors.
Monitoring Program Implementation	Agencies may provide for monitoring to ensure that decisions have expected results and that mitigation commitments are met.	Observe the effectiveness of program implementation, including mitigation efforts, through direct observation and conversation with knowledgeable people. Provide suggestions for program improvement.
1/There is no fixed analysis sequence and steps often overlap.		

30.6 – Exhibit 02

<u>How Social Analysis Tasks are Integrated with Land Management Planning</u>		
A Analysis Activities in a Convenient Sequence 1/	B NEPA Process Applied to (36 CFR 219.12)	C Related Social Analysis Tasks (FSM 1970)
Scoping	Determine purpose and need by identifying and evaluating public issues, management concerns, and resource use and development opportunities. Develop criteria to guide the planning process, based on laws, administrative direction, public and management input, and ecological, technical, economic, and management and concerns and	Initiate social effects analysis when the potential effects of agency policies or actions are important to the decision. Conduct a preliminary investigation to identify or validate issues, select key variables for analysis, determine analysis areas, and assess data needs and sources. Help identify public and agency concerns and management opportunities.
Collecting and Interpreting Data	Maintain a current inventory of data appropriate for planning and managing resources. Determine the unit's ability to supply goods and services at specified levels of management production.	Depth of analysis depends on importance of expected social effects. If desired, develop a social overview document or file to present this information.
Formulating Alternatives	Develop a broad range of reasonable alternatives that respond to issues, concerns, and opportunities, and that provide a basis for maximizing net public benefit, consistent with sound forest management practices. Include a "current level" and an RPA Program alternative.	Assist in formulating alternatives that respond to all important public and agency social concerns. Consider effects on lifestyles, attitudes, beliefs and values; social organization; population and land use; and civil rights.
Estimating Effects	Estimate the physical, biological, economical, and social effects of each alternative, including expected market and nonmarket outputs, and direct and indirect benefits and costs.	Estimate social and economic changes that would result from each alternative. Report effects by alternative on forest users, forest-development communities, urban areas, others who value the forests, women and minorities, civil rights, and consumers.

30.6 - Exhibit 02 - Continued

A Analysis Activities in a Convenient Sequence ^{1/}	B NEPA Process Applied to (36 CFR 219.12)	C Related Social Analysis Tasks (FSM 1970)
Selecting a Preferred Alternative	Evaluate the significant physical, biological, economic, and social effects of each alternative, using planning criteria. Recommend a preferred alternative.	Help evaluate and compare the social and economic effects of each alternative so that these are considered along with other factors.
Monitoring Program Implementation	Evaluate implementation at designated intervals to determine how well the unit applied management standards and has met objectives. Recommend needed changes in management direction.	Observe the effectiveness of program implementation, including mitigation efforts, through direct observation and conversations with knowledgeable people. Provide suggestions for program improvement.
^{1/} There is no fixed analysis sequence and steps often overlap.		

31 - Conduct Scoping

Scoping is a procedure for determining the depth and focus of environmental analysis necessary for making an informed decision (FSH 1909.15, sec. 05). In order to determine the scope of an environmental analysis, the responsible official must know the social context of the proposed action, including the most important issues and concerns. This information is also necessary for estimating the social consequences of an action and its alternatives. Resulting documents also provide potentially affected persons with quantitative and descriptive information about the proposed action (FSM 1973.02).

31.1 - Initiate Social Impact Analysis During Scoping

Initiate social impact analysis when preliminary scoping determines that important social effects could result from a Forest Service decision on a proposed action or its alternatives (FSM 1973.03). This analysis tells the decisionmaker:

1. The variety and intensity of possible social effects.
2. The location of affected populations.
3. The interrelationships between social and other factors.
4. Whether it is possible to mitigate adverse effects that could occur (FSH 1909.15, sec. 24).

Designate a social scientist or other person familiar with the affected social environment (hereafter called social science analyst) to compile and help interpret the social information required in the scoping process.

31.2 - Consider Social Conditions in Scoping

Most routine Forest Service actions are small in scale and generate few important social effects. But some major actions such as forest planning, mineral and recreation developments, or a combination of numerous smaller actions produce a complex pattern of impacts that merit careful study. In scoping the current social situation and the possible effects that could result from proposed actions, consider the following factors:

1. Categories of people the activity is likely to affect: for example, residents of nearby communities, forest products industries, forest users, environmental groups, minorities, women, retirees, local business people, and adjacent landowners (40 CFR 1501.7(a)(1)).
2. How the action compares with historical trends: past and present economic activities, rates of population change, community stability, public reactions to similar changes in the past, and local traditions (FSH 1909.15, sec. 61.4).

3. Socioeconomic and sociocultural conditions the action is likely to affect.
 - a. Socioeconomic effects (sec. 35.4) include changes due to the action in income, employment, population, local revenues, and business activity.
 - b. Sociocultural effects (sec. 35.5) include changes in community institutions, values, interpersonal relationships, and perceptions of the environment.
4. Sources of effects: direct, indirect, induced, and cumulative (40 CFR 1508.7 and 1508.8).
5. Duration and intensity of effects: short or long term (FSH 1909.15, sec. 11.2); how significant (40 CFR 1508.27).
6. Location and magnitude of the action: whether it is local, statewide, regional, or national in its effects (FSM 1973.3).

31.3 - Plan the Analysis

Complete these steps in conducting social impact analysis (FSM 1973.1). Plan and coordinate each step as part of the overall environmental analysis (sec. 30.6, ex. 01).

1. Begin a preliminary social investigation as soon as there is a clear understanding of the nature of the proposed action and of the need for social analysis. The following are appropriate scoping objectives for the preliminary investigation:
 - a. Determine the types, range, and intensity of social effects usually associated with such actions.
 - b. Identify groups, communities, and categories of people the action might affect. Delineate the area(s) of influence (sec. 31.41).
 - c. Explore social issues, concerns, and opportunities to ensure that important matters receive appropriate consideration. Learn the background of each issue, who has a stake in the outcome, and possible ways to resolve controversial issues.
 - d. Assess the adequacy of existing data for predicting the impacts of Forest Service activities. For example: Is there sufficient information? Is the information recent and relevant? Focus on the most important issues and concerns (FSH 1909.15, sec. 11.5) and the data required to analyze them.
 - e. Identify the most relevant social variables (sec. 33).
 - f. Determine whether additional field work is necessary to fill data gaps.
2. Analyze the present social situation and existing trends to use as a base for projecting the social effects of different alternatives in agency planning (sec. 34).

3. Work with other specialists to formulate reasonable alternatives and estimate the possible effects of each alternative, including the proposed action (sec. 35). This helps to identify social information needed in the environmental analysis.

31.4 - Identify Agency-Community Linkages

Determine how Forest Service activities and various social categories, groups, and communities affect each other. Usually linkages between the Forest Service and local residents are most numerous and visible. There are also important ties between some Forest Service activities and citizens who do not reside in the immediate area, those interested in wilderness, wildlife, outdoor recreation, and natural resource development.

The nature of the proposed action determines the most important links between National Forest units and the affected population. The action may create new links and alter existing ties. It is useful to develop a list of questions to help identify existing linkages and to collect the information needed to describe them. Decisionmakers and knowledgeable resource personnel should review the questions for relevance. The following is a list of suitable questions:

1. Who uses the resources of the Forest Unit? Does the Unit supply a large portion of each user's need for goods and services?
2. Are other local businesses and industries indirectly linked to agency programs?
3. Where National Forest lands are involved, what activities or conditions occur on adjacent lands and what are their ties to the National Forest?
4. What portion of local government revenues depend, directly or indirectly, on agency activities?
5. Do American Indians and other groups have ties to Forest sites and resources?
6. If the proposed action is site-specific, do some individuals and groups have strong feelings about its location and desirability?

31.41 - Determine the Area of Influence

Delineate an area (or zone) of influence large enough to include the people most subject to the direct and indirect social effects of various program alternatives. Many of the strongest and most stable links (sec. 31.4) between the Forest Service Unit and the public are evident in this area.

1. Size. The size of the area of influence depends on the activity. For example, an area influenced by a major recreation development would be much larger than an area affected by the upgrading of a local road. An agency action with widespread social effects may warrant delineation of two or more areas; for example, a local zone of direct, intense, and frequent effects and a larger regional or national zone of more subtle or infrequent effects. In the larger zone, the links to the Unit are usually weaker and the Unit's resources are a less crucial part of the area's economic and social activities.

2. Linkage to Economic Impact Analysis Area. If the area of social influence roughly coincides with the economic impact analysis area for the same action, use the same area for both analyses to simplify social data collection. This is sometimes feasible in integrated land-use planning. However, if there is no identified economic impact analysis area or if it is clearly inconsistent with the area of social influence, select the area of influence appropriate for the social impact analysis.

3. Delineation of Boundaries. When feasible, delineate local areas of influence along county lines to facilitate data collection and coordination with local units of government. When counties are large and internally diverse, be sure to note other distinctive population features caused by mountains, drainages, travel routes, industries, and cultural or lifestyle patterns (sec. 31.42). Similarly, if a larger regional area of influence is a useful tool, define it along county or State boundaries.

