

Community Well-Being and Forest Service Policy:

Re-Examining the Sustained Yield Unit

by

Kristin Aldred Cheek

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Rebecca Johnson

Sustained yield units (SYU's), implemented around 1950, required that National Forest timber harvested from a designated area had to be processed in a specific local community. Six units were created for the purpose of promoting community stability, a concept often measured in economic terms. Forest policies designed to aid communities have moved away from SYU's. Today's policies include a broader notion of community well-being, and emphasize nurturing a community's internal ability to accomplish its goals. Still, some communities are asking that the SYU idea be revisited.

A qualitative, exploratory study of the Lakeview (Oregon) and Big Valley (California) units was undertaken. The overall objective of the study was to provide insight into whether or not the sustained yield unit policy would be effective in meeting current objectives for forest-based communities. It was also intended to add to our knowledge of the relationship between forest policies and forest-based communities. Interviews were conducted with key informants in the two study areas. Data from interviews were supplemented with data from existing sources.

The main theme that emerged from the Lakeview unit was that the SYU had interacted with other factors in the community to improve the local quality of life. Respondents identified many positive relationships between the SYU and local services, businesses, and community involvement. At the same time, they emphasized that the communities in the unit had many positive attributes prior to the establishment of the unit and that these attributes also had a positive influence on the local quality of life. The data did not show evidence that the SYU "created," for example, social capital. What was already in place in the local community was a key factor.

The main theme that emerged from interviews with Big Valley residents was that the SYU enabled the valley to maintain a mill. The SYU had done so by protecting the local mill from competition. Big Valley respondents described a fairly simple relationship between the SYU, the maintenance of the mill, and associated employment and income provided because the mill was still in business.

Some of the perceptions respondents held regarding changes in or the health of their communities were compared to quantitative data. The perceptions and quantitative indicators were not consistent. These comparisons suggested that either people's perceptions were not accurate, or that more appropriate quantitative indicators, which

correspond to the same phenomenon people discussed, need to be identified. Still, people's perceptions are considered important sources of information.

Results from the study indicate that sustained yield units have at least the potential to contribute positively to community well-being. However, the effects of SYU's are best looked at in the context of many other factors that are a part of the local community, as well as larger external factors affecting the community. Baseline conditions, changing conditions, and the SYU all interact and influence community well-being.

This study points to several areas for further research, such as comparing the development of SYU and non-SYU communities. It also points to the need to understand the relationship between the perceptions of forest-based communities' residents and the quantitative indicators often used by researchers when studying change in these communities.

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Kristin Aldred Cheek

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COMMUNITY WELL-BEING AND FOREST SERVICE POLICY: RE-EXAMINING THE SUSTAINED YIELD UNIT

I. INTRODUCTION

CONCERN FOR FOREST-BASED COMMUNITIES

Forest-based communities have been a focus of researchers' and policymakers' concern for many years. This concern was expressed in the early part of the century in terms of community *stability* and *permanency*. The meaning of stability has never been agreed upon, but it has often been used to mean an absence of change, either decline or rapid growth. Researchers have used mainly economic indicators, such as employment and income, to assess community stability. Concern for communities has grown in more recent years to encompass much broader ideas of community *well-being*. Well-being has been used to describe a community's ability to meet local challenges, and incorporates more notions about the quality of life in, or overall health of, a community. Researchers have used a myriad of social and economic variables to assess community well-being.

The Rural Sociological Society's Task Force on Persistent Rural Poverty's (1993) finding that natural resource-based communities are characterized by high unemployment, low income, and large amounts of substandard housing gives us some insight into why forest-based communities are still a focus of concern today. Many of Oregon's rural areas can be considered natural resource-based, and can be used to further demonstrate the characteristics of these types of regions. Rural Oregon's average unemployment rate is generally higher than urban Oregon's. Likewise, per capita income is lower. Job recovery following the recession in the mid-1980's was slower (Miller, 1990). Policymakers are concerned about the disparity in income and other socio-economic indicators between rural and urban areas, and about the opportunities for employment in rural areas.

Rural areas have also relied more on natural resource industries. In recent times, they have experienced significant losses in timber and mining (Miller, 1990). For example, in 1990, 20,578 people were employed in sawmills in Oregon. By 1994 this figure had dropped to 14,527. These jobs paid an average of \$27,300 in 1990, compared to an overall average for all wage and salary employment of \$21,321 (Lux et al., 1992 and 1996). This loss of jobs and income has been one impetus for recent efforts to search for ways to assist forest-based communities.

FOREST SERVICE POLICY AND COMMUNITY CONDITIONS

Over the years, many people have tried to increase our understanding of the relationship between forest policies--particularly Forest Service timber harvest levels--and the conditions in communities. This study was undertaken in an effort to contribute to a greater understanding of the forest policy/community relationship.

Sustained Yield Units

The U.S. Forest Service has some responsibility for the well-being of the communities surrounding the forests it manages. Traditional tools used by the Forest Service to stabilize communities focused on the supply of timber provided from the forests. Sustained yield units (SYU's) were one such tool. They were part of a historic policy aimed at promoting community stability. The units provide a unique opportunity to see how a policy established for forest-based communities played out over almost five decades.

Congress enacted the Sustained Yield Forest Management Act in 1944. The act gave authority to the Department of Agriculture to create sustained yield units on National Forests in order to promote stability. The existence of a sustained yield unit meant that specified timber cut in a given area had to be manufactured to a certain extent within designated communities. There were also additional requirements in some units, such as the minimum number of workers who had to live within a certain distance of the processing plant. Several federal units, comprised entirely of federal lands, were created in the 1940's and 1950's. One cooperative unit, which coordinated forest management on federal and private lands, was created. The policy was effectively abandoned by the Forest Service in 1957 when it announced that it would establish no new units. However, units that had already been created were left intact (Clary, 1987).

Why Study Sustained Yield Units Today?

Researchers have heavily criticized the sustained yield unit policy, and underlying assumptions about the relationship between timber supply, industry stability, and community stability. The Forest Service has moved in the direction of policies that are more comprehensive in their approach to communities and emphasize community capacity, economic diversity, and a more diverse range of forest uses. The concept of the sustained yield unit has been labeled obsolete for many years by the Forest Service and by researchers. Still, the sustained yield unit idea persists. All of the questions about sustained yield units have not been satisfactorily answered.

Lack of Knowledge about Sustained Yield Units

In the past, research about communities and forest policy has generally focused on economic measures of community stability. Some researchers have concluded that a policy of sustained yield does not necessarily bring stability to a community (Robbins 1987, Jackson and Flowers 1983). Recent research tells us that past policies related to community stability may have contributed to *instability* by obstructing diversity (Force et al., 1993). This lack of diversity (or dependency on a single industry) may make communities inherently unstable, or less resilient to disruptions (Roth, 1991). Despite these criticisms, reviews of federal sustained yield units have often been favorable, and the units have continued to operate for decades. We do not yet fully understand how the sustained yield unit policy has contributed to or been a disservice to these communities, especially beyond the traditional measures of jobs or income.

Persistence of SYU's and Similar Ideas

We also do not know how the sustained yield unit or similar concepts might fit into today's policy context. This is important to know because sustained yield units and similar ideas for helping communities persist today. For example, despite years of negative discussion about the sustained yield unit policy, a local collaborative group in California (the Quincy Library Group) recently asked the Forest Service to consider creating a new sustained yield unit.

In addition to this direct revival of the sustained yield unit idea, there are other manifestations of attempts to help forest-based communities. For example, the Forest Plan for the Pacific Northwest within the range of the northern spotted owl includes the new concept of Adaptive Management Areas, "...to encourage testing of technical and social approaches to achieving ecological, social, and economic objectives (U.S. Department of Agriculture, 1994:24)." The broad intention of the Adaptive Management Areas, in terms of social issues, is to create "...prototypes of how forest communities might be sustained (U.S. Department of Agriculture, 1994:24)."

Finally, some recent research on the well-being of forest communities suggests that one possible strategy for linking ecosystem management activities with communities is to make forest commodities available to processing facilities in a local area (Sierra Nevada Ecosystem Project, 1996). All of these events suggest that we need to understand the accomplishments and shortcomings of the sustained yield unit policy, and we need to understand how this or similar policies might fit into today's policy context.

RESEARCH OBJECTIVES

The overall objective for this study is to provide insight into whether or not the sustained yield unit policy would be effective in meeting current objectives for forest-based communities. This will be done by examining two case study sustained yield units in an effort to assess the extent to which the policy contributes to a community's well-being.

It is important to understand the origins and design of sustained yield units, as well as their achievements or shortcomings before exploring the value of the policy or any of its components in the contemporary policy context. It is also important to understand today's goals for forest-based rural communities, as defined by researchers, the Forest Service, or the communities themselves. Through this understanding, one can begin to see the feasibility of, and questions associated with, applying the sustained yield unit concept today. Using two SYU's as case studies (Lakeview, Oregon and Big Valley, California), this thesis aims to:

- Describe the original intent and design of the sustained yield unit policy;
- Describe current objectives for forest-based communities and describe related research;
- Describe how the accomplishments of the units have been assessed in the past;
- Describe and assess the case study communities;
- Develop hypotheses regarding the sustained yield units' contribution to, or lessening of, community well-being; and

- Synthesize the knowledge about performance of sustained yield units in an effort to provide insight into the feasibility of using the sustained yield unit concept in forest-based communities today.

This study broadens the evaluation of the sustained yield unit policy beyond traditional community stability and beyond reliance on primarily economic indicators in assessments of communities. It looks specifically at the sustained yield policy in relation to the current policy context. It provides a link between traditional assessments of forest-based communities with contemporary ones that incorporate diverse dimensions of community well-being.

THESIS ORGANIZATION

The remainder of this document addresses each of the objectives described above. The next chapter combines descriptions of past and present policy objectives and related research. Chapter III presents the methodology for this study. Chapter IV provides background on the communities in the two case study units, including summaries of past sustained yield unit reviews. Chapter V contains a general assessment of the case study communities' well-being. Chapter VI, Results, provides a more specific analysis of the role of the sustained yield units in the communities. Finally, the concluding chapter discusses the implications surrounding the use of sustained yield units today, and implications for future research.

II. POLICY AND RESEARCH REGARDING FOREST-BASED COMMUNITIES

Of interest for this chapter is the development of policy and research related to forest-based communities. The chapter is separated into two sections: (1) past policy and research, and (2) current policy and research.

PAST POLICY AND RESEARCH

Concerns for forest-based communities go back more than a century. The original ideas for community stability came out of concern for what happened in the timber towns in the northeast and Great Lakes states. In the early days of the country's development, there was a large surplus of timber coupled with a restricted market. This meant that it was uneconomical for logging operations to make any permanent investments. The operations simply adopted a "cut and get out" mode of business. Wood products workers were transient and were unable to establish homes, communities, and institutions (Kaufman and Kaufman, 1990; Waggener, 1977; Robbins, 1987). In the east, farmers were able to move in and successfully farm many of the cutover lands. Although the timber community moved on, a farming community was often established in its place. After the eastern forests were extensively cut and access to the western forests became easier, some were concerned that similar logging practices would take place out west. Shorter growing seasons in some areas of the west meant that it was infeasible for the same type of stable farming settlement to take place as it had in the east (Roth, 1991).

In the early part of this century, policymakers continued to be troubled about the long-term availability of timber and about the permanency of communities (Mason, 1927). David T. Mason, who was concerned about depletion of forests, is considered the "father" of sustained yield in the U.S. He advocated sustained yield management of the forests, saying that a continuous supply of timber would help communities. He defined the "community problem" as "...the problem of keeping forest soils regularly engaged in the work of growing trees so that dependent communities may have maximum permanent prosperity (1927:625)." The next sections will address the Forest Service's historic role in addressing the "community problem."