31.42 - Delineate Subareas

If possible, divide a diverse area of influence into subareas with distinctive social and economic characteristics. Delineate on the basis of one or a combination of:

1. Community type (for example, size, principal industries, or cultural history).
2. Geographic location (for example, counties or drainages).
3. Proximity to the location of the activity (for example, within easy commuting distance or farther away).
4. The distribution of occupations and/or lifestyles within a rural area (for example, areas where coal miners and ranchers are the dominant residents might be useful units of analysis where coal development is occurring).
5. Other pertinent characteristics, such as settlement patterns or recreation activities, but do not delineate subareas solely on the basis of location of interest groups.

Insofar as possible, the subareas should not overlap, yet must include all of the people the action affects. For examples of subareas and their uses, see the sample worksheets and summaries in section 38.4.

31.5 - Consider Social Analysis Documentation

The complexity and importance of the social issues may warrant preparation of a social and economic overview or other reference document for use in the analysis.

31.51 - Social and Economic Overview

A social and economic overview is an optional reference document prepared during scoping for forest land management planning or other major actions. An overview is a published or

unpublished report, or an accessible file of data with a summary and interpretation in narrative form (sec. 38.1).

A well-designed social and economic overview:

1. Describes the social, historical, and economic context of a Forest Service Unit and identifies problems, opportunities, and potential sources of controversy.
2. Includes the most recent and reliable social, demographic, and economic data.
3. Discusses socioeconomic and sociocultural trends pertinent to Forest programs.
4. Identifies important relationships among physical, biological, economic, and social aspects of forest management.
5. Facilitates the design of effective public involvement programs within the area of influence.
6. Organizes appropriate social and economic information for developing forest plans, programs, or project-specific environmental documents. If the social and economic overview (SEO) is a written document, rather than file data, and copies are readily available, it may be referenced in other environmental documents (40 CFR 1502.21).

31.52 - Other Social Analysis Reference Documents

The responsible official may request other, more focused social background reports for specific projects or situations. Examples are: economic impacts of phosphate mining on ranchers, social effects of a pesticide spraying program, effects of a reduced timber harvest on local businesses, social impacts of a large recreation complex in a retirement area, and social effects of coal development on a neighboring Indian reservation.

31.6 - Identify Special Concerns

Determine if there are areas of social life accorded special consideration by law or tradition. For example, the Forest Service has a legal mandate to protect certain resources, such as cultural sites and historic places (36 CFR 800 and FSM 2360). Also consider the legal rights and existing privileges of minorities, women, adjacent landowners, local governments, and National Forest users (FSH 1909.15, sec. 24). Examples include the right to equal employment opportunities; mining, grazing livestock, or fishing on public lands; the need for access to private inholdings or tribal religious sites; and the health and safety of National Forest users.

31.7 - Develop Criteria

Develop criteria and standards to guide social impact analysis (FSH 1909.15, sec. 11.91).

Criteria for social analysis may be derived from Federal laws and policies, public concerns, consultation with other experts, the professional standards of the social sciences, prior experience, and other sources. Criteria are necessary to:

1. Determine the Depth of the Analysis. How to identify the boundaries of the area of influence, level of inventory required, or degree of detail for the discussion of anticipated effects.
2. Select and Measure Variables. How to focus the analysis on social variables that are most relevant to the decision at hand (sec. 33.4).
3. Formulate Alternatives. How to develop reasonable alternatives (FSM 1920, 1950; FSH 1909.15). Other criteria may be necessary to ensure an adequate range of alternatives and to address all major issues.
4. Evaluate Alternatives. How to evaluate social effects of alternatives. The social science analyst shall consider issues, concerns, and opportunities; sociocultural and socioeconomic trends in the area of influence; characteristics and preferences of affected communities; and the expected type and distribution of impacts (sec. 35 and sec. 36.1).

31.8 - Anticipate Data Needs

Social data needs must be consistent in time and effort with the scope of the environmental analysis and the issues the analysis must address. Comprehensive information is necessary to analyze unfamiliar actions and actions that have a high potential for social and economic impacts.

32 - Conduct Indepth Social Impact Analysis

If the action or its alternatives could have a significant effect on the quality of the human environment (sec. 36.2), a detailed social impact analysis is mandatory. Include findings in an environmental impact statement (FSM 1952). Ensure that the disciplines of the persons conducting the analysis are appropriate to the scope of the analysis and to the issues identified in the scoping process (40 CFR 1502.6).

33 - Select Variables

Focus a social impact analysis on public and agency issues and concerns identified during scoping. Select the most appropriate social variables, collect valid data to describe them, and provide the social information necessary for a sound decision.

33.1 - Select Measurable Variables

To compare social conditions before and after a Forest Service action and to determine the significance of changes, select social variables that permit measurement or narrative description of these changes. Choose variables that accurately portray the most important social changes likely to occur under each alternative.

Some social variables, such as average age, income, or educational level, are readily available and easily expressed in numbers. It is also possible to measure and report qualitative changes, such as worker morale, community stability, and recreation satisfaction. Except when using scientific survey instruments, it is more meaningful to use brief descriptive phrases or a narrative for analyzing and comparing variables that measure values, attitudes, or other qualitative social behavior (sec. 38.4, ex. 01 through ex. 04).

33.2 - Consider a Wide Range of Variables

Consider the potential effects of each alternative on the lifestyles, attitudes, beliefs, values, social organization, population, land-use patterns, and civil rights within the area of influence (FSM 1973.2). Select relevant variables within these broad categories of effects (sec. 33.3) to measure potentially important changes and to estimate expected effects. Obtain suggestions and data from case studies, environmental documents, acknowledged experts, and other sources that describe the experiences of comparable Forest Service Units and communities affected by similar actions. Identified issues and concerns suggest additional variables that merit examination.

33.21 - Lifestyles

Patterns of work and leisure, customs and traditions, and relationships with family, friends, and others are elements of lifestyle. Focus an analysis on individual and community lifestyles that Forest Service policies and practices affect. People may be affected because of:

1. Direct economic relationships to the Forest Service, for example, through employment in an industry using Forest Service commodities (timber, minerals, or forage) or holding special-use permits (ski areas, resorts, outfitters, and guides).
2. Induced economic effects from Forest Service activities; as in locations where recreational use of the National Forest is the foundation for the local tourism industry. An agency policy change that modifies forest recreation might affect employment in hotels, restaurants, and industries that provide supplies and services to the primary tourist industry (laundry and dry cleaning, food products, or fuel).
3. Esthetic and amenity ties to forest lands; for example, recreationists and the residents of adjacent private subdivisions place a high value on either the esthetic amenities of public lands (such as open space, scenery, peace, and solitude) or the amount, kind, and quality of recreation opportunity.

33.22 - Attitudes, Beliefs, and Values

Consider the feelings, preferences, and expectations people have for forests and the management and use of particular areas. Examples include the desire to harvest a forest's commodities or enjoy its esthetic qualities; preferred or unwanted management practices; or the desire to preserve familiar, sacred, archaeological, and historic sites.

Forest settings or products have emotional meanings to many people. American Indians (and others) use National Forest sites for spiritual renewal and cultural observances. Cedar groves, trails, firewood, Christmas trees, huckleberries, solitude, wind in the treetops, streams, landscapes, and wildlife have significant emotional and symbolic meanings to many people.

Changes in Forest Service policy may result in practices that have an impact on people's feelings about agency activities: their likes, dislikes, perceptions, and fears. Important components of these feelings include their sense of personal freedom, self-sufficiency, and control over their future. Public involvement and interview data provide impressions about personal and community values and value changes. It is also possible to measure these impressions scientifically by using attitude scales. Changes in demographic characteristics (such as rapid growth and loss of jobs) often affect attitudes, beliefs, and values, as well as the other social categories discussed here.

33.23 - Social Organization

Look for effects on three dimensions of social organization: social institutions, community cohesion, and community stability (sec. 30.5).

Institutions such as the family, school, businesses, and city government satisfy human needs. Rapid population growth in a town might affect all of these components. Local governments experience fiscal pressures from increased demand for public schools and services. Retail businesses expand along with membership in civic groups and churches. The influx of new people with different lifestyles and values is a source of stress to some residents and weakens community cohesion. New and old residents have divergent needs and different ways to satisfy them. Community stability is weakened when changes are disruptive enough to interfere with community efforts to solve problems and meet the needs of residents.

33.24 - Population Characteristics

Consider population variables, such as the size, rates of change, and composition of the population. These are potentially very important when major Forest Service actions change the number or type of locally available jobs, community services, and housing options. However, most Forest Service actions do not involve substantial population changes.

33.25 - Land-Use Patterns

Review the types, intensity, and spatial distribution of land uses; for example, agricultural, industrial, residential, or recreational uses. Forest Service actions may affect the location, density, and type of land use; the proportion of open space; pollution levels; the supply of water; and energy resources.

33.26 - Civil Rights

Consider the effects of each alternative on civil rights, minority groups, women, and consumers (FSH 1909.15, sec. 24). The social categories described in section 33.2 are appropriate areas to investigate for civil rights effects.

The phrase "civil rights" implies fair and equal treatment under the law, both within the agency and in its relations with the public (FSM 1703). The Forest Service participates in special programs to enhance opportunities for equal participation of women, minorities, and the handicapped (FSM 1761 and 1762).

Identify and document instances in which a proposed action may adversely affect civil rights.

33.3 - Select Key Variables

Each category of social effects (sec. 33.2) includes many variables, and some of them may be important to the decision on a proposed action. Exhibit 01, Reminder List of Social Variables, provides a handy reference list of variables that are measurable numerically or by means of attitude surveys, expert opinion, or personal observation. Most of these variables are not significant factors in the analysis of routine Forest Service actions. However, major programs, policy changes, and site-specific actions along with combinations of lesser actions, such as mines, ski areas, energy facilities, or timber harvests, can have important effects on many of these and on other variables.

33.3 - Exhibit 01

Reminder List of Social Variables

When the social effects of a proposed action may be important to a decision, identify and analyze the appropriate social variables. The following variables have been identified in a variety of previous environmental analyses. They are grouped into the six categories of social effects described in section 33.2. Consider a variable if:

- a. There might be significant variations in the effects expected under different alternatives.
- b. It may be possible to resolve or better understand an issue or concern because of an analysis of this variable.

1. Lifestyles

- a. Types of jobs available; these vary by skills, income, season, and business cycle.
- b. Percentage of unemployed in the local labor force.
- c. Family income and consumption patterns.
- d. Size, number, and characteristics of ethnic cultures and subcultures.
- e. Existing and incoming occupational subcultures.
- f. Recreation preferences, use patterns, and amenity options.
- g. Degree of privacy, isolation.
- h. Relationship of lifestyle to infrastructure and forest resources (mill employee, recreationist, or retired person).

2. Attitudes, Beliefs, and Values

- a. Public conceptions of appropriate uses of forest land.
- b. Scope and intensity of demonstrated support or opposition to the proposed action.

33.3 - Exhibit 01--Continued

- c. Customs and traditions in the affected area.
- d. Religious or subcultural orientations toward certain sites or resources.
- e. Local perceptions of incoming workers, recreationists, or retirees with different lifestyles.
- f. Attitudes about economic development by outsiders.
- g. Programs of organized special interest groups.

3. Social Organization

- a. Community cohesion (degree of unity and cooperation).
- b. Community stability (ability to absorb and manage change).
- c. Source and focus on leadership.
- d. Family and friendship networks.
- e. Traditions of mutual trust and aid.
- f. Nature and frequency of antisocial behavior, including crime, delinquency, drug and alcohol abuse, and vandalism.
- g. Child and spouse abuse, fights, rowdy behavior, and other symptoms of stress and anxiety.
- h. Infrastructure capacity: housing, schools, utilities, streets and highways, shopping facilities, social services, medical services, parks, and other recreation sites.
- i. Tax structure and rates; other public revenues.
- j. Type, diversity, and membership of service and special-interest organizations in the affected area.
- k. Opportunity for effective participation in Federal, State, and local governments.

4. Population

33.3 - Exhibit 01--Continued

- a. Number, density, and distribution of residents and visitors, including seasonal variations.
- b. Age and sex characteristics of residents, in-migrants, and visitors.
- c. Racial and ethnic composition.
- d. Types, rates, and duration of in-migration and out-migration.
- e. Available human resources (educational level, talents, skills).

5. Land-Use Patterns

- a. Existing land uses, such as timber, wildlife habitat, recreation, mining, and grazing, and their interactions.
- b. Compatibility of proposed changes in use with present uses of the site and adjacent lands.
- c. Agency use of fire, herbicides, pesticides; clearcutting practices.
- d. Extent of pollution and waste disposal.
- e. Sites of historical, cultural, or scenic value.
- f. Zoning requirements.

6. Civil Rights

- a. Civil rights implications related to any or all of the variables listed in the above five categories.
- b. Barriers to equal access by minorities and handicapped created or removed through the proposed action(s).
- c. Past and present evidence of discriminatory practices in the locale and the potential interaction of this with the proposed action(s).
- d. Potential for participation as contractors or subcontractors by small business, minority-owned business, small disadvantaged business, and women-owned business concerns in contracts, grants, and cooperative agreements generated by the proposed action(s).

33.4 - Apply Selection Criteria

Reduce the number of appropriate variables by eliminating those that fail to meet analysis needs or standards. The following criteria help to determine this. Relevance and potential significance are the most important criteria; consider them first. Then screen variables that meet these criteria against other criteria.

1. Relevance. The variable actually relates to the proposed action. To locate relevant information:
 - a. Determine the nature of the proposed action; that is, what activities are expected. Also consider when, where, why, and how the action could occur.
 - b. Identify who could be affected by the action and its alternatives. Explore how these persons might be affected.
 - c. Decide whether analysis of the variable helps to understand the issues identified during scoping.
 - d. Determine what else the decisionmaker should consider before selecting an alternative.
2. Significance. Forest Service actions (or other alternatives considered) affect or are affected by the variable, and the potential effects are important.
3. Availability. It is possible to obtain data to describe changes in the variable.
4. Efficiency. Measurement of the variable reduces the need for other data and measures.
5. Sensitivity. The measure of the variable clearly registers changes because of the proposed action.
6. Reliability. The measure yields consistent results.
7. Validity. The measure truly represents the variable condition.

34 - Collect and Interpret Data

Obtain social data from Forest Service units; other Federal, State, and local agencies; private sector groups; conversations with informed residents; and personal observations during field visits (sec. 38.2).

34.1 - Gather Social Data

Most sociocultural and socioeconomic data fall into four categories: (1) statistics, (2) written material, (3) observations, and (4) respondent contact data. There is no uniform "best" category

of information available for all social variables. Use the selection criteria in section 33.4 to help identify appropriate information.

34.11 - Statistics

Look for pertinent statistical data. These include numerical tabulations of population characteristics (age, sex, income, and labor force categories) or types of behavior (such as patterns of outdoor recreation and interview or questionnaire survey responses). Some data (for example, the U.S. Census) come directly from the people involved and are a matter of public record. If data are obtained without the conscious knowledge of the persons or groups tabulated, it may be necessary to treat these data as confidential. The most useful statistical data are those collected at regular intervals and with fairly consistent standards because these data allow for comparisons over time.

34.12 - Written Materials

Determine social conditions and effects from existing written materials that provide factual information or report social behavior (including attitudes, beliefs, and values). Examples are letters to editors, newspaper articles, written testimony, local histories, graduate theses, annual reports, and research studies. Content analysis systems help analyze written data (FSH 1609.13). Some of these systems store information in a retrievable form and yield tabulated summaries of the results.

34.13 - Observations

Derive observations from talking with people, watching live television coverage of events, attending community meetings and other events, and systematically monitoring and recording selected variables.

Use caution in the way you gather data. A set of nonrandom observations may yield data that are unrepresentative of the local population or too diverse for meaningful generalizations. Observational data are usually rich in context and meaning and can increase the understanding of the possible effects of an action. Such data are important sources of information for understanding conditions and trends in rural areas where other data are limited.

Procedures for collecting observational data are similar to first-hand investigative reporting and require a degree of immersion in the community. Increase data credibility by keeping careful field notes on each event observed; specify time, place, occurrences, persons involved, and other pertinent details.

34.14 - Respondent Contacts

Seek and record respondent-contact data. Options include the results of interviews, opinion surveys, or other direct-contact methods used to learn more about people's attitudes, opinions, experiences, and preferences. Keep in mind the following attributes of such data:

1. Respondents sometimes provide valuable information or insights that are not available from other sources.
2. Most of the data collected consist of attitudes or self-reports of behavior rather than actual behavior.
3. Unless a random sample is used, the responses are not representative of the total population.
4. Office of Management and Budget (OMB) approval is necessary for Federal Government-sponsored surveys where 10 or more people receive the same set of questions (5 CFR 1320; FSM 1377).

Consider conducting surveys when social information vital to the analysis is lacking and existing surveys by other Federal agencies or State and local governments cannot supply the desired information.

Interviews and questionnaires are good ways to get large numbers of responses from a cross-section of the population. Questionnaires are inexpensive to administer and computers can tabulate them readily, whereas interviews provide more immediate and detailed information. Design and pilot test the survey instrument and obtain OMB approval before collecting and processing the data. Consult a standard social science methods textbook for details about developing and administering surveys (sec. 38.5).

Forest Service social science analysts frequently obtain information from knowledgeable agency employees and from existing public response files (sec. 34.2). These sources are very accessible, pertinent to the analysis, and exempt from OMB clearance requirements.

Exhibit 01 lists examples of each of the four types of social data.

Examples of Four Types of Social Data¹

1. Statistical Data

- a. Demographic data (population size, age structure, percent married, number and permanence of households).
- b. Housing vacancy rates, tourist facility occupancy rates, average rent paid, percentage of owner-occupied dwellings.
- c. Traffic counts, vehicle registrations, commuting time, transportation alternatives.
- d. City or county hospital beds, school classrooms, power generating capacity, telephone hookups, full-time judges and police officers, social services case loads.
- e. Employment, income, weeks worked per year, worker turnover, absenteeism, distance to work.