The Forest Service and Community Stability

The history of the Forest Service and its relationship to communities near the forests it manages is extensive and somewhat ambiguous. The ambiguity existed for two reasons: (1) unclear definitions of the Forest Service's roles, responsibilities, and authority, and (2) a variety of definitions--or lack of a single, clear definition--for community stability. The following sections address these two topics.

Forest Service Roles, Responsibilities and Authority

The first chief of the Forest Service interpreted the mandate for his agency to include responsibility to local communities. Despite this established tradition of responsibility for communities, there have been few historical community stability references written into laws. Some people have concluded that Congress expected community stability to arise indirectly from actions on the National Forests, and that community stability should not be a chief planning goal (Roth, 1991).

The Forest Service's main tool in promoting community stability has been the management of timber supplies. There were two basic assumptions that account for the methods the Forest Service has employed over the years in trying to achieve community stability. The first was that an even flow of timber to a community would ensure a constant number of jobs. The second was that a constant number of jobs in the timber industry would equate to community stability (Force et al., 1993; Waggener, 1977; Cramer et al., 1993; Roth, 1991).

Sustained Yield Units

The most explicit direction given to the Forest Service to try to address the "community problem" was the 1944 Sustained Yield Management Act. The act provided for the establishment of sustained yield units, where a specified portion of timber harvested in a certain area had to be processed in a designated local community. Only six units were created, partly because of the equity issues that they raised for communities and operators without sustained yield units (Waggener, 1977; Clary, 1986).

The Assistant Chief of the Forest Service wrote a summary of the 1944 Sustained Yield Management Act when it was enacted (Granger, 1944). Along with the summary, he provided some interpretation of its primary objectives. He reiterated the stated purposes of the act, including: stabilizing communities, forest industries, employment and taxable wealth; assuring a continuous flow of forest products; and securing water supplies, preventing erosion, and preserving wildlife. He stated that the central purpose of the act was related to the stabilization of communities, forest industries, employment, and taxable wealth, since the remaining objectives would automatically be realized through sustained yield management of the forests. Although he discussed community stability, he did not define it. He did mention the concept of *permanence* while discussing communities in relation to the act.

Non-Declining Even-Flow

The Forest Service manual regulations relating to timber management plans state the following objective: "...to provide, so far as feasible, an even flow of national forest timber in order to facilitate the stabilization of communities and the opportunities for employment (Waggener, 1977)." The Forest Service's policy of non-declining even flow, instituted in 1973, requires that harvest levels remain constant or rising (Wilkinson and Anderson, 1987). Yield is measured by decade, and can be no more in one decade than can be expected to be harvested in future decades (MacCleery, 1983).

It was thought that the practice of non-declining yield would provide a secure foundation for employment in the local community. One rationale was that if companies expected timber supplies to be stable, their employment policies would also be more stable (Jackson and Flowers, 1983). The policy was also meant to ensure long-term supplies of timber for the nation.

In some cases, the policy of non-declining yield has contributed to instability in communities because harvest levels on National Forests did not respond to changes in private harvests. To allow for adjustments in private harvest levels, the Forest Service can depart from non-declining yield. Departures from non-declining even flow can be evaluated if "Implementation (of non-declining even flow) would cause a substantial adverse impact upon a community in the economic area in which the forest is located (Schallau, 1983:9)." The Forest Service can temporarily raise harvest levels above those normally allowed. Schallau (1983) stated that this practice has been the primary method used by the Forest Service in community stability efforts.

Forest Plans

The National Forest Management Act of 1976 marked the beginning of a requirement for forest plans. The act did not specifically mention community stability, but it did require incorporation of public input during the planning process. This act addressed communities in two ways: (1) it called for the consideration of nearby communities' wants, as assessed during public participation processes; and (2) it required an evaluation of the effects of actions on local income and employment (Roth, 1991; Force et al., 1993). In 1979, the Forest Service issued further regulations explicitly stating that community stability had to be considered when creating forest plans (Schallau, 1983; Roth, 1991)¹.

Defining Community Stability

Since the inception of the Sustained Yield Management Act, economists, sociologists, policymakers, and others have debated the meaning of community stability. Many agree that it has not been well defined for the Forest Service's purposes (Waggener 1977, Machlis and Force 1988). Machlis and Force (1988) argued that the definition of community stability has been "inconsistent and atheoretical." As a result, it has been difficult to analyze effects of policies meant to promote stability.

Waggener (1977) stated that stability implies constancy, or the absence of unexpected change (with allowances for short-term variability). It seems that this definition was most appropriate for describing the Forest Service's objectives for many years. When the Forest Service was established in 1905, Gifford Pinchot wrote that the

¹ As with other requirements for consideration in plans, if the Forest Service concludes that an action will have an adverse impact on a community, it is not required to omit that action. The agency must be able to demonstrate that it gave the action a *hard look*, and must pursue mitigation measures if applicable.

forests would be managed such that “Sudden changes in industrial conditions will be avoided by gradual adjustment after due notice (Leonard, 1989:79).” In general, it was thought that a stable rural community was one that remained in relative equilibrium (Roth, 1991).

More recent publications have disputed the usefulness of the concept of community stability, not only because it seems difficult to attain--due to the complexity of communities--but also because a static community is not likely to succeed in today’s rapidly changing world.

A review of the literature suggests that the definition of community stability has evolved to incorporate more ideas about a community’s ability to adjust to change (Roth, 1991). The Forest Service defined it in 1982 regulations as “the rate of change with which people can cope without exceeding their capacity to deal with it (Machlis and Force, 1988).” Still, the associate chief of the Forest Service said as recently as 1987 that, “For my purposes, community stability means the avoidance of radical, or abrupt changes in the economic or social structure (Leonard, 1989:79).”

Fortmann et al. (1989) argued that the term community stability has simply been used as a political tool to promote timber harvesting. They argued that whatever meanings may have originally been associated with community stability have been obscured over time by political use of the term.

Summary

A 1987 conference on community stability provides us with a useful summary of findings related to forest policy and community stability. The conference resulted in a five part volume that provided background material, explored the role of the government in community stability, and provided suggestions for alternatives to the traditional focus on timber supply as the primary tool for community stability (LeMaster and Beuter, 1989). The participants in the conference drew several conclusions, including:

- No one agrees on a definition of or measurement for community stability;
- The Forest Service lacks strong statutory authority to strive for community stability; and
- Although the Forest Service may not have this strong authority, they do realize that their actions can have adverse effects on communities, so they try to phase in changes.

Relevant Research

General Research Regarding Forest-Based Communities

Discussion regarding forest-based communities has often emphasized employment in the timber industry. Also, as noted above, the concept of community stability was ill-defined, or at best assumed to be equivalent to stable employment. Due to these reasons,

forest policy evaluations by researchers have often focused on the relationship between timber harvest levels and employment or other economic indicators.

Despite the Forest Service's reasoning that a decline in timber harvest would surely contribute to instability (Leonard, 1989), the overwhelming research evidence appears to be that sustained or even increased supplies do not ensure or necessarily even contribute to stability. Jackson and Flowers concluded that, "To date, there is no published evidence that national forest management stabilizes timber supplies and the employment base in timber-dependent communities (1983:20)." Robbins concluded that, "The hope that sustained-yield legislation would bring stability to the timber industry never materialized (1987:196)." Schallau (1989) argued that it actually contributed to instability, because it did not incorporate all information about public and private harvests. The result was that excess milling capacity was attracted to the area--capacity that could not be fully utilized in the long run.

Schallau (1983) also pointed out that departures from sustained yield would not help during a recession, when demand for wood products is low. Helfand and Emerson (1983) had the following response to industry pleas in the 1980's to increase National Forest sales:

This argument assumes that timber availability is the key to the level and variability of timber industry employment, tax revenues, and other economic variables that, in turn, influence community stability. However, as today's simultaneous timber glut, including a three year backlog of sold but uncut national forest timber, and high unemployment in timber-based communities attest, 'supply side' reasoning of this type doesn't work (16).

Other researchers focus on the lack of diversity in timber-based communities. Past policies may have contributed to instability by obstructing diversity (Force et al., 1993); this lack of diversity (or dependency on a single industry) may make communities inherently unstable. Diversity, on the other hand, is thought to make economies more resilient to disruptions (Roth, 1991).

Some researchers have identified a flaw in the implementation of even flow policy: stable, predictable sales have not always translated into their first intended outcome--stable, predictable harvests (sales can go unsold or be stored for later harvest). In some cases, harvests from National Forest have been less consistent than private harvest (Jackson and Flowers, 1983).

Daniels et al. (1991) evaluated the Forest Service's policy of constant flow assuming that it *was* successful in achieving its first intended outcome. Using a general equilibrium model for a single community, they compared an even-flow harvest scenario with market-responsive scenarios. The model showed that, in a market-responsive scenario, a drop in lumber prices would reduce lumber demand and reduce demand for associated labor. Labor from the lumber sector would shift to the other sectors of the economy, and the other sectors of the economy would expand. In the even-flow scenario, labor was more stable in the lumber sector, but some of the potential increases in the other sectors were lost. They concluded that, under the best case scenario where harvests are

even (which they said was unlikely), gains in the wood products sector are offset by opportunities lost in the remainder of the community's economy.

It is recognized more widely today that there are additional important factors affecting the timber industry than raw material supply. These might include market fluctuations, changes in technology, productivity of the workforce, and the general economic situation (Roth, 1991; MacCleery, 1983; Helfand and Emerson, 1983).

The body of literature surrounding this topic appears conclusive: a stable economy, if that is one's goal, cannot be achieved simply by supplying a continuous timber harvest. In other words, a continuous timber supply is not a sufficient condition to achieve community stability. The extent to which it does contribute to community stability is still debatable. Researchers and the Forest Service are moving in new directions, not only looking at other methods to achieve certain goals in forest-based communities, but also to study other concepts and goals that are more suitable than community stability.

Research Specific to Sustained Yield Units¹

Clary (1987) provided an overview of the 1944 Act and its implementation. He discussed problems associated with sustained yield units, using the Shelton cooperative unit and the Flagstaff and Vallecitos federal units for illustration.

The Shelton unit, established in 1946, was a cooperative agreement with the Simpson Timber Company in the state of Washington. The Forest Service and the company entered into a 100 year agreement that would coordinate forest management on their combined lands (Clary, 1987). The Forest Service initially accelerated its planned harvests on the Olympic National Forest in order to maintain the Shelton mills (Schallau, 1989). Establishment of the unit was strongly opposed by the nearby community of Grays Harbor, and by small operators and other forest users in the area, because it would limit others' access to Forest Service timber. The Forest Service attempted to establish other cooperative units elsewhere. They failed to do so not only because of opposition from excluded parties, but also due to lack of local support from the communities that the units were intended to help (Clary, 1987). The Shelton unit is still in place².

Frustrated with attempts to create more cooperative units, the Forest Service turned its efforts to federal units. The Vallecitos unit on the Carson National Forest in New Mexico was established in 1948. It was the smallest of the SYU's created, with an annual planned harvest of only 1.5 mmbf (million board feet). There was a population of poor subsistence farmers in the area who were dependent on Forest Service grazing permits. The Forest Service was about to reduce the permits and recognized that this would have a large impact on the local population. Their solution was to create a

¹ Descriptions of the two case study units, as well as summaries of past reviews for the units, are provided in Chapter IV.