2. Written Data

- a. Letters to the editor, Forest Supervisor, or District Ranger.
- b. Research studies, novels, nonfiction accounts, newspaper articles, radio and television documentaries.
- c. Written testimony (and transcribed oral comments) at hearings and listening sessions.
- d. Posters, circulars, and newsletters and formal resolutions from interest groups.
- e. Historical records and documents, newspaper archives, annual reports, feasibility studies, environmental statements.

3. Observational Data

- a. Systematic observation of use patterns or conditions (what people say or do about the appearance of their neighborhoods, smoke or dust problems, water quality, and recreation areas).
- b. Reports of behavior or "climate" at hearings, meetings, or rallies.

34.14 - Exhibit 01--Continued

- c. Land and resource uses (visual evidence of effects, whether legal, illegal, temporary, or permanent).
- d. "Unobtrusive" measures (noting evidence of litter, paths, fishermen, camping equipment)

4. Respondent Contact

- a. Public opinion polls, social surveys (to learn the number of people who believe that their neighborhood is deteriorating, favor or oppose proposals, would take another job, or express concern about unemployment).
- b. Interviews with agency personnel.
- c. Data collection via user registration, permits, applications.
- d. Agency "response forms" (citizen comments about Forest Service alternatives) or visitor use forms. Regional Offices of Information must approve the use of response forms.
- e. Onsite user interviews (traffic destination surveys, user satisfaction studies).
- f. Ballot measure votes (special district formation, legislative proposals).
- g. Citizen and "expert" comments on potential impacts.

¹Do not regard this as a standard list.

34.2 – Review Public Participation Data

Forest or Regional Information Offices usually maintain files of letters, response forms, newspaper articles, and other data related to current agency programs. These files are readily accessible and can help identify likely issues, potentially affected people, and additional sources of information. The files do not contain sufficient information for an indepth social analysis but they may be a good source of initial data.

Public participation files are most useful when they are up-to-date, oriented toward the same actions and potentially affected populations as the present analysis, and extensive enough to provide a range of individual and group perspectives.

34.3 - Compile and Verify Data

Data pertinent to the issues or concerns are important for evaluating alternatives. Use a number of sources and methods to derive data on social conditions and to estimate social effects. For example, observation provides clues to needed respondent-contact data (which questions are of public concern?). Using several data sources enables one to evaluate the validity of each source. If there is a close correspondence between what is indicated by statistical data and by observational data, each source may be valid. Use as many types of data (sec. 34.1) as necessary to describe the total affected environment adequately and to identify possible effects of each alternative (40 CFR 1502.16). Review available statistical data and written social data to identify additional data needs.

Serious errors may result when you use data from one source to extend trends identified by another source unless the data are comparable; that is, the two sets have been compiled under the same standards. For example, one data source indicates that 20 percent of the local labor force works in the wood products industry, but the computation does not include government, agriculture, and the unemployed. A more recent source includes one or more of these categories, and as a result, wood products employees appear to be only 15 percent of the total labor force.

34.4 - Interpret Data

Social information is sometimes extensive and may be inconsistent. The analyst's task is to present the information in a way that increases its value to the decisionmaker.

1. Identify and focus the analysis on the most relevant and potentially significant social variables (sec. 33.4).
2. Analyze these variables to determine the social conditions, environmental relationships, and anticipated social effects most pertinent to the decision.

For example, if the proposal is for a pesticide spraying program and the program is likely to have social effects, focus the analysis on:

- a. The variables most likely affected.

- b. The nature and severity of the effects.
- c. Individuals and groups interested in or affected by the action and the basis for their support or opposition.
- d. Possible ways to mitigate unwanted social effects.

When interpreting data, it is essential to see interest groups in a larger social context that includes other view-points and to consider events in a historical perspective. Increase the information value of items selected for the analysis by fitting them into a larger social context, organizing them chronologically, and projecting them into the future.

34.41 - Minimize Bias

The social science analyst must make a deliberate effort to be impartial in the analysis. What is a positive effect to one group may be negative or unimportant to another, and the analyst must clearly indicate this when presenting the results of the analysis.

34.42 - Consider All Affected People

Consider the social effects of an action and its alternatives on each potentially affected group or category of people. Do not limit social analysis to the concerns of organized interest groups because:

1. The analysis of public involvement materials systematically considers expressed concerns of interest and preference groups.
2. Social impact analysis seeks a comprehensive view of social effects. Some potentially affected people are not members of a vocal interest group. Interest groups seldom include a representative sample of the affected population.
3. Members of interest groups also belong to other social units (occupations, neighborhoods, or ethnic groups), so agency actions may affect each differently.

A knowledge of the motives, goals, and expectations of each group or category provides a basis for predicting the social effects of agency actions. Explore these early in the analysis to expedite the estimation of effects (sec. 35) when the agency has formalized alternatives.

Potentially affected interest groups and categories with special needs or concerns might include: American Indians, other racial or cultural minorities, older and handicapped citizens, commodity users (timber, minerals, or grazing lands), women, recreationists, outfitters and guides, conservation groups, and adjacent landowners.

34.43 - Establish Time Frames

Most current statistical data sources date back at least 20 to 30 years and thus provide a basis for identifying and projecting trends. This information is necessary in the formulation of a "no-

action" alternative to use as a basis for estimating the effects of other alternatives (sec. 35.1). A proposed action may continue much longer, but it is difficult to project most economic and social trends more than 10 or 20 years into the future with some assurance of accuracy or certainty.

34.5 - Organize Data

Organize information efficiently to facilitate scoping, formulating alternatives, estimating the effects of alternatives, and identifying mitigation measures. Begin data organization at the onset of the analysis process and continue as you acquire new information and insight.

34.51 - Use Appropriate Graphics

Maps, graphs, and other graphic aids efficiently summarize and facilitate comparison of data. Use a Forest Service map or a State road map to define and illustrate the area of influence. For instance, use dotted lines to delineate activity locations or analysis subareas. Often, the area of influence is small enough to portray in adequate detail on a single page. When using a Government map, cite the source. Obtain written permission before publishing maps obtained from the private sector.

Graphs are effective for portraying relationships, whether among social units, time periods, or steps in a process. Tables permit easy comparison of data such as unemployment rates or population shifts over time. Matrices are useful for comparing two sets of data in several ways. For example, list agency alternatives on one axis of a matrix and different social variables on another. Then summarize the effects of each alternative on each variable in the squares and compare them (sec. 38.4). Photographs or sketches are a good way to convey visual impacts.

35 - Estimate Effects

See FSH 1909.15, section 23, for direction on formulating alternatives, which include the proposed action, no action, and other reasonable alternatives. In general, estimate the social effects of a proposed action and its alternatives when:

1. Social effects relate to the identified issues and concerns and may be important to the decision at hand (FSM 1973.03).
2. There are important differences, by alternative, in the type, intensity, and duration of social effects.

Methods for estimating the social effects of each alternative include:

1. Consultation with experts whose training and experience enable them to predict the most probable outcome of each alternative.
2. Computer modeling to project outcomes from different sets of assumptions (sec. 35.4 and sec. 38.3(2)).

3. Social science field work to determine which social variables the proposed action is most likely to affect. Use appropriate projection techniques to estimate the effects each alternative is likely to produce (sec. 35.4 and sec. 38.3 (1-2)).

4. Interdisciplinary team judgments of what could happen, based on a review of all available pertinent data. These data include public response files (sec. 34.14), studies of similar situations (sec. 38.3(3)), and personal experience with such actions.

Review the general social effects categories specified in FSM 1973.2 and the variables selected for analysis (sec. 33.2) to ensure that the analysis does not overlook critical effects. Often, both socioeconomic and sociocultural variables are important to the analysis of the social effects categories. Exhibit 01 illustrates this relationship.

35 - Exhibit 01

<u>Category Affected</u>	<u>Socioeconomic Variables</u>	<u>Sociocultural Variables</u>
1. Lifestyle	No. employed in recreation, mining or logging	No. who camp out, fish, or enjoy hiking
2. Social organization	Capacity of local hospital or school facilities	Patterns of mutual aid in time of need
3. Values, attitudes, beliefs	Desire to harvest timber	Desire for privacy, solitude, or scenic beauty
4. Population	No. moving to take new jobs; size of payroll	Age, sex, norms, and values of new residents

35.1 - Focus on Agency-Induced Changes

Social analysts must distinguish between social change induced by Forest Service actions and social change that would occur without the action.

Project the no-action or "baseline" alternative first (FSH 1909.15, sec. 23.1). Then project the expected effects of each action alternative and compare them with the baseline alternative. Attribute any differences to the action alternative under comparison. For example, suppose projections indicate that jobs would decline 5 percent under "action" alternative B and would decline 10 percent under no-action or baseline alternative A because of automation and the changing age structure of timber stands. Alternative B's socioeconomic effect is to reduce by half the loss of jobs that would otherwise occur.

35.2 - Identify Other Sources of Change

Continuing social and economic changes occur under "no-action" because of external factors, for example:

1. Changing market conditions for forest commodities and services.
2. Independent actions by other agencies or by the private sector.
3. Minor shifts in Forest Service management emphasis permitted under present direction.
4. Changes in public preferences and forest-use patterns.
5. Local population shifts unrelated to Forest Service activities.

Agency activities have little or no influence on these changes. However, estimate these changes and project their effects in the discussion of the no-action alternative. Avoid erroneously attributing important effects from other sources to the proposed action.

35.3 - Consider Resource Interrelationships

Estimate social effects in a context of physical, biological, economic, and social factors to avoid overlooking important interrelationships (FSH 1909.15, sec. 24). For example, a major change in water quality or availability could affect certain species of game fish, local recreation options, the cost of cleaning and purifying water, and the travel-tourism industry.

35.4 - Estimate Socioeconomic Effects

Many effects of forest management actions reach the public through the private economic sector. A Forest provides commodities and opportunities to the local, regional, and national economies; buys goods and services from them; provides local payrolls; and shares the receipts collected with local governments. Because the extent of forest resource utilization differs among

alternatives, varying amounts of commodities flow to affected industries. Profits, employee earnings, and ultimately tax revenues also vary.

Knowledge about the extent of these changes is critical to social impact analysis because it provides a basis for estimating related effects on other segments of the economy, the community, and the lives of individuals.

35.41 - Use of Economic Models

Input-output (I-O) analysis (ch. 20) uses a system of computer programs to estimate socioeconomic effects that originate in the economic sphere. An I-O analysis can detect and document the ways that a change in one sector of the local economy stimulates changes in other sectors. The Forest Service Input-Output Model for Planning (IMPLAN) describes the structure and trade flows of county economies. It can make effective, short-term predictions of the effects that changes in forest outputs may have on county economies, individually or in combination. IMPLAN is most useful in multi-county trend analysis, as is done in forest and regional land management planning.

Input-output models identify economic trends and relationships useful in comparing alternatives. Regard the numbers (jobs and income) produced by the model as indicative of the relative impacts of the different alternatives and not as accurate predictions of actual changes.

The IMPLAN model has been of limited value in the analysis of small areas of influence because it is programmed with county-level data based on the decennial U.S. Census. When using IMPLAN or other predictive models for social analysis, take into account the level and date of the data in the system. When either community-level or more current information is needed, consult appropriate Federal, State, and local sources (sec. 38.2).

To illustrate one use of current data, Federal and State employment and unemployment statistics are updated each month. It is possible to locate, organize, and interpret employment trends for a small area on a case-by-case basis.

Prepare a table to show employment (by sector, such as manufacturing, mining, or retail sales) and unemployment trends. Then estimate the significance of local conditions by comparing levels and percentages of change with past years, other localities, and State and Federal averages.

35.42 - Population Analysis

If a proposed action could generate substantial changes in locally available employment, analyze population characteristics and trends. A loss of jobs for an extended period implies out-migration of workers and their families. Make assumptions about the number of jobs filled by local workers, the number of incoming workers, and the number and size of the families that will accompany these workers. Various studies provide a basis for these assumptions (sec. 38.5).

If a proposed action could result in important changes in the size or composition of the population in the area of influence, project future trends and estimate the related social and

economic effects. Five general methods are available for projecting current trends and conditions into the future. These are (1) simple trend extension, (2) economic input-output models, (3) use of population multipliers, (4) community comparison, and (5) the use of experts.

The IMPLAN model estimates population at the county level under a variety of assumptions. Trend information is necessary for building the no-action alternative (sec. 35.1 and sec. 35.2) and for estimating the social effects of the alternatives. Projection techniques are described in section 38.3 and in sources 1 and 3 in section 38.5.

35.43 - Infrastructure Impacts

Rapid population changes affect county and community facilities and services, both public and private. These may include housing, utilities, streets, schools, parks, playgrounds, retail stores, social and medical services, and churches. The severity of the impacts depends on the size and duration of the action as well as the capacity of affected communities to absorb the additional people. Only 50 incoming workers could overload a rural community of 300 people. However, most small cities with 5,000 residents or several neighboring small towns of from 300 to 500 residents may have adequate housing and services for 50 new workers.

A small town has fewer available local workers than a large town, so more labor is "imported" to do a given amount of work. However, isolated villages with fewer than 1,000 people usually lack adequate public and commercial services, even for their own residents. Thus, both present and incoming population data are needed for estimating infrastructure impacts.

35.44 - Fiscal Impacts

Fiscal impacts sometimes occur because of changing Forest outputs and population changes relating to Forest programs. The level of Forest outputs determines Forest Service payments to counties and may affect tax revenues derived from the production of goods and services in the area of influence. Rapid population growth and infrastructure expansion create additional expenses for local government that are funded through taxes, grants, or borrowing. After growth stabilizes, funding needs usually stabilize within a few years. Population decline results in revenue losses and a reduction in local government employment.

Knowledge of the age, sex, and occupational structure of the area of influence is useful for estimating the fiscal impacts of various alternatives. For example, an alternative that increases local government costs and tax revenues would have an adverse effect on retirees living on fixed incomes.

When fiscal information is essential to the analysis, consult a Forest Service fiscal staff officer about agency payments to State and local governments. Consult appropriate departments of State, county, and city government for additional fiscal data.

35.5 - Estimate Sociocultural Effects

Sociocultural effects are social consequences of Forest Service activities that are noneconomic in origin or cannot meaningfully be reduced to monetary terms. These effects include changes in people's norms, values, customs, sense of well-being, social relationships, and basic institutions (sec. 33.2, ex. 01). The potential sociocultural effects of most major actions are important to affected people and the agency. Be sure to understand these effects before beginning decisionmaking and implementation. Describe relevant sociocultural conditions and effects in the most appropriate and effective way (quantitative, graphic, or precise narrative).

When estimating sociocultural effects, determine whether a proposed action complements, aggravates, or has little effect on conditions in the area of influence. The same proposal may be regarded as beneficial in one location and as undesirable in another because communities differ in their economic needs, proximity to the action, and knowledge about the changes likely to occur. Look beyond the public's current impressions of a proposed action. People often modify their views about the action after implementation because their subsequent experiences differ from their expectations. Activities that prove to be environmentally sound, socially responsive, and locally perceived as necessary earn increased public support.

Sociocultural effects are sometimes inconsistent with socio-economic effects, so it is important to understand both before making a decision. For example, one area of influence is heavily dependent on timber production but also has high unemployment. The Forest Service economist estimates that a proposed recreation development would create 200 jobs locally--a positive socioeconomic effect. However, many local residents oppose the accompanying influx of tourists. The unemployed loggers and mill workers are unwilling to change careers and lifestyles and to enter the service occupations with the low pay offered by the travel-tourism industry. They prefer to wait for the timber market to improve or to look for jobs in other sectors or locations.

Communities vary widely in their potential to accommodate population increases. This ability depends on size, financial resources, administrative expertise, local outlook toward growth, available outside assistance, and surplus infrastructure capacity (sec. 35.43). Nevertheless, extremely rapid, extended growth has a potential to surpass any community's ability to adjust and may create serious problems, at least in the short run.

Exhibit 01, How Rapid and Extended Changes May Affect Community Institutions, demonstrates how the socioeconomic, fiscal, and sociocultural impacts that result from continuing population growth could affect different institutions. References listed in section 38.5 are useful in identifying and estimating these combined impacts.

35.5 - Exhibit 01

How Rapid and Extended Changes May Affect Community Institutions

Individuals and Family Groups

Shortage of adequate housing; inflation of prices and rentals.

Multiple-family occupancy of some single-family dwellings; other make-shift living arrangements.

Local inflation increases hardship for persons with fixed incomes.

Greater incidence of anxiety, mental illness, alcoholism and other drug abuse, and suicide.

Increase in the frequency of divorce, separation, remarriage, and illegitimate births.

Improved job opportunities, especially in rural areas; some young people drop out of school to take well-paying jobs.

Increase in the percentage of single male residents during project construction.

Greater percentage of mothers employed outside home.

More frequent abuse of spouses and children.

Quality of Neighborhood and Community Life

With continuing in-migration, greater racial, cultural, and lifestyle diversity.

Increased support for newer, less conventional social and cultural activities in the community.

Expanded social and employment opportunities for women and minorities.

Decline in the effectiveness of informal community controls and an increase in formal-legal relationships.

Increase in most categories of adult crime and juvenile delinquency; more people feel insecure and lock their homes and cars.

Greater competition for the use of recreational facilities.

Realignment of friendships as new issues separate friends and new contacts permit alternatives.

35.5 - Exhibit 01—Continued

Increased noise; pollution of air and water; more litter on streets, sidewalks, and highways.

Schools, Churches, Voluntary Associations

Increased variety of church denominations and sects.

New alternatives to conventional morality and established customs exist.

Organized groups oriented toward resource conservation or development become more prominent.