² Source: Olympic National Forest, Olympia, WA.

sustained yield unit in the area to provide local people with jobs. A company was chosen to build a sawmill and a stock factory in the area, but it backed out. Another company was then recruited and named the "designated responsible operator." This first operator lost its status because it was not meeting the requirements of the unit's policy. One of the policy's requirements was that 90% of the people employed had to live within 10 miles of the plants. The next operator lost its designation amidst complaints that it was bringing its employees in from other areas. Over the coming years, the Forest Service would be in continual conflict with the local operators. Although Clary stated that the "Vallecitos unit was a dismal failure" (1987:12), the unit has persisted with the support of the local people¹. Clary stated that the main problem with the unit was the confusing motivation behind its establishment. (The motivation was related to rangeland improvement, as the unit was created in part to mitigate the effects from a reduction in grazing permits.)

The Flagstaff, Arizona unit on the Coconino National Forest was created in 1949. As in Vallecitos unit, the Flagstaff policy did not allow free entry. Two large mills in place at the time the policy was established were named designated operators. Several small operators in the area were largely ignored, although the policy did set-aside 15% of the harvest in the unit for outside competitive bidding. One of the large firms in the unit bought out the other in 1954. In 1962, the Forest Service eliminated the 15% that small operators had been purchasing. The large unit operator continued to grow, buying out some of the small operators. Then, in 1968, two new mills started business in Flagstaff and petitioned the Forest Service to reinstate the 15% that had been available for competition outside the unit. Their request was granted in 1969. Also in 1969, an internal Forest Service audit revealed that the appraisal process in the unit was different than outside the unit, and this difference was to the advantage of the unit operator. This led many to conclude that the unit had largely just been a benefit to one company. The SYU was discontinued in 1980 in part because it was determined that the Flagstaff economy was no longer dependent on the timber industry.

Schallau and Maki (1986) undertook a case study of the Grays Harbor unit. The Grays Harbor unit on the Olympic National Forest, established in 1949, was put in place in part to appease the community after the conflict over the Shelton unit. Schallau and Maki stated that "The original purpose of the Grays Harbor unit was to enhance the economy of the forest products industry and dependent communities of Grays Harbor County (2)." The policy stated that all primary processing of timber harvested within the unit had to be processed in Grays Harbor County (Washington). The policy has since been changed to require that only 50% be processed locally.

Schallau and Maki compared Grays Harbor County to two adjacent counties using primarily employment measures. They found that Grays Harbor was better off than its neighbors, leading them to question whether it was fair to continue the unit. They stated that the unit may not have had an impact on other communities at the time the unit was

¹ As of 1996, it is still in operation. Source: Carson National Forest, Flagstaff, AZ.

established, but speculated that the unit may have had adverse impacts on neighboring communities at the time of their study. As of 1996, the unit is still in place¹.

CURRENT POLICY AND RESEARCH

Recent Trends Towards Re-Addressing Forest-Based Communities

Prior to the 1990 Farm Bill, Schallau had this to say about Forest Service policy: “The evidence suggests that a more logical policy [than even flow for stabilization and opportunities for employment] would recognize that some communities are beyond help, some communities don’t need help, and some would benefit from a departure (that is, departure from non-declining flow) for public forests (1989:20).” In reality, it is not likely that anyone will recognize publicly that “some communities are beyond help,” but the new directions in the Forest Service seem to adopt Schallau’s idea of a more tailored approach to assisting forest-based communities. New directions also place more emphasis on nurturing a community’s internal ability to accomplish its goals, as well as an emphasis on a more diverse range of resource uses.

The 1990 Farm Bill (PL-101-624) provided new authority and direction to the Forest Service to aid rural communities in diversifying. Programs are intended to be locally controlled, rather than dictated from the outside. The bill established an Economic Development and Global Marketing Program that provides education and technical assistance in order to create jobs and raise income (Sec. 2371). It also allowed for the creation of economic diversification teams to help communities determine options for economic revitalization and diversification (Sec. 2375). Specific goals or tools included: encouraging more value-added processing, improving marketing and utilization of non-timber goods such as special forest products, cultural and historical resources, and amenity values; increasing efficiency of processing and utilization of waste products in manufacturing; technology transfer and research; employee training; and loans to disadvantaged communities (McWilliams et al., 1993; Madigan and Vatour, 1991). This legislative change was accompanied by a new set of key words in the literature: capacity, community well-being, forest base, and diversity.

One part of the new Forest Service objectives relates to community capacity. The new philosophy is that improvement and long-term prosperity in these rural areas will only happen if capacity to deliver goods and services is built within communities. Communities need to be able to compete effectively (Madigan and Vatour, 1991), particularly given the ever-increasing globalization of markets. Capacity is described by three elements: physical infrastructure (e.g., sewer and water systems); human capital (e.g., education levels), and civic responsiveness (e.g., leadership) (FEMAT, 1993).

The use of “well-being” represents a renewed recognition for the dynamism in forest-based communities. Many people have questioned the value of stability in a

¹ Source: Olympic National Forest, Olympia, WA.

community as it is defined as constancy. Richardson and Christensen (1994) stated that the term well-being refers to general community welfare.

The change from “timber dependence” to “forest base” seems to complete a shift that began years ago with the Multiple Use and Sustained Yield Act. People have recognized for a long time that there are many values in the forest other than timber--aesthetic, wildlife, recreation, and so on. There are also non-timber commodity values, such as mining and grazing, that contribute to communities’ economies. The use of this new terminology is intended to reflect these many different ways that forests contribute to communities (Richardson and Christenson, 1994). It also seems that the use of base rather than dependence connotes more about assets, rather than liabilities or limitations.

A closely related concept is “diversity.” The various values of the forest are credited with drawing new industries to forest-based areas, including telecommuters, new footloose entrepreneurs, and services for retirees and recreationists (Richardson and Christenson, 1994).

The Forest Service’s involvement with communities “...has evolved...from a role of promoting community stability through timber production to one of helping communities attain their own goals, particularly through diversification efforts that recognize the value of all forest resources (U.S. Department of Agriculture, 1991).” Throughout the Farm Bill, the emphasis is clearly on *economic diversification*. A key part of the Forest Service’s mission is now to help rural communities nurture diversity through responsible use of *all* forest resources (McWilliams et al., 1993).

Relevant Research

There is a large body of research on forest-based communities that has looked at a broad range of social and economic variables. Many of these studies have either broadened the concept of community stability, or found other more useful concepts for describing communities.

Kaufman and Kaufman (1990) conducted a study of two Montana communities in the 1940’s. Their study was reprinted in a volume about communities and forestry in part because its content and conclusions are still relevant in the 1990’s.

The authors provided some background on community stability and discussed a sense of permanence. Rather than focusing on jobs and the timber industry, they discussed such issues as local leadership, ties in the home, religion, and united action in a community. They identified several signs of stability: a long history of civic organizations, schools and churches, and attractive and well-built public buildings and homes. Similarly, they identified several signs of instability: temporary business structures, unkempt streets and sidewalks, and hastily constructed dwellings.

Kaufman and Kaufman concluded that there were many problems in the communities that they studied. They asserted that “There is a need for trained leadership with vision, for widespread participation on the part of all groups, and for cooperative action toward common ends (34).” They argued that stability of the whole community needs to be considered in a manner much broader than the supply of raw materials to

certain forest industries. They recognized that in order for stability to be achieved communities had to face gradual change to adjust to new conditions:

Synonyms of stable are lasting, permanent and durable. But for an institution to be lasting, especially in the modern world, it must gradually change to meet new conditions (32).

Machlis and Force, along with some co-authors, have published several research articles on the topic of communities and resource production. Their first effort in a series of articles was a review article on timber-dependent communities that described relevant literature, presented methodological problems and theoretical concerns, and provided suggestions for future research (Machlis and Force, 1988). Of particular interest here are the three issues that they identified in the literature:

The definition of community stability has been inconsistent and atheoretical (221).

The theoretical construct of community stability has remained unclear, and economic measures have dominated the literature (222).

Like community stability, resource dependency has predominantly been measured in economic terms (225).

The authors then embarked on some exploratory case studies in an effort to understand the relationship between resource production and social change.

Machlis et al. (1990) conducted an exploratory study examining the relationship between local resource production and social change in two case study communities using regression models. Their hypothesis was that social change was associated with changes in levels of resource production.

They collected data for 13 production and 15 social change indicators. The independent variables were those related to resource production, and the dependent were those related to social change. They collected social change variables along four dimensions: (1) community size (e.g., population); (2) community structure (e.g., number of churches and businesses); (3) cohesion (e.g., number of social groups and marriages); and (4) anomie¹ (e.g., suicides and arrests). The resource production indicators corresponded to one of three categories: (1) output; (2) market value; or (3) employment.

The authors concluded that there was an association between the level of resource production and social change. However, they found that the relationship was complex and unclear. For example, they found that indicators for social cohesion (marriages) and for anomie (arrests) both increased with increased timber production (R^2 of 0.37 and 0.59, respectively). They suggested that further efforts be aimed at identifying local coping

¹ Light and Keller define anomie as "a condition within society in which people's integration within the social fabric is weakened and their commitment to societal norms is lessened (1985:31)."

strategies and political economy or national trend variables that can be integrated into models.

Similarly, Force et al. (1993) used regression models to test the relationship between timber production, local historical events, and community change in one case study community. They hypothesized that social change (dependent variable) was associated with changes in resource production and/or local historical events (independent variables). Historical events fell into one of four categories: (1) non-timber economic development; (2) timber-related economic development; (3) natural disasters; or (4) social unrest.

Again, they found some significant relationships, with the addition of historical events improving some of the models over those in the 1990 study. They were surprised by some of their findings. For example, they found again that arrests increased with increased national forest harvest levels, mill production, disasters, and non-timber development (R^2 of 0.17, 0.35, 0.29, and 0.05, respectively). They questioned whether this suggested that the forest industry was a destabilizing force in a community, or whether larger trends in arrests were driving the result. Also, they found a relationship between employment in the lumber industry and national forest harvest levels (when harvests either increased or decreased, employment did the same). However, they found that local social unrest explained almost as much variation in the employment model as harvest levels explained (R^2 of 0.20 and 0.26, respectively). The authors concluded that additional variables, such as those related to macro economic events, needed to be identified and included in the model. They speculated that macro events may have had a bigger influence on social change than some of the factors they analyzed.

The Forest Ecosystem Management Assessment Team's (FEMAT) (1993) report on the forests in portions of the Pacific Northwest included a Social Assessment of the Options. The authors pointed out that the assessment was not a research project, but rather was intended to facilitate a policy analysis. The team was instructed to describe the social values and uses related to the forests in the region, to assess the social effects of policy options on local communities, to investigate possible social policies that could assist industries and communities in a transition, and to consider the costs and benefits associated with the placement of forest reserves. Of particular interest here is the assessment of rural communities that the team undertook.

The report contained an emphasis on the role of community capacity and a community's ability to adapt to change. FEMAT assessed communities in terms of socio-economic factors and in terms of local capacity.

One of the findings in FEMAT was that "Capacity is an important factor in how communities respond to shifts in federal forest policy or changing state or local funding (VII-9)." Capacity in this context was defined as the ability to adapt. For a community, it involves the ability of residents, institutions, and leaders to meet local needs. Three specific areas of community capacity were outlined in the assessment: physical infrastructure (e.g., water and sewer systems, financial capital, transportation corridors), human capital (e.g., skills, experience), and civic responsiveness (e.g., leadership). Community capacity was considered to be important because it affects the ability of a

community to improve its well-being. They also looked at factors believed to put communities “at risk,” including: small size, isolation, lack of economic diversity, dependence on public timber harvests, and low leadership capacity. They concluded that future policies need to be customized for the specific conditions of communities, and need to address a diverse range of issues.

The authors stated that there has never been a simple relationship between harvest levels and community stability. They asserted that community stability is not a timber supply problem, but rather a social and economic policy problem. As such, it should be addressed with varied, innovative policies that consider more than harvest levels.

Other authors have also questioned the relationship between timber harvest levels and community stability. Hibbard and Elias (1993) presented a brief history of sustained yield and government attempts at community stability: They discussed efforts of policymakers to move from “timber mining” to a “timber culture,” providing for the establishment of permanent, stable communities. They questioned the conventional wisdom that a stable supply for the timber industry would lead to a stable industry and a stable community. They noted such intervening factors as business cycles and technology. They also pointed out that many times in history the timber industry has thrived while local communities have struggled.

Hibbard and Elias also discussed the policy implications for helping forest-based communities today. They concluded that there is an emerging shift away from the federal role towards state, regional, and local roles. They called for a broad range of customized policies aimed at building capacity and problem-solving abilities.

Heberlein (1994) questioned the traditional assumption that more timber harvest leads to more jobs, which leads to communities being better off. He argued that many more factors than timber harvest affect these communities. Among the forces of change he identified as affecting forest-dependent communities were technological change, urban dominance, conflicting values, a global economy, and increased mobility.

Hoffmann and Fortmann (1996) examined poverty in Sierra Nevada forest counties. Their main question of interest was how timber industry employment affected poverty. They used caseload data from Aid to Families Dependent Children, Unemployed Parent (AFDC UP) as an indicator for poverty. The authors used time series data and Granger Causality tests in their study. They found that changes in lumber and wood products employment did not “Granger-cause” AFDC UP caseloads, except in two of the 15 counties studied. In other words, variation in lumber and wood products employment did not cause variation in AFDC UP caseloads. The authors concluded that “we have no evidence that the loss of timber-related employment ‘caused’ increases in AFDC caseloads at the county level, nor that its availability would cause the decline of AFDC caseloads at the county level (1996:413).” They contrast their finding with conflicting popular beliefs that the loss of wood products employment causes poverty.

Richardson and Christensen (1994) provided a summary of some of the recent trends in research about forest-based communities, including a shift in focus away from community stability towards community well-being. They also highlighted the movement towards using socio-economic measures of well-being. Where past research may have

used primarily economic measures, the authors mentioned recent research that uses a broader range of measures, including infrastructure, social cohesion, education levels, and land and business ownership patterns.

Beckley (1995) discussed problems with the way that stability has been used in the past, and talked instead about health, vitality, and the long-term sustainability of communities. He described early observations of boom towns and ghost towns, and how people came to recognize that both rapid economic decline and growth can cause adverse effects in a community.

Recognizing that there is some connection between economic and social well-being, Beckley questioned the predominant assumption that they are *closely* linked, stating instead that sometimes the links are weak or indirect. As a way of expanding on the traditional economic, quantitative measurements of well-being, Beckley offered three phenomena that relate directly to social well-being, but are not reflected in traditional measurements: quality of work, social cohesion, and local empowerment. He argued for use of qualitative methods in research to expand on traditional economic methods:

I suggest that a well-reasoned, thoughtful, qualitative analysis of community capacity, social cohesiveness, and so on, that is done after fairly extensive fieldwork could be quite useful to community leaders, or to communities without good leaders, as the case may be. On the other hand, the traditional way social scientists have measured well-being--through complex input-output models or quantitative multivariate models with a limited number of social indicators--may be of less use to the communities themselves. These methods are often unintelligible to community members and significantly more limited in scope. I am not suggesting scrapping the quantitative set of tools with which we measure well-being, but rather expanding on them. The best analysis combines both the rigor of quantitative variables and the breadth and context provided by qualitative techniques (265).

Power (1983) started with the statement that "Debate about the effects of U.S. Forest Service timber harvest policies almost always focuses on the number of local jobs supported or the local income generated (28)." He went on to state that income alone is not an accurate measure of economic well-being. He suggested that non-market quality of life measures, such as clean air and water, recreational opportunities, and personal safety, also be considered.

Doak and Kusel (1996) completed a social assessment of communities in the Sierra Nevada Region of California. They used socio-economic and capacity measures to assess well-being. Socio-economic data were derived from the 1990 census and included such variables as poverty, housing tenure, education, unemployment, and public assistance. Using these variables, the authors built a scale in order to compare communities. They stated that low socio-economic scores were associated with areas where people might lack the resources to sustain a reasonable standard of living. This meant that these people also experienced lower well-being than those with higher socio-economic scores.

Community capacity was assessed with the help of local expert witnesses. The experts rated communities in terms of physical (a community's physical characteristics, including financial capital), social (residents' willingness and ability to work together for community goals), and human (residents' skills, education, experiences, and abilities) capital. Doak and Kusel described capacity as follows:

Capacity is a dynamic and multidimensional measure that provides an indication of the ability of local communities to foster an environment in which local residents can identify and address their needs and goals. Low capacity scores indicate areas that have a reduced ability to effectively address the needs of local residents and take advantage of local development opportunities that might benefit them. Low capacity, then, reflects not only lower well-being but also a reduced ability, and likelihood, of residents...to improve local well-being, including socio-economic status (395).

Doak and Kusel concluded that the socio-economic and capacity measures represented different components of well-being. The independence of the measures was found to be in part because of social capital, which was determined to be a critical component of community capacity. The authors reported that the combination of the two measures "...provide a comprehensive perspective of the current state of well-being of the communities...(50)."

Doak and Kusel combined the socio-economic and capacity scores for each community. Communities with low scores in both areas were considered to have the lowest level of well-being, while those with high scores in both areas were considered to have the highest level of well-being. Communities with low community capacity but high socio-economic status were considered to be better off than those with low scores in both areas. This was because residents of the high socio-economic status community could help themselves by buying their way out of problems if necessary. However, a community with a medium to high capacity score and a very low to medium socio-economic score was considered to be better off than one with a low to medium capacity score and a medium to high socio-economic score because "the higher capacity suggests a greater ability to take advantages of opportunities (391)."

SUMMARY

The body of literature on forest-based communities provides us with several pieces of information. First, the conventional understanding that timber harvest will necessarily result in stability in employment and in a community is inadequate. Second, there are many intervening and extraneous variables that influence the relationship between timber harvest and stability. Third, the concept of community stability is limited and does not reflect the complexity of forest-based communities. An expanded vision of community well-being is more appropriate.

What is not entirely known is how a forest policy, particularly one related to resource production, influences a community's well-being. Many researchers have discussed the characteristics of employment and demographics associated with forest policies, but few have explored many other ways that a forest policy might contribute to or detract from a community's well-being in terms of such things as capacity or quality of life. In the broadest terms, the relationship between forest policy and the condition of the local community is not well understood.

Finally, it is also not known if or how the sustained yield unit concept fits into an expanded vision of community well-being. Past research regarding sustained yield units has focused on the original stability goals of the policy, using indicators such as employment, income, and population.

The literature also demonstrates the changing methods used to assess community well-being. Some researchers are advocating the use of qualitative methods to collect site-specific, context-rich information about communities.

III. METHODS

RESEARCH METHODS

Basic Rationale

The nature of this project calls for a qualitative research framework. Past research on forest-based communities has not brought us to a satisfactory understanding of the forest policy/community relationship. There are statistical procedures that might be used to ascertain the performance of the unit in relation to stability and well-being (e.g., Force et al., 1993). However, these procedures do not provide a complete picture of the situation and the use of them might be premature. Limited facets of the role of sustained yield units in communities have been addressed in the past. An exploratory grounded theory approach is a useful first step in building hypotheses regarding what happened in the SYU situation. Existing quantitative data can tell us something about performance of the unit. However, this research emphasizes community members' perceptions about the performance of the unit, something that has not been systematically explored to this point.

Quantitative data are not rejected in this research framework. Existing quantitative data such as employment or census statistics were also compiled and used descriptively to complement primary qualitative data.

Qualitative Research

Creswell (1994) provided distinct definitions for qualitative and quantitative research:

Qualitative study: "...an inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting (1-2)." Uses inductive reasoning.

Quantitative study: "...an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in order to determine whether the predictive generalizations of the theory hold true (2)." Uses deductive reasoning.

Marshall and Rossman (1989) described qualitative data analysis as a "search for general statements about relationships among categories of data (112)." Analytic procedures include organizing the data, generating categories, themes and patterns, testing emergent hypotheses against the data, searching for alternative explanations for the data, and writing (Marshall and Rossman, 1989). Qualitative research provides a rich, in-depth understanding of a situation.

Inductive and Deductive Research

Singleton et al. (1988) provided an explanation of inductive and deductive reasoning in science. They stated that “a deductive argument, judged as to its validity, is either valid or invalid--there is no in-between. An inductive argument, by contrast, is judged as more or less sound depending on how probable it is that the conclusion is true, given the evidence provided in the premises (44-45).” They went on to say that induction “involves the drawing of conclusions that exceed the information contained in the premises (50).” Singleton et al. also stated that all science inevitably uses induction, because it tries to determine general knowledge that goes beyond specific observations.

Creswell (1994) contrasted deductive and inductive models of research. He described deductive research as a process where the researcher tests hypotheses or research questions derived from a theory by conceptualizing concepts or variables from the theory, and using a research instrument to measure variables in the theory. He described inductive research as a process where the researcher gathers information, asks questions, forms categories, looks for patterns (theories), and develops a theory or compares patterns with other theories.

Purposes of Research

Marshall and Rossman (1989) provided a helpful framework for delineating study purposes, and matching them with research questions and research strategies. They identified four general purposes of studies: exploratory, explanatory, descriptive, and predictive. Singleton et al. (1988) offered a somewhat different categorization of research purposes. They provided the following three research purposes: to explore, to describe, and to test relationships or explain. The three purposes are associated with increasing research structure.

The main thrust of this project was exploratory. Exploratory research is described as investigating a little understood phenomena, identifying and discovering important variables, and generating hypotheses for future research (Marshall and Rossman, 1989).

Table 1 provides information regarding research purposes and techniques. It also provides information on the pros and cons of specific methods of data collection techniques suggested for exploratory qualitative studies.

Exploratory Research

Exploratory studies usually do not have a precise problem statement or precise hypotheses. Qualitative methods are used in part to discover important questions, processes, and relationships, not to test them (Marshall and Rossman, 1989). Guiding hypotheses--tools used to generate questions and search for patterns--are suggested alternatives to precise, fixed hypotheses (Marshall and Rossman, 1989).

Table 1: Research Purposes and Techniques

Purpose of Research	Suggested Techniques	Common Advantages	Common Disadvantages
Exploratory	Participant observation In depth interviews Key informant interviews	face to face facilitates cooperation from respondents collects data in a natural setting explores complex social relationships allows flexibility in building hypotheses good for discovering local perspective	time consuming can be costly researcher has to be aware of response and memory biases
Explanatory	Participant observation In depth interviews Survey questionnaire Document analysis		
Descriptive	Participant observation In depth interviews Survey questionnaire Document analysis Unobtrusive measures		
Predictive	Survey (large sample) Kinesics/proxemics Content analysis		

Sources: Marshall and Rossman, 1989; Singleton (1988)

Grounded Theory

Marshall and Rossman (above) described qualitative research in general terms. Grounded theory is a specific qualitative method of inquiry and data analysis. It provides an explicit framework for analyzing data in a manner that enables the researcher to explore and understand complex phenomenon studied. Strauss and Corbin (1990) defined it in this way:

A grounded theory is one that is inductively derived from the study of phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory stand in reciprocal relationship with each other. One does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area of study is allowed to emerge (23).