Crowded schools; pressure for more classrooms, buildings, personnel; more competitive athletic teams and other groups but more difficult to qualify for them.

Social clubs and lodges gain members; new leadership patterns emerge; some shifts in relative prestige and influence of different organizations.

New voluntary organizations form, some to deal with various effects.

Increased student and teacher turnover; greater need for special programs for particular students.

More lifestyle and leisure options for residents.

Local Government

Political activity more intense, competitive, with wider participation.

Overburdened public services: police, fire, libraries, hospital, jails, juvenile homes, social services, parks, playgrounds, swimming pools.

Increased traffic, street damage; inadequate parking, abandoned cars.

Insufficient public utilities: water, sewer, solid waste, and power generation facilities.

Time is required to plan: meanwhile uncoordinated real estate development occurs in absence of zoning.

Revenues for expanding facilities either very inadequate or lag 2 to 3 years behind needs.

35.5 - Exhibit 01--Continued

Increases in litter, theft, vandalism, and animal control problems.
Long-range prospect of gains in per-capita revenues.

Increasingly complete community services are developed.

Social Aspects of Private Economic Sector

Decline in production due to absenteeism; increased employee turnover.

TV cable, telephone, water, power companies unable to meet hookup demands.

Increased business activity; national chains open branch operations; some small businesses are displaced.

Shortage of responsible professionals and technicians: doctors, lawyers, dentists, repairmen, carpenters, mechanics, electricians, plumbers.

Loss of trained employees to higher-paying jobs in new industries.

Retail outlets unable to handle business volume with former courtesy and efficiency.

Real estate, construction, mobile home, vehicle dealership, other growth-related businesses thrive.

Income redistribution due to higher rents, wages, profits, and land values; some people gain, others lose.

Greater variety of commercial services become available.

35.6 - Identify Effects on Civil Rights

The Forest Service is prohibited from discriminatory practices within the agency and in transactions with the public (FSM 1710). The analysis should identify any infringements on civil rights that could result from a proposed action or its alternatives (FSM 1730).

35.7 - Consider Direct, Indirect, and Cumulative Effects

Consider both direct and indirect social effects in the environmental analysis (40 CFR 1502.16, 40 CFR 1508.8). Direct social effects are those caused by natural resource management actions, such as the impact of Forest Service roading and free-use policies on local firewood users. A new road in a heavily forested area usually increases recreation use. An oil and gas leasing program may stimulate exploration and development.

Indirect and induced (ch. 20) social effects are the often unintended secondary consequences of the action and its direct effects. For example, new arterial roads that open several drainages for timber harvest might increase jobs and payrolls, revitalize civic organizations, and stimulate expansion of public services. Development and sustained production on oil and gas leases or mining claims increase local business volume, employment, and tax revenues.

Cumulative effects occur when direct and indirect effects from more than one action overlap, increasing the total impact (40 CFR 1508.7). A major oil and gas discovery usually brings many companies into an area and intensifies social impacts. New workers move to the area. Local governments and businesses lose employees to oil and gas developers who pay higher wages. Housing, schools, and local services may be unable to meet expanding needs. This could in turn increase rents, taxes, and the price of consumer goods and services, making the area less attractive to persons on fixed incomes.

35.8 - Provide Effective Description of Effects

Estimation of social effects is a compromise between detail and significance. Objectively consider each geographic subarea (sec. 31.42), assess changes in the most relevant social variables (sec. 33), and identify the most significant effects.

Describe effects in quantitative terms, if feasible, and in brief narratives (FSM 1970.6). The exclusive use of symbols "+", "-", "0", or "?" is discouraged because use of these symbols masks rationale, source, and qualification of the estimate. Document sources of data and estimates by experts.

When there is insufficient information to make credible estimates of the effects of an action with a potential for significant adverse impacts on the human environment, see 40 CFR 1502.22. If similar actions have occurred previously under comparable environmental conditions, it may be possible to infer the range of probable effects from such examples.

Work sheets are useful to summarize and compare selected variables or general categories of effects (sec. 33) by alternative and for each subarea analyzed. Collect and summarize the most

significant effects of the decision on social life. Examples of worksheets and narrative summaries of social effects for two alternatives are in section 38.4, exhibits 01 through 04.

35.9 - Identify Mitigation

Usually, the Forest Service is not responsible for the direct mitigation of social effects that occur outside of National Forest boundaries and jurisdiction; but other governmental units may need to act. The Forest Service is directed by statute and agency regulations to provide civic and public officials with quantified and descriptive measures of the projected impacts of agency actions so that potentially affected people can develop appropriate strategies to deal with them (National Environmental Policy Act, sec. 102(d)(g); FSM 1973.02(3)). A careful projection of expected impacts helps other Federal agencies, States, counties, and communities to avoid or mitigate adverse effects that fall within their jurisdiction (40 CFR 1502.14, 1502.16).

36 - Evaluate Alternatives

The decisionmaker must consider social and economic effects that are important to the decision (FSM 1973.03). Review, compare, and weigh the effects of each alternative using alternative evaluation criteria that reflect social as well as other concerns.

36.1 - Develop Social Criteria for Evaluating Alternatives

Social analysis continues throughout the environmental analysis. New social information becomes available, providing a better understanding of potential effects. Review alternative evaluation criteria developed during scoping (sec. 31.7) and adapt or extend them, if necessary, to be responsive to identified issues and concerns. From a social analysis perspective, an alternative that avoids or resolves adverse social impacts and prolonged conflicts is preferable to one that does not.

Alternative evaluation criteria are human values applied to Forest management; for example, clean air, scenic beauty, economic efficiency, increased employment, or the protection of endangered species. In evaluating social effects, consider criteria that reflect widely shared values such as democracy, economic opportunity, local autonomy, and "being fair." The following are examples.

1. Quality of Social Life. An alternative protects and enhances the quality of life preferred by affected residents. A high quality of life may include:

- a. An economic structure compatible with locally preferred work and leisure patterns.
- b. Forest uses and practices in harmony with community beliefs and values.
- c. An absence of disruptive conflicts within the community.
- d. Optimism about the advantages of living in the area.

2. Community Stability. Community stability (sec. 30.5 and sec. 33.23) depends on the type and rate of population change, the consistency of changes with local values, the effectiveness of local leadership, and the volume of forest output to the private sector. Under the best alternative, proposed changes are consistent with the local capacity to adapt facilities, services, and institutions. Clearly identified community preferences, knowledge of existing trends, and evidence of the ability to adapt help to define acceptable rates and types of sociocultural and socio-economic change.

3. Equitable Distribution of Effects. All individuals, groups, or communities do not share social effects equally, so any alternative is likely to benefit some people and negatively affect others.

An alternative may be socially preferable when the individuals and groups that benefit from it also pay most of the direct and indirect costs of implementing the alternative. Accordingly, it is less desirable if one group benefits while others pay most of the costs.

The analysis of the equitable distribution of effects requires careful study. A positive effect in one community may be perceived as negative in another.

4. Effective Mitigation. The alternative avoids, restricts, or adequately compensates for adverse social effects.

5. Long-term Justification. The alternative considers the resource needs of future generations and includes measures to ensure adequate future supplies.

36.2 - Determine Significance of Effects

(40 CFR 1502.1, 40 CFR 1508.16, 40 CFR 1508.27).

36.3 - Compare Alternatives

Compare alternatives on the basis of social, economic, and other evaluation criteria. To simplify the comparison of the social effects of each alternative, summarize important effects in meaningful phrases in a summary table (sec. 38.4, ex. 05). If possible, enter these effects on a master table that also summarizes economic, biological, and physical effects by alternative. This permits easy comparison of each factor in the context of the others. Identify alternatives that offer the best mix of benefits for the environmental costs incurred, including a preferred alternative, if there is one (FSH 1909.15, sec. 25).

37 - Document, Implement, and Monitor

37.1 - Document Findings

(FSH 1909.15, ch. 30 and 40). When a social impact analysis is complex or controversial, keep a written record of the social portion of the analysis process even if a formal background document is unnecessary (FSM 1952; FSH 1909.15, sec. 31). Information gathered during scoping is thus readily available for further analysis; it is easy to review, revise, and compare the data; and

issues considered during the analysis are recorded for future reference. A suitable outline for such a record is:

1. Nature of the proposed action: who, what, when, where, how, and why.
2. Potentially affected area, social characteristics that are relevant to the analysis, and social issues identified.
3. Possible social effects and mitigation opportunities under each identified alternative.
4. Comparison of the social effects of each alternative.

If the proposed action is not categorically excluded, include social analysis findings in the appropriate environmental document. Note in the narrative the information sources and methodologies used in the analysis or identify them in foot-notes or a reference section. Include supporting documents prepared for the analysis in the appendix or ensure that these documents are readily available. If incorporating other documents by reference (to avoid duplication or technical details), briefly describe their content and indicate their source(s).

37.2 - Implement the Decision

(FSH 1909.15, ch. 50).

37.21 - Monitor Implementation

Monitor implementation of the action to ensure achievement of desired results. This may require periodic visits to the affected area, or it may involve telephone conversations with field personnel, representatives of local government, and other sources to obtain current impressions of the action's effects. During the monitoring phase, the social science analyst has an opportunity to assess the accuracy of social effects projections and to identify any program adjustments that would help reduce unwanted effects. The analyst must report any important discrepancies between expected and actual effects to the decisionmaker or designated staff personnel.

38 - Techniques and Procedures Appendix

38.1 - The Social and Economic Overview

The social and economic overview is a description and analysis of selected social, geographic, demographic, historical, and economic conditions and trends with projections into the future. An overview may be a very general document for use as a reference in routine Forest planning or a more focused report dealing with the social and economic context and possible effects of a site-specific action. The length of the overview depends on the scope and complexity of the analysis, but the presentation must be concise, relevant, and readable.

The responsible official determines whether to prepare a separate overview document. If published, relevant sections of it may be incorporated by reference in other documents. If a

contractor prepares the social and economic overview, it is expedient to request a separate, publishable document as background information for a variety of analysis efforts.

Normally, a social and economic overview does not include technical economic analyses of Forest Service actions that are available elsewhere; for example, benefit/cost ratio calculations, present net value estimates, or other methods of economic efficiency analysis (FSM 1971). The overview contains social and economic data of general interest, such as the nature of the existing economic structure, labor force characteristics, population shifts, income distribution, industry trends, resource supply needs, transportation factors, land-use patterns, and pertinent social and cultural information (sec. 33.2).

The social and economic overview should:

1. Have a table of contents, introductory summary, appropriate graphs and tables, cited data sources, and appendices for detailed supporting data.
2. Define and map the area(s) of influence.
3. Describe the geographic, economic, and social features of the area of influence, its State or regional context, and the links (relationships) between the Forest units and the area of influence.
4. Discuss the lifestyle, values, concerns, social organization, population characteristics, civil rights considerations, and land-use patterns of the area of influence and explain their significance to Forest management (sec. 33).
5. Identify relevant social and economic trends and project their future course. Project trends and expected Forest uses 10 to 20 years into the future and consider trends over the past 20 or 30 years to aid in interpreting current and future conditions. Trends may be extended further, but longer range projections are less accurate.
6. When appropriate, present a strategy for the analysis of major Forest Service actions currently under consideration. Depending on the available data, it may be possible to analyze salient issues, identify critical social and socioeconomic variables for estimating effects, discuss the effects of various action alternatives, or cite sources and methods for acquiring necessary data.
7. Note problems of data reliability, inconsistency, or gaps in relevant information that may affect the estimation of effects (40 CFR 1502.22).

38.2 - Sources of Social Data

1. U.S. Census Documents. Summary volumes are available in most libraries and from the Government Printing Office. Complete sets are in most university libraries. These include periodic censuses of population, housing, agriculture, and business for the Nation, States, and counties. Censuses have comparable data for past decades and are thus very useful for

documenting trends. Two summary publications, Statistical Abstract of the United States and the City and County Data Book, are valuable desk references.

2. Other Federal Agencies. Other resource management and recordkeeping agencies, such as the Bureau of Land Management, Department of Energy, Bureau of Economic Analysis, the Corps of Engineers, and the Federal Bureau of Investigation publish useful information. Some of these agencies have compiled social data for resource programs which, when applicable, may be incorporated by reference (40 CFR 1502.21 and FSH 1909.15, sec. 11.4 and sec. 32.4). Comparing data early in the analysis helps ensure the use of valid, consistent sources.

3. State and Local Government Agencies

a. Planning Agencies. These agencies collect data on such subjects as local budgets, school enrollments, tax assessments, zoning regulations, current population estimates and projections, tax receipts, and anticipated development activities. Because Forest Service planning regulations (36 CFR 219.7) require a review of State and local planning efforts as part of the Forest Service planning process, contact and coordinate with these planning agencies. Examine their programs for the utility of their data and avoid a duplication of effort (40 CFR 1501.7 and 40 CFR 1506.2).

b. State Departments. Each State has departments of government that compile data about economic trends, social services and other State programs, agriculture and forestry, environmental quality, State parks and recreation, energy, and other subjects. Some States publish this information in yearbooks and all States issue periodic topical reports.

Health and welfare data include vital statistics, health and illness data through time, case load by type, information about specific populations, and inventories of medical personnel, support equipment, and facilities. Public safety agencies have information about crime, emergency service capacities, and problem areas and trends. Job service offices have information about employment conditions and trends.

c. Universities. Many university departments and social science research institutes conduct studies and publish materials about social and economic conditions, population shifts, resource development, public opinion, and other topics relevant to social impact analysis.

d. Economic Development Groups. Local or regional development offices provide data about current business activities, natural resource availability, labor force composition, employment data, impending development activities, housing occupancy information, and tourist facilities. Normally, information such as the available utility services and the number of connections by type and year are available.

4. Public and University Libraries. Libraries afford convenient access to many of the publications suggested above. They also employ reference librarians to assist patrons who seek specialized data. Libraries frequently have special collections that provide social information of State and local interest, including local history.

5. Business and Industry. The business sector may provide plans and time schedules for resource development projects, annual reports to stockholders, payroll and employee data, and information about new technologies with social and economic implications.

6. Special-Interest Organizations. Wildlife, recreation, wilderness, and other special interest groups offer information about environmental concerns, recreation use patterns, and the perspective of their membership.

7. In-Service Data Sources. Many pertinent data sources exist within the agency.

a. Public Participation Data. Public participation data, such as letters, response forms, petitions, and recorded meeting notes, provide valuable insights into some of the issues raised by the general public. Commonly, the participants in this process do not represent the total population and the data omit some affected segments (FSH 1609.13).

b. Forest Service Personnel. Agency employees are especially helpful in documenting historical events that have helped to shape the communities associated with the Unit. These personnel can provide personal observations, local written data, or leads to additional respondent contact data.

c. Other Sources. Agency environmental documents, maps, computer inventories, and other sources provide accessible, authoritative background information useful in preparing social overviews or estimating the effects of proposed actions.

38.3 - Projecting Social Effects

1. Trend Extension. Trend extension is the projection of past population, economic, and social trends to selected years in the future. Projections usually are quantitative and based on a specific set of assumptions. For example, on the basis of past recreation increases and population growth, one can project that recreation use from the area of influence will increase by 8 percent per year during the next 10 years and that recreation visitation from cities and suburbs near the area of influence will increase by 10 percent per year. Alternatives that will not meet that level of use may have adverse social effects, such as crowded campsites and diminished enjoyment.

Trend extension can be a quantitative projection of units (houses, miles of road) that will be produced per year. One can plot straight line or curvilinear projections mechanically on graphs. It is crucial to report all of the assumptions (for example, population growth) behind the projection. Make allowances for any anticipated events that would change the assumptions and thus change the projected trends.

2. Population Multipliers. The term "multiplier" denotes a number that expresses the relationship between population growth and its social and economic effects. The use of multipliers is based on the assumption that changes in employment and population size are the key to predicting other social changes such as an increased demand for facilities and services. Two approaches are summarized below.

First, assess social effects and needs quantitatively, such as numbers of doctors, hospital beds, police cars, classrooms, or overnight campsites. Then calculate changes in service levels for some standard population unit, such as 1,000 persons, basing them on average needs (available in sources such as sec. 38.5, no. 2). For example, each additional 1,000 people in an area may suggest a need for one more doctor and four hospital beds. Use judgment to adjust results; for example, an area with 3,000 people already may have 5 doctors and 20 hospital beds, or only one doctor and no hospital.

The social scientist also uses employment fluctuations resulting from changes in Forest Service programs or policies as a basis for estimating population changes. If proposed rural development would create 500 "basic" jobs during the construction phase and if field work indicates that 70 percent of the workers will be nonlocal and average 1.3 dependents per worker, the increased population could result in serious social and economic impacts. It is possible to estimate the increased demand for housing, medical, educational, and recreational facilities. Using other multipliers derived from the experiences of other populations in similar situations, it is also possible to project the number of new "nonbasic" jobs in business and government. At the county level, each new basic job usually creates between 0.5 and 2.5 additional nonbasic jobs providing goods and services.

Observe some cautions in the use of population and employment multipliers. The relationship between commodities and employment is not rigid because transportation costs for raw materials, unused production or service capacity, overtime, and automation may change the relationship between increased economic activity and the number of workers. Similarly, the tie between new jobs and population change is not rigid because of differences in local-hire employment rates, rural commuting, the duration of the project, locally available amenities, housing market conditions, educational opportunities, the diversity of the local economy, and other factors.

When computer models are not available or are inapplicable, the use of employment and population multipliers is another technique for projecting the effects of changes into the future. These multipliers provide a systematic, traceable method for identifying direct and indirect effects of an action. Be sure to document the assumptions behind the technique when reporting the estimates. Appropriate local multipliers should be available from a unit economist, the county planner, or from State sources.

3. Community Comparisons. To learn about the possible social consequences of a proposed action, locate comparable communities that have experienced a similar action. Estimate the effects of the alternatives on the basis of what occurred in the comparison communities. The community comparison technique is more useful in analyzing site-specific developments than in land management planning social impact analyses (SIAs). For example,

when the proposal is for a new ski resort, observe what happened in another place where a similar resort was built.