Coding is the central means of data analysis. Strauss and Corbin identified three types of coding. Open coding is the process of “breaking down, examining, comparing, conceptualizing, and categorizing data (61).” It is the initial step in analysis. Axial coding involves further development of the categories identified in the data, discovering relationships between categories. Selective coding is the most integrative step in the process, and involves identifying a core category around which other categories are

synthesized. Although the overall analysis moves from initial identification of concepts towards integration of larger concepts, it is not necessarily a linear process. Throughout the analytic process, the researcher continues to ask questions and to test the emerging categories and propositions against the data.

Specific Approaches

Case studies are one possible research strategy for exploratory research. Case studies can incorporate several different approaches to data collection and analysis. A case study involves research into a single entity, limited in terms of time period and activity studied, and involves the collection of detailed information using several procedures (Creswell, 1994).

In-depth interviews are one example of a data collection technique used in a case study strategy. Qualitative, in-depth interviews are described by Marshall and Rossman (1989) as being more like conversations than formal interviews. In these interviews, the researcher explores general topics, and allows the participant's particular point of view to emerge. One purpose of in-depth interviewing is to obtain valid and reliable information (Marshall and Rossman, 1989). A semi-structured interview can maintain some of the qualities of in-depth interviews, such as allowing the participant's point of view to emerge. But, it also allows the researcher to focus the interview on a more specific topic.

Elite, or key informant, interviewing is a special case of in-depth interviewing that utilizes leaders, experts, and influential people for data collection (Marshall and Rossman, 1989). Key informant interviews are conducted using snowball sampling. Canton-Thompson (1994) described this type of sampling as follows:

It directs field researchers to secure their interviewees by requesting initial interviewees to designate others they think should provide information and for what reasons. The same names begin appearing in each new interviewee's recommendations and finally no new names are forthcoming so the researcher stops sampling...It is grounded in the realities of those who have seen what you are trying to study instead of mathematical probabilities (2).

Conclusion

The main purpose this research project was exploratory. The case study approach was useful to organize and guide the research process, and allow in-depth examination in specific locales. Grounded theory provided this researcher with a framework for analyzing data. This framework was useful in assuring that the data analysis was done in a systematic, rigorous manner that was sound. Semi-structured interviewing was chosen as the appropriate data collection technique. Available data were used to supplement information from the interviews. The "Specific Research Methodology" section below provides detailed information about the methods of data collection and analysis used for this thesis.

SPECIFIC RESEARCH METHODOLOGY

Case Study Selection

In all, five federal sustained yield units and one cooperative sustained yield unit were created. In order to provide in-depth analysis and a rich description of the communities, a subset of the units was studied. When the sustained yield units were created, they specified certain communities as part of the units. These geographically based communities were used as the basis for the study.

The selection of the first unit for study, the Lakeview unit in Oregon, was based in part on practical considerations. The researcher had prior experience with the area through a previous study, and as a result had made contacts that facilitated the research process. It was also chosen because the unit will have to be formally re-evaluated soon, due to the recent announcement of a mill closure. It seemed that the research would be timely and useful in this regard. The Lakeview unit includes the incorporated communities of Lakeview and Paisley.

The second site, the Big Valley unit in California, was chosen in part because of its potential comparative value against the Lakeview unit. The Big Valley unit includes Adin, Bieber, Lookout, and Nubieber, which are all small, unincorporated towns. The area is directly south of Lakeview. The unit shares some of the same characteristics with the Lakeview area, including relative isolation and an economy based on natural resources. However, it differs in size and in economic diversity. In addition, the site-specific designs of the units' policies also differ somewhat.

The two units have also been overlooked in much of the literature. The Grays Harbor, Vallecitos, Shelton, and Flagstaff units have received more examination.

Existing Data

Existing data were compiled from historical documents, current policy records, census, and other sources. Historical documents included the original policy, policy statements for the two case study units, periodic written reviews of the units, news articles, and miscellaneous documents related to the units. Current documents included forest plans, policy statements, and the 1990 Farm Bill. Documents were collected from the Forest Service, historical societies, local government entities, and residents of the case study areas.

The literature review conducted for the thesis was useful for identifying recognized community well-being variables that could be drawn from census and other data sources in order to help describe current conditions in the communities. For example, Doak and Kusel (1996) used such socio-economic indicators as poverty and education levels. Community stability studies generally used employment, income, and population figures.

Appropriate geographic levels of analysis from the census data were chosen based on considerations of the geographic scope of the policy, knowledge of the study areas, and

availability of data. Lakeview and Paisley are incorporated. Census data is available at the "place" level for incorporated communities. The Big Valley communities are not incorporated, so census divisions (county parts) were judged to be the most appropriate level for this study. Specifically, the Adin-Lookout Division and two block groups in the Big Valley Division were used.

Existing data were used to:

- Discover information about the situation in the communities prior to establishment of the units;
- Develop descriptions of the policy documents;
- Provide a richer understanding of what happened between the start of the policy and today;
- Supplement information collected in interviews; and
- Provide quantitative, or objective indicators of well-being (e.g., poverty rates).

Interviews

Interview Process

Forty-nine key informant interviews were conducted by the researcher in May and June of 1996. The interviews were conducted to:

- Learn about residents' perspectives or perceptions regarding community well-being;
- Gather information about community capacity;
- Provide a rich understanding of what happened in the communities over the years; and
- Explore residents' beliefs about the performance of the units.

In sum, the interviews were designed to enable the researcher to begin developing hypotheses regarding the role of SYU's in community well-being.

The Interview Design

The interview consisted of two major parts: (1) questions related to the conditions in the community (community assessment); and (2) questions specific to the role of the SYU¹. For the most part, the interview flowed from general to more specific questions. The first part of the interview was broken further into two sections: questions regarding general social and economic conditions, and questions regarding community capacity.

The community assessment portion of the study was based on Doak and Kusel's (1996) methodology. It differed in three significant ways. First, Doak and Kusel limited

¹ A complete copy of the interview protocol is provided in the Appendix.

their assessment of socio-economic conditions to available statistical data from the census. That type of data is presented for this study in Chapter IV, the chapter which gives some background information on the communities. However, when this assessment was undertaken, the researcher also asked each respondent what he or she thought about the social and economic conditions in the local community. Did they think their community was healthy? Why? Was this the way it had always been? What did they think made a healthy community? Answers to these questions gave important subjective information regarding the well-being of the case study communities. It also provided information regarding what elements of community life or conditions in the community were important to the respondents, how conditions in the communities had changed, and how these people defined health for their communities. Questions about the health of the community were preceded by questions about social and economic conditions. The term "health" was used to discuss the overall state of the community.

Second, the researcher asked respondents about local community capacity (by first defining and then asking about physical infrastructure, human capital, and social capital). Doak and Kusel used information on community capacity gathered from a smaller number of local experts.

Third, this assessment differed in that the interview was designed to allow respondents considerable freedom in answering the questions. Examples were given in the community capacity portion of the interview to help clarify the questions, but elsewhere in the interview respondents were allowed to answer in ways that they felt were most appropriate. For example, the respondents were not given a definition of community well-being, but instead were asked how they defined a healthy community. When necessary, probing questions were asked to clarify what a respondent meant by use of a particular term or example.

The SYU portion of the interview was designed so that similar information was approached by more than one question in subtly different ways. This was done to provide the researcher with a fuller understanding of the situation. It was also done to provoke thought (although not to prompt respondents) to ensure that key pieces of information were not being missed. Respondents were asked if they thought that the SYU had done anything for their community, if it had met its goals related to community stability, and if had induced any other effects that were not part of its original goals. They were asked if there were things about their community that were different from other communities because of the SYU, and asked what they thought the community would be like today if it had never had a SYU. They were specifically asked if the SYU had hindered their community in any way. The respondents were also asked about possible relationships between the SYU and elements of community capacity that they had identified earlier in the interview.

Interviews lasted from about 45 minutes to three hours. A typical interview lasted for about one hour and 15 minutes.

The Respondents

Interviews started with a core group of people that were recommended by two contacts in each case study area. The Big Valley contacts were long-time residents of Big Valley and a neighboring community. One Lakeview/Paisley contact was a long-time resident and the other a more recent resident. A chain referral (or snowball) process was used in identifying further potential interviewees. This was done by asking each respondent for names of other people who were considered leaders, involved in local issues, or somehow knowledgeable about the community and the SYU. At a certain point, respondents began recommending many of the same people who had already been interviewed or were scheduled for interviews. This point came sooner in Big Valley than in the Lakeview/Paisley area. Some respondents would recommend categories of people, asking the researcher if merchants, ranchers, or others had been contacted. When it seemed as though the key people had been contacted, the categories of people had been covered, and the interviews were consistently eliciting repetitive information, the interview process was ended.

Respondents' roles in the communities varied widely. Some were directly connected to the lumber and wood products industry--managers, workers, and business owners. Some were involved in government operations--federal (Forest Service) or local (county or city). Others included ranchers, owners of local service businesses, and people involved in local volunteer activities.

The respondents ranged in age from 23 to 81, although a majority were on the upper end of that scale (the median age of respondents was 58). A majority were also long-time residents (the median residency was 48 years). The intent of the interviews was to gather information on a policy that was instituted in 1950. Therefore, contacts tended to be older, long-time residents. Still, a range of perspectives was desired to assemble a complete picture of the communities. So, some younger residents and some newer residents were interviewed. Long-time residents were able to recount first-hand knowledge. Newer residents were able to provide interesting perspectives because they could compare the local community with other rural areas where they had lived. This perspective was particularly helpful in the community capacity portion of the interview.

Analysis of Interviews

Most of the interviews were tape recorded. After the interviews were complete, the researcher transcribed each of them in their entirety. Analysis of the interviews began during the interview process, continued through the transcription phase, and progressed into further stages of analysis. Specifically:

- Concepts in the data were identified and labeled;
- Categories were identified and their dimensions (e.g., size, intensity, or frequency) were developed;
- Conceptual relationships between categories were discovered and developed;
- An overall conceptual framework was developed;
- Conceptual diagrams were developed; and

- Transcripts were re-examined to verify provisional findings throughout the process; this included continually asking questions and grounding findings in the data.

The next chapter uses existing data to provide detailed background information on the two case study SYU's and communities. Chapter V then presents assessments of the communities based on interviews.

IV. THE LAKEVIEW AND BIG VALLEY SUSTAINED YIELD UNITS

AN INTRODUCTION TO THE COMMUNITIES¹

Lakeview and Paisley

Lakeview and Paisley both reside east of the Cascades in Lake County, Oregon. Figure 1 shows the location of the two communities. The area can be described as rural and dependent on economic activities that relate to natural resources. Historically, the primary industries in Lakeview and Paisley have been agriculture and wood products. The federal government also has a significant presence in the area. The Bureau of Land Management (BLM) has a District office in Lakeview, and the Fremont National Forest's Headquarters is in Lakeview. The Forest Service also has a ranger district office in Paisley.

The area is arid and high in elevation. The setting offers recreational opportunities including camping, hunting, hiking, and biking. Lakeview is nationally known for its hang gliding sites, and hosts a hang gliding event each year.

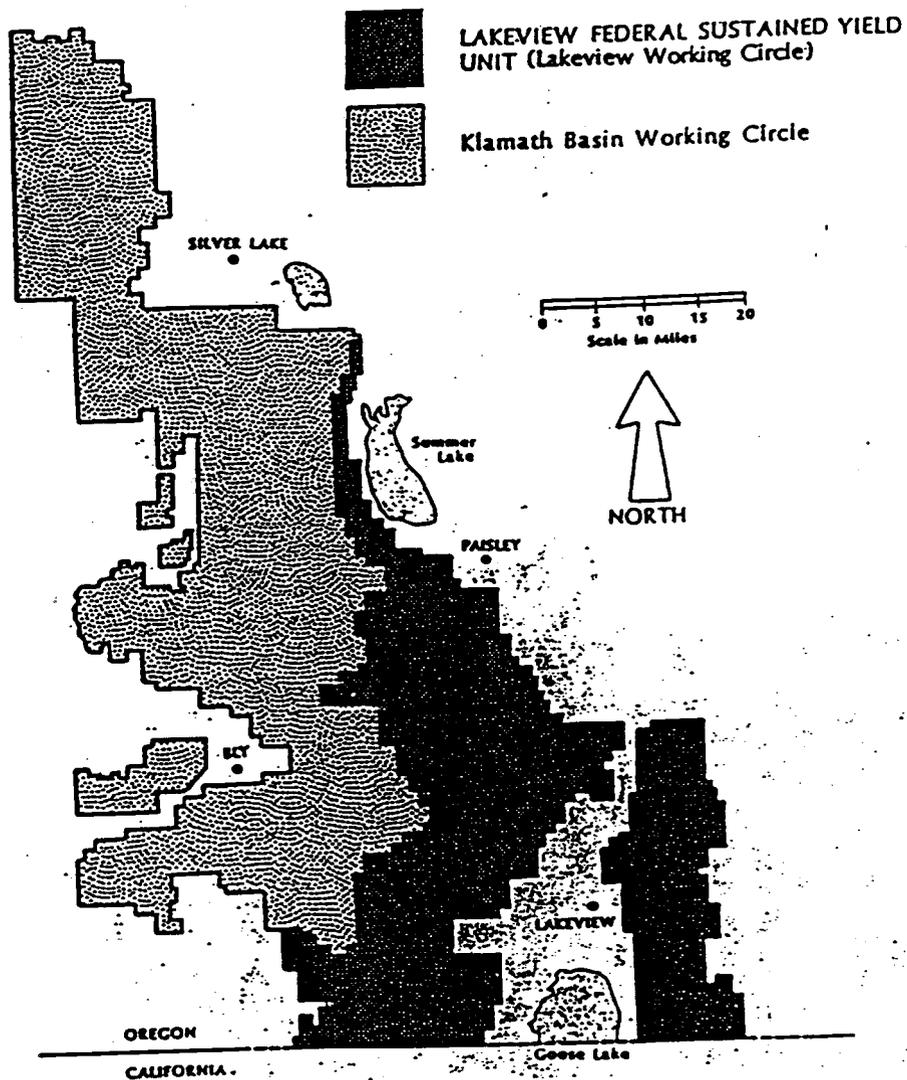
Lake County is the third largest county in the state in terms of land area, but is one of the least populated. It is 77% publicly owned. The Forest Service manages 19% of the county's area and the BLM 49% (Johnson et al., 1995).

To some extent, Lakeview is a service center to nearby rural areas. In addition to a variety of retail businesses and professional services, it has a hospital, a long term care facility, and an airport. However, Lakeview is about 100 miles from Klamath Falls, which serves as a major shopping center for many Lakeview and Paisley residents. Paisley is a small town that offers some local services. The town has created a boarding school program for out-of-town high schoolers in an effort to preserve its school district. It also possesses a well-supported emergency services program.

One unique feature of Lakeview and Paisley is a set of five educational funds with a total value of over \$8.5 million. The funds assist Lakeview and Paisley high school graduates with the cost of undergraduate and graduate education. Almost \$300,000 was awarded to students in 1995.

¹ More community description based on interviews follows in Chapter V.

Figure 1: Map of Lakeview and Paisley^{1, 2}



¹ Working circles are areas on National Forests defined by the Forest Service to help organize land management activities. Although the SYU and working circle borders may coincide, working circles are not synonymous with SYU's (all SYU's may be a part of a working circle, but not all working circles are SYU's). Still, some residents of SYU communities refer to their SYU as a working circle.

² Source: Fremont National Forest, 1989c.

Lakeview is the county seat of Lake County. Both Lakeview and Paisley are incorporated. Table 2 shows demographic information for these two towns in comparison with both the nation and the state. Lakeview is considerably larger than Paisley (populations of 2,526 and 350, respectively). Both communities had a higher percentage of their population in the 45-64 and 65+ age categories than either Oregon or the nation. They each also had a slightly lower percentage in the 18-24 age bracket. Lakeview had less in the 25-44 age category and slightly more in the 0-17 age category than the other places. Paisley was very similar to the state and the nation in these two categories.

Both communities showed considerable in-migration from 1985 to 1989. Each had 15% of their residents reporting that they had lived in a different county within Oregon in 1985. Another 19% moved in to Lakeview from another state, leaving only 66% living in the same house or county in 1985. By contrast, 83% of Paisley's residents reported living in the same house or county in 1985, with only 2% of the residents having lived in a different state in 1985. Overall, 14% of Oregonians lived in a different state in 1985.

Table 2 also shows educational attainment for persons over 25 years of age. Both Lakeview and Paisley showed a higher percentage of residents that did not complete high school than in Oregon or the nation. They also showed a lower percentage of residents who attended higher education.

Both Lakeview and Paisley had a lower percentage of employed males over 16 years of age than either the nation or Oregon in 1989. Likewise, they had higher percentages of unemployed males and males not in the workforce. Lakeview had less employed females and more females not in the labor force than the other places. By contrast, Paisley had a much larger percentage of employed females.

Employment by industry in Table 2 reflects the lack of diversification in the Paisley economy. Most people were employed in agriculture, forestry or fisheries (including the Forest Service), manufacturing of durable goods (wood products), retail trade, or educational services. Lakeview also had large percentages of employment in agriculture, forestry and fisheries, manufacturing, and retail trade, but the remainder of employment fell into a wider range of industries (e.g., transportation, health services, finance, insurance and real estate). Both communities had much larger percentages of employment in agriculture, forestry or fisheries than Oregon or the nation. Lakeview also had a higher percentage of employment in the manufacturing of durable goods.

Finally, Table 2 shows income statistics. Median household income and per capita income were lower in both Paisley and Lakeview than in Oregon or the nation. Paisley fared somewhat better by these indicators than did Lakeview. Paisley's poverty rate was much lower than state and national figures, while Lakeview's was slightly higher.

Table 2: Selected Demographic Characteristics, U.S., OR, Lakeview, and Paisley (1989)

	United States	Oregon	Lakeview	Paisley
Total population	248,709,873	2,842,321	2,526	350
Percent Male	49%	49%	49%	51%
Percent Female	51%	51%	51%	49%
Race				
White	80%	93%	95%	97%
Black	12%	2%	0%	0%
American Indian, Eskimo, or Aleut	1%	1%	3%	2%
Asian or Pacific Islander	3%	2%	1%	0%
Other Race	4%	2%	1%	1%
Persons of Hispanic Origin	9%	4%	4%	2%
Age				
0-17 Years	26%	25%	27%	25%
18-24 Years	11%	9%	8%	7%
25-44 Years	32%	33%	28%	33%
45-64 Years	19%	19%	21%	21%
65+ Years	13%	14%	17%	15%
In Migration (persons over 5 years)				
Same house in 1985	54%	47%	42%	64%
Same county in 1985	26%	27%	24%	19%
Same house or county	80%	74%	66%	83%
Same state in 1985	10%	12%	15%	15%
Different state	10%	14%	19%	2%
Educational Attainment (persons over 25 years)				
9th to 12th grade, no diploma	16%	13%	18%	17%
High school graduate (incl. equivalency)	33%	31%	38%	38%
Some college, no degree	21%	27%	21%	18%
Associate degree	7%	7%	6%	9%
Bachelor's degree	15%	15%	12%	12%
Graduate or professional degree	8%	7%	5%	7%
Total, associate degree or higher	30%	29%	23%	27%
Employment Status (16 years and over)				
Male, employed	70%	69%	62%	62%
Male, unemployed	5%	5%	9%	10%
Male, not in labor force	26%	27%	29%	28%
Female, employed	53%	53%	49%	61%
Female, unemployed	4%	3%	4%	2%
Female, not in labor force	43%	44%	48%	36%

Table 2: Continued

	United States	Oregon	Lakeview	Paisley
Employment by Industry				
Agriculture, forestry, and fisheries	3%	5%	14%	38%
Mining	1%	0%	0%	0%
Construction	6%	6%	2%	2%
Manufacturing, nondurable goods	7%	5%	1%	0%
Manufacturing, durable goods	11%	13%	17%	11%
Transportation	4%	4%	3%	0%
Communications & other public utilities	3%	2%	2%	1%
Wholesale trade	4%	5%	2%	0%
Retail trade	17%	18%	21%	16%
Finance, insurance, and real estate	7%	6%	4%	0%
Business and repair services	5%	5%	2%	1%
Personal services	3%	3%	2%	1%
Entertainment and recreation services	1%	1%	1%	0%
Health services	8%	8%	5%	1%
Educational services	8%	8%	8%	24%
Other professional and related services	7%	7%	6%	4%
Public administration	5%	4%	8%	1%
Income				
Median HH income	\$30,056	\$27,250	\$23,256	\$25,000
Per capita income	\$14,420	\$13,418	\$11,285	\$11,409
Income in 1989 below poverty level	13%	12%	14%	6%

Source: U.S. Bureau of the Census.