Match the comparison community and the proposed action as closely as possible with the community and project under analysis, for example, in size, rural-urban composition, distance from metropolitan areas, and major sources of employment. Various social effects bibliographies list case studies that may be reviewed to identify common patterns. (sec. 38.5).

38.4 - Sample Matrices and Narratives of Social Effects

Exhibits 01 through 5 are examples of matrices and narrative statements that can illustrate social effects.

38.4 - Exhibit 01

WORKSHEET: Social Effects Matrix

Alternative: No action. Outputs and significant practices: Commodity outputs continue at present levels as will TSI and range and habitat projects. Few visible changes from residences, recreation sites, and highways. Developed recreation facilities have slight (+5,000 recreational vehicle days per year) increase in use.

CATEGORIES OF SOCIAL EFFECTS

UNITS OF ANALYSIS	Population Change and Land-Use Patterns*	Lifestyle, (Work, Leisure, Customs, etc.)**	Attitudes, Beliefs, and Values**	Social Organization** (Cohesion and Institutions)
County Seats (Government and Service Industries)	Significant in-migration and growth (3%/yr). Conversion of nearby forests and farms to residences and ranchettes. Sources: Wayne & Benton Co. Planners	Diverse and growing service economies. Urban/surburban ways of life.	Towns large enough to accept the diversity of values. Middle class/white collar values dominant.	Growth and newcomers bring new issues and needs. Most handled easily because of urban diversity and sufficient resources.
West Side Rural (Forestry and Wood Products)	Population stable, many young adults migrate. No major change in land uses.	Long established logging and mill communities. Some jobs lost to automation. Hunting, fishing, & firewood important. Seasonal employment.	Work hard and play hard. Family and long-standing friendships important. Cooperation.	Highly cohesive communities, with sufficient public services to handle needs of current population.
East Side Rural (Forestry, Tourism, and Ranching)	2%/yr growth--retirees and second homes. Conversion of ranch & low elev. forest to recreation and residential use. Source: County Land Use Plans	Old ways of ranching and woods work--or new leisure lifestyles. Hunting, fishing, & firewood important to all. Visuals important to newcomers.	Conflicts between old rural values & new urban, leisure values. People get along by "not noticing."	Badly divided community. Newcomers need expanded public and private services, old-timers resistant.
Southern Valleys (New Rural Lifestyle, Farming, Crafts)	Population growing (2%/yr) but big in-migration of 1970s is over. Zoning has greatly slowed conversion of farms and forests.	Small farms, handicrafts, tourism. Both oldtimers and newcomers strive for self-sufficiency. Firewood and clean water very important.	Increasing comfort between oldtimers' rural values and newcomers' "counter culture." Similarities appreciated, differences tolerated.	Frictions and infrastructure deficiencies of 1970s now disappearing. Increasing cohesion and quality of life.
Sources: * Chapter 1, Social and Economic Overview ** Chapters 5 and 6, Social and Economic Overview				

38.4 - Exhibit 02

WORKSHEET: Social Effects Matrix

Alternative: C Outputs and significant practices: Because of reduced expenditures in timber and roading activities, timber harvest is reduced by 10 percent during the first 3 decades. Range and habitat improvements allow 25 percent increase in domestic AUM's and 10 percent increase in deer herd. Large developed recreation site in Green Pine Valley south of Pineville will quadruple RVD's on the Green Pine Ranger District by 1995.

CATEGORIES OF SOCIAL EFFECTS

UNITS OF ANALYSIS	Population Change and Land-Use Patterns*	Lifestyle, (Work, Leisure, Customs, etc.)**	Attitudes, Beliefs, and Values**	Social Organization** (Cohesion and Institutions)
County Seats (Government and Service Industries)	A slight slowing of population growth and land conversion except for the resort-related growth in Pineville.	Little change, except for some new emphasis on tourism industries in Pineville. "Flashier" ways of life appear there.	No changes, except for new leisure & conspicuous consumption.	No problems, except for growth-related strains in Pineville.
West Side Rural (Forestry and Wood Products)	Population decline, out-migration of young families, no change in land uses.	Loss of jobs, younger relatives move away. Greater importance of firewood, fishing, and hunting.	Little changes, except for increased strain on families from out-migration.	Cohesiveness of informal network increases, but government and business feel the pinch of the cutback.
East Side Rural (Forestry, Tourism, and Ranching)	Less conversion of ranch-land to residential use. Population growing, but at a slower rate. Influx of newcomers slows.	Little change; ranching strengthened, woods work cut back. Newcomers become more settled.	Oldtimers less threatened, newcomers expect to be a smaller minority. Slightly less conflict.	Community less strongly divided. Oldtimers more accepting of increased services, while newcomers are less demanding.
Southern Valleys (New Rural Lifestyle, Farming, Crafts)	Population growth 10%/yr during construction of the Green Pine resort. Reviewed conversion of farm and forest land.	Many aspects of resort life at odds with both newcomers' and oldtimer's ways of life. Wood stove use threatened and water quality down. Seasonal unemployment reduced.	Oldtimers and newcomers find common values and attitudes as resort styles assert themselves. Resort people typically unaware of their impact.	Cohesion formed in opposition to resort. Large strain on infrastructure. Lower quality of life for many, some advantages to people statewide.

38.4 - Exhibit 03

Sample Narrative Summarizing the Social Effects of the No-Action Alternative

County Seats--Capable of handling highest population growth rate in the area of influence without undue strain. Residential growth occurring on farm and forest land. Newcomers share many values with oldtimers, and sense of cohesion is moderate. County changes are in the directions desired, so sense of control is high.

West Side Rural Areas and Communities--Cohesive communities, some loss of young adults because of lack of jobs. Analysis predicted the decline in logging and timber stand improvement work is likely to pick up the slack, so sense of control and self-sufficiency is high. Population and land-use patterns are stable.

East Side Rural Areas and Communities--Retirees and recreationists are coming into the area, with resulting loss of ranch and forest land to residential uses. Increased concern over visual qualities. Increased conflict between newcomers and oldtimers. However, newcomers regard life in the area as a pronounced improvement over their previous residences. Oldtimers see a loss of control and a new way of life replacing traditional ways.

38.4 - Exhibit 04

Sample Narrative Summarizing the Social Effects of Alternative C

County Seats--Few social effects different from those of the no-action alternative, except for Pineville which experiences growth and some disruption from the resort development.

West Side Rural Areas and Communities--Reduction in harvest, roading, and timber stand improvement all have some negative effects. Unemployment and out-migration to nearby areas increase somewhat and public and private services decrease. Strains on facilities but local formal and informal networks help to cope. Community cohesion increases.

East Side Rural Areas and Communities--Change that has been occurring slows with improvement in health of ranching industry. Recreational and retirement newcomers not growing as rapidly and become better integrated into the community.

South Valley Communities--The growth and changes in lifestyles associated with the Green Pine resort will cause significant change, value conflicts, and disruption. Oldtimers and former newcomers become more cohesive, but because of mutual opposition to resort. Environmental degradation a major concern. Some negative impacts on resort patrons and employees as tensions make communities less hospitable.

38.4 - Exhibit 05

<u>Comparison of Social Effects of the Alternatives</u>				
	<u>No-Action Alternative</u>	<u>Alternative A (High Timber Departure)</u>	<u>Alternative B (Low Cost and Amenity Emphasis)</u>	<u>Alternative C (Low Cost, Grazing and Resort)</u>
<u>County Seats</u>	High population growth but no major effects outside of communities' ability to cope.	Slight increase in population over No-Action. No major effects beyond coping capacity.	Population growth less than No-Action. No significant effects.	Similar to No-Action Alternative in social effects, except for Pineville's growth and some disruption there.
<u>West Side Rural Areas and Communities</u>	Stability, but out-migration of young, and other long-term changes.	Economic boom and in-migration for first 20 years. Problems from growth, but prosperity helps solve them. Many potential problems in downturn 25 years ahead.	Major negative impacts because of mill closures. All aspects of community life impacted. Depression and out-migration. Long-term effects severe.	Negative economic and community impacts, but generally within ability of communities and families to cope.
<u>East Side Rural Areas and Communities</u>	Changing nature of community from ranching to retirement. Conflicts.	Timber activities increased, visual impacts on retirees create conflicts in communities. Ranching community fading.	Ranching and forestry disappearing as viable parts of community. Retirees becoming dominant group.	Increased stability of community from revitalization of ranching. Retiree's growth slowed, but their integration into the community is facilitated.
<u>Southern Valley Communities</u>	Stabilizing trends after changes and conflicts of the past 20 years.	Same as No-Action Alternative.	Few direct effects. Stabilization slowed by conflicts and hard times spilling in from neighboring areas.	Major disruption of the community. Large population increase from people with very different lifestyles and values. Major community conflicts.

38.5 - References

The following sources are available from the Social Analysis Library at the Office of Environmental Coordination in the Washington Office. Most volumes are also available at a university library.

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