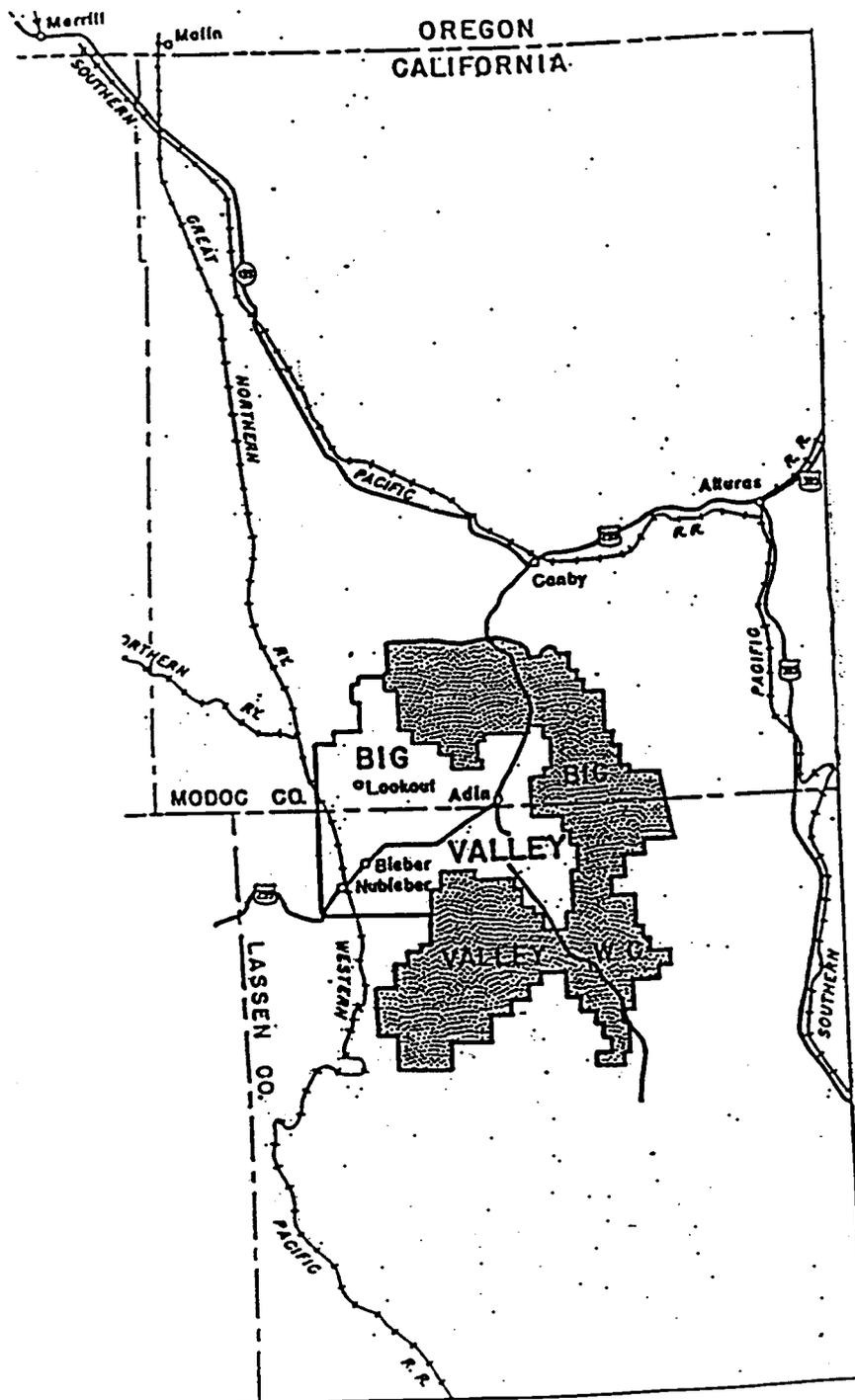
Big Valley

Big Valley stretches across a county line in northeastern California. The communities of Adin and Lookout reside in Modoc County, while Bieber and Nubieber are in Lassen County. Figure 2 shows the location of Big Valley. These communities, like Lakeview and Paisley, are historically dependent on natural resource industries such as ranching, wood products, and mining. They are situated amidst a mix of private and public lands. There is a Forest Service ranger district office in Adin. There is a medical center, along with some stores, restaurants and small businesses in the valley. Residents buy most of their goods and services in Redding (approximately 95 miles) or Klamath Falls (approximately 100 miles).

None of the four communities in the valley are incorporated. Table 3 shows demographic information for Big Valley in comparison with both the nation and the state. The total population of Big Valley in 1989 was 1,884. The population of Big Valley is somewhat older than that of California or the nation.

Big Valley experienced considerable in-migration between 1985 and 1989. Seventy-four percent of the Big Valley population reported living in the same house or county in 1985. Twenty-four percent moved from another county within California, and another 2% from a different state.

Figure 2: Map of Big Valley¹



¹ Source: Mack and Stillings, ND.

Table 3 also shows educational attainment for persons over 25 years of age. Big Valley showed a much higher percentage of residents that did not complete high school than in California or the nation. It also showed a lower percentage of residents who attended higher education.

Both males and females over 16 in Big Valley were more likely to not be in the labor force than their counterparts in California and the nation. Unemployment rates in Big Valley were comparable to those in the state and the nation.

Employment by industry shows high percentages of people employed in agriculture, forestry or fisheries (including the Forest Service) and manufacturing of durable goods (wood products). The percent of employment in the retail sector is noticeably lower in Big Valley than California or the nation.

Finally, Table 3 provides information on income. Median household income and per capita income were lower in Big Valley than California or the nation. Big Valley's poverty rate was slightly higher.

Table 3: Selected Demographic Characteristics, U.S., CA, and Big Valley (1989)

	United States	California	Big Valley
Total population	248,709,873	29,760,021	1,884
Percent Male	49%	50%	52%
Percent Female	51%	50%	48%
Race			
White	80%	69%	93%
Black	12%	7%	2%
American Indian, Eskimo, or Aleut	1%	1%	3%
Asian or Pacific Islander	3%	10%	1%
Other Race	4%	13%	1%
Persons of Hispanic Origin	9%	26%	4%
Age			
0-17 Years	26%	26%	28%
18-24 Years	11%	11%	7%
25-44 Years	32%	35%	30%
45-64 Years	19%	17%	21%
65+ Years	13%	11%	14%
In Migration (persons over 5 years)			
Same house in 1985	54%	47%	61%
Same county in 1985	26%	33%	12%
Same house or county	80%	80%	74%
Same state in 1985	10%	12%	24%
Different state	10%	8%	2%

Table 3: Continued

	United States	California	Big Valley
Educational Attainment (persons over 25 years)			
9th to 12th grade, no diploma	16%	14%	21%
High school graduate (includes equivalency)	33%	25%	34%
Some college, no degree	21%	25%	24%
Associate degree	7%	9%	8%
Bachelor's degree	15%	17%	10%
Graduate or professional degree	8%	9%	4%
Total, associate degree or higher	30%	35%	21%
Employment Status (16 years and over)			
Male, employed	70%	71%	60%
Male, unemployed	5%	5%	4%
Male, not in labor force	26%	24%	36%
Female, employed	53%	54%	42%
Female, unemployed	4%	4%	5%
Female, not in labor force	43%	42%	54%
Employment by Industry			
Agriculture, forestry, and fisheries	3%	3%	22%
Mining	1%	0%	0%
Construction	6%	7%	7%
Manufacturing, nondurable goods	7%	5%	0%
Manufacturing, durable goods	11%	11%	23%
Transportation	4%	4%	7%
Communications & other public utilities	3%	3%	0%
Wholesale trade	4%	5%	0%
Retail trade	17%	16%	11%
Finance, insurance, and real estate	7%	8%	5%
Business and repair services	5%	6%	1%
Personal services	3%	4%	4%
Entertainment and recreation services	1%	2%	1%
Health services	8%	7%	6%
Educational services	8%	7%	8%
Other professional and related services	7%	7%	2%
Public administration	5%	4%	2%
Income¹			
Median HH income	\$30,056	\$35,798	\$24,519
Per capita income	\$14,420	\$16,409	\$11,451
Income in 1989 below poverty level	13%	12%	14%

Source: U.S. Bureau of the Census.

¹ Big Valley data was compiled from three census areas. Median income is shown for the largest of those three areas. Per capita income is a weighted average from the three areas, based on population.

THE LAKEVIEW UNIT

Impetus

Lake County residents led the effort to establish the Lakeview Federal Sustained Yield Unit. One of the reasons for creating the unit was that it appeared private lands in the county would be largely cut over some time in the 1950's, leaving the local wood products industry dependent on federal timber (Lake County Examiner, 1990; Bach, 1981). A 1945 news article reported that "...practically all private timber in the area owned or controlled by the Lakeview mills has been liquidated and in fact this year, 1945, will see the end of private timber, except for a few isolated tracts and those owned by outside interests (Lake County Examiner, 1945)." The mix of private and federal timber shifted dramatically about 1950, with private logs accounting for 60 out of 65 mmbf processed in 1949, and the federal harvest rising from 15 mmbf in 1949 to 86 mmbf in 1961 (Yarosh, 1990).

The threat of that timber being hauled out of the county, most likely to Klamath Falls, was a genuine threat that the residents of the area recognized. For example, Weyerhaeuser was the largest private timber land owner in the county in the 1920's (Tonsfeldt, 1987). By 1960, a reviewer for the Lakeview Unit reported that "All of the timber owned by the Weyerhaeuser Company is planned for their plant in Klamath Falls...(Saubert, 1960:10)." Given that Weyerhaeuser owned lands adjacent to the Fremont, it seemed reasonable to believe that the company would easily have been able to purchase National Forest timber in Lake County and haul it to either their mill in Klamath Falls or nearby Bly for processing.

A description of Lakeview in the late 1930's also helps illustrate why the need for a SYU was first identified. Perhaps Lakeview residents desired to somehow protect what industry had developed in the area by the 1940's:

Two years ago the sawmills in Lakeview were just sawing boards and shipping rough lumber after it was air dried. Only two mills had any semblance of a remanufacturing or drying plant. A large portion of the labor was transient, and when the mills closed down in the fall for lack of logs, Lakeview became partially deserted overnight and business more or less hibernated for the winter. The last two years have seen a great difference...(Bach, 1981:174)

Recognizing the threat to their wood products industry, and realizing the impact that losses in wood products would have on the rest of the community, the Lake County Chamber of Commerce applied for the establishment of a sustained yield unit in the area in 1949 (Fremont National Forest, 1989b). The unit was approved by the Secretary of Agriculture in 1950 (Bach, 1981).

Basic Layout

The SYU covers approximately 40% of the eastern part of the Fremont National Forest, a total of 492,435 acres (Fremont National Forest, 1989c; Olson, 1982). The Fremont lies east of the Cascades and borders the start of the Great Basin. The forest consists mainly of ponderosa pine, white fir, lodgepole pine, and juniper. Table 4 shows the extent of the wood products industry in 1950.

Table 4: Lakeview and Paisley Wood Products Industry, 1950

Sawmills and Logging Operations, Lakeview and Paisley:

Town	Company Name	Daily Milling Capacity (MBF)	Daily Logging Output (MBF) ¹	Other
Paisley	Adams Mill	40	40	
Lakeview	Adams Mill	75	150	box factory, molding plant
Lakeview	Cottonwood Lumber Company	20	20	
Lakeview	Fremont Sawmill Company	96	n/a	remanufacturing plant
Lakeview	Lakeview Logging Company	n/a	200	
Lakeview	Pierce Logging Company	n/a	50	
Lakeview	Warner Mt. Logging Company	n/a	115	
Lakeview	White Pine Lumber Company	70	150	box factory

Box Factories, Lakeview and Paisley:

Town	Company Name	Daily Capacity (MBF)
Lakeview	American Box Corporation	50
Lakeview	White Pine Lumber Company	65

Source: Forest Products Industry Directory of Western North America, 1950

The original policy statement for the unit required that all timber sold in the unit had to be manufactured in Lakeview or Paisley. The policy included the following definition of manufacture:

¹ At the time, some lumber companies employed their own loggers, rather than hiring contract loggers.

The term manufacture herein is defined as the cutting of logs in sawmills into rough green lumber containing the approximate percentages of the various dimensions of lumber usually produced by mills of comparable size in the sawmill industry of the ponderosa pine area of eastern Oregon; and in addition the expenditure of at least an average of 5 man-hours of work per thousand board feet of logs used in remanufacturing, refinement or other processing beyond the rough green lumber stage. In other log-using plants, manufacture will be considered to have been accomplished when an equivalent degree of employment has been expended on the material used (Saubert, 1960:A2).

The policy also required that "In conducting timber harvesting and manufacturing operations, local labor will be employed insofar as practicable (Saubert, 1960:A3)." Entry into the unit by new firms was permitted (there was no "designated operator").

Timber was to be offered on a competitive basis using established Forest Service procedures. Purchasers in the unit were not allowed to bid on national forest timber outside the unit for manufacture within Lakeview or Paisley. This limitation was most likely included in the policy to guard against outside opposition. The annual allowable cut was 53 mmbf.

Past Reviews

Reviews of the units are required periodically to determine if the goals of the unit are being met. The first review of the Lakeview unit covered the years 1950-1959. It was completed by Jack Saubert (1960), a staff officer at the Fremont National Forest. The author provided a background of the unit, a description of the current situation in the community and the local wood products industry, and a discussion of the unit's effectiveness. He compiled available statistical information and interviewed interested parties in the local area, as well as people in neighboring Modoc County (California).

The first point of discussion regarding the unit's effectiveness was stability. After examining lumber employment, income, and salaries for the years 1950 to 1959, Saubert concluded that these figures had been quite stable. Lumber employment was 892 in 1950, and had dropped to 697 by 1959. However, during the same period that Lake County lost about 22% of its lumber employment, Alturus¹ lost 53%. Overall wage and salary employment² in Lake County grew modestly during this time period, from 1,387 to 1,493. Lake County experienced a 6% growth in population in the 1950's, while nearby Modoc County lost 14%.

¹ Alturus is the county seat of Modoc County, directly south of Lakeview, in California. Alturus was used as a comparison for Lakeview in the 1960 review.

² Wage and salary employment does not include agricultural employment or the self-employed. This data is available on an annual basis only at the county level, so county level data was used by Saubert.

Saubert pointed to the addition of a new molding plant in Lakeview as a factor in the county's growth. He also emphasized the difference between the extent of manufacturing facilities in Lakeview and Alturus, noting that Lakeview's industry was much more developed in terms of remanufacturing capacity. He found that "The extent of remanufacture and refinement and resultant employment has been the most successful feature of this Federal Unit (25)." He stated later in the report that the remanufacturing plants were there due to a "...relatively assured supply of raw material," and that elimination of the unit "...would break faith with these established plants (30)."

Saubert stated that stability in the lumber industry was noticeable in the rest of the Lakeview economy. He also said that the lumber industry had stabilized the boom and depression associated with the opening and closing of a uranium mine during this period. Despite the loss of the mine, Saubert reported that "...the town is continuing to build new houses, business is relatively good, and the community has endured the loss of the mining industry with little disruption (22)." He also found that local people strongly favored continuation of the unit.

The 1960 review contained some of the elements that continue to be points of discussion regarding the unit. The first was a comparison between advertised and bid prices within the SYU and in the adjacent East Klamath Working Circle. The reviewer found that in the first nine years of the unit, there was a 2.1% overbid within the SYU, and a 17.3% overbid in the East Klamath Working Circle. This theoretical loss in returns to the federal government and the county continues to be a point of debate today¹. The second was an observation that "One of the needs of the community is some type of plant that can effectively utilize mill waste and the large amount of small lodgepole pine and other species that [are] available (22)." Effective utilization of small materials would also continue to be an area of concern over the coming years.

A second review of the unit covered the years 1950-1965, overlapping with the first review. This one was conducted by Jack Usher (1966), another staff officer at the Fremont. Usher generally followed Saubert's format, updating many of the statistics that Saubert had compiled. One new piece of information in the 1966 report was the reviewer's judgment that mill and logging employees within the unit were more likely to be permanent residents of the area than similar employees in other areas outside the unit.

More complete utilization of materials continued to be a major issue in 1966. Usher was concerned that stability might become stagnation, as the local remanufacturing industry had slowly been declining. Lumber employment had dropped to 478 by 1965. Lake County had lost 9% of its population between 1960 and 1965. He stated that:

We urgently need to promote local manufacturing or remanufacturing facilities based on integrated wood resources. Some possibilities include utilization of lower grades of lumber for fiber products, pressed boards, ground wood processes, plywoods or veneers (17).

¹ Counties with National Forest land within their boarder receive 25% of timber receipts. Receipts from forests that lie in more than one county are allocated according to acreage in each county.

Of particular concern was the “five man-hour rule,” or policy requirement that five man hours of labor be put into each 1,000 board feet beyond the green chain. Usher felt that this rule may have been a barrier to the establishment of plants that might utilize lower grades of lumber. He recommended that the rule be amended, eliminating the specific number of hours and replacing it with a number “... equivalent to the average amount expended in comparable sized plants producing similar products in the ponderosa pine region... (18)” No actions were taken on the 1966 review (Culbertson, 1975).

A 1975 review by Assistant Timber Staff Officer Richard Culbertson followed the same format of the 1966 study. Up to this point, reviewers had noted the number of employees in the lumber and wood products sectors out of the total of all wage and salary employees. In this review, Culbertson stated that 75% of the basic county economy was derived from the timber industry and that this had been true throughout the history of the unit. He did not describe his methodology for calculating this figure. County employment in lumber and wood products by 1972 had risen slightly to 470. Agricultural employment (not included in wage and salary figures) was 590. Government employment had risen from 570 in 1960 to 680 in 1972. Total employment including agriculture was 2,530.

The capacity of the mills in 1972 was 106 mmbf, given single shift operation with brief times of double shift operation. The capacity was considerably more than the 66 mmbf allowable harvest from the unit. More private timber was being milled in the unit than in previous years, as a result of an increasing lumber market. However, Culbertson noted that the rate of cutting on private land would not be able to continue due to supply constraints.

One issue addressed in the 1975 review was the competitive situation, or lack of competitive bidding. Culbertson stated that the mills appeared to have divided the unit into areas where they each bid on timber. Among the negative impacts he felt resulted from this situation were a lower monetary return to the federal treasury and the county, and a less efficient industry that only operated on one shift.

Another major issue at the time of the review was the introduction of the Small Business Administration (SBA) Set-Aside¹ program to the unit. This further restriction on purchasing complicated the situation in the unit. Although the goals of the unit and SBA policies were similar, Culbertson stated that the SBA program:

“... was not designed to operate well with other programs such as the Lakeview Federal Unit Policy... The primary intent of the Sustained Yield Unit is not to protect either small or large business but, rather, to promote stability of the dependent communities (26).”

¹ Culbertson provided the following definition of the small business program: “The purpose and intent of the Small Business Act... is to develop and encourage the capacity of small business and to insure that a fair proportion of the total purchases and contracts and sale of Government property be placed with small-business enterprises; the end result being to maintain and strengthen the overall economy of the Nation (24).”

Fremont Sawmill was the only large business in the unit for a period of time. It announced in 1972 that it would close the Paisley mill in part because of limitations on supply due to the Set-Aside program. The Forest Service and Lake County tried to obtain an exemption from the program for the unit, but were not successful. Instead, the SBA reconsidered the size of the businesses in the unit and modified the small and large business share percentages. For a complete discussion of the issue, see Culbertson.

Seemingly as a result of the possible closure of the Paisley mill, Culbertson recommended that the following clause be added to the policy:

The closure of all the manufacturing facilities for a period of six months or more in either Lakeview or Paisley will be considered prima facie evidence that the objectives of this Policy Statement are not being met (38).

Given that the Paisley mill closed in 1996, the addition of this clause has proven to be a major action in the history of the unit.

Culbertson also made several other recommendations. The utilization of small materials was still a major issue. Culbertson recommended updating the policy to reflect new types of manufacturing and to eliminate the five man-hour rule. His recommendation was that the five man-hour rule be replaced with "...remanufacturing refinements shall be required to the highest level practicable for the grade of product produced by the logs, within the limits of available facilities (34)."

Among other findings in the review were that:

- The mills had made reasonable investments to remain efficient;
- Local labor was being employed for the most part; and
- The economies of Lakeview and Paisley were stabilized or in an upward trend and that the unit was still important for maintaining stability.

The 1980 review, the first done outside the Forest Service, was done by John Beuter and Doug Olson from Oregon State University. The objectives of the review included determining the timber dependency of Lakeview and Paisley, determining the trend of economic stability in the communities, and determining if the SYU had made a difference in terms of its goals. The authors examined economic data at the county level to address these objectives. The remainder of the report discussed harvest levels in the unit and the characteristics of the local wood products industry.

Using an economic base¹ approach, Beuter and Olson found that the importance of lumber and wood products in the county economy declined from 59% to 35% of the economic base between 1940 and 1970. They noted that this decline was offset somewhat by increases in the public forestry agencies. Further increases in government employment

¹ Economic base theory considers the amount of local employment that exceeds what is required to produce locally-consumed goods and services. This excess employment is then assumed to be producing goods or services for export. It is considered part of the local economy's economic base. For a more complete description, see Beuter and Olson, 1980.

were seen between 1970 and 1978. The authors concluded that the county continued to be “highly dependent upon the timber resource and associated activities (10).” They also stated that there were no major disruptions in the balance between the basic industries and the rest of the economy. This was seen as evidence of relative stability.

In order to examine trends in economic stability, Beuter and Olson also conducted a shift-share analysis¹ of the county economy. The analysis showed that the county was behind the nation in job growth from 1940 to 1970 because of its dependence on agriculture and wood products. These two industries were declining nationally during these years. The economy showed improvements from 1970 to 1978 because of a shift towards employment in the government sector.

After concluding that relative stability had been achieved in the local economy, the authors addressed the question of whether the unit made a difference in achieving the stability. Beuter and Olson discussed the fact that public opinion favored the theory that the unit had made a difference. The authors mentioned that they conducted interviews, but did not clearly state their methodology for assessing public opinion. They also speculated on optimistic and pessimistic scenarios of what might happen without the unit, and concluded that it did make a difference.

One change in the unit during this period was an increase in competitive bidding. The entrance of a new firm changed the make-up of the local bidding patterns.

Other issues discussed in the review were similar to those in the past: Should the five man-hour rule be eliminated²? How does the SBA program fit in? What could be done to improve utilization of small materials within the unit? The authors discussed the options related to these issues, but did not give any explicit recommendations.

Doug Olson (1982) completed a master’s thesis on community stability and sustained yield units. He used the Lakeview unit as a test case for a descriptive model he developed to gauge the achievement of stability in SYU’s. He stated that the 1980 review lacked emphasis on “social welfare aspects (6)” of community stability; his thesis was designed to address these aspects.

Olson used the four goals of the 1944 law--stability of forest industries, employment, taxable forest wealth, and community--as a basis for his model. He utilized secondary data for his analysis, including 14 indicators and a shift share (regional share) analysis of employment. The indicators were:

- Forest industry--production, efficiency, investment;

¹ Shift-share analysis looks at employment trends in a particular area in comparison with the nation. For a complete description, see Beuter and Olson, 1980.

² After the 1975 review, the statements regarding remanufacturing were modified so that the five man-hour rule was retained for sawmills, but wood fiber processing plants were required to process materials to the “highest level practicable.” (For more details, see the policy statement as amended in 1976, included in the Appendix of Beuter and Olson, 1980.)

- Employment--employment trend and unemployment;
- Taxable forest wealth--real property value;
- Community--birth rate, age class distribution, median family income, number below poverty level, number of food stamp recipients, divorce rate, suicide rate, and crime rates.

The analysis was done at the county level, using neighboring Harney and Klamath Counties as comparisons. Olson went through a process to determine if each indicator was acceptable, unacceptable, or ambiguous in terms of being consistent with its associated community stability goal. The process varied somewhat for each indicator. For example, forest industry output was evaluated by examining output plotted graphically over time for each of the three counties. Olson concluded that there was "no indication of a long term fall off of production (59)," and that Klamath and Harney county figures showed more evidence of a drop-off during the 1969-1970 recession. He concluded that this indicator was acceptable. Many of the other indicators were evaluated by comparing statistics over time, as illustrated by Olson's explanation for testing the unemployment indicator:

If the unemployment rate is lower than either of the comparison counties for over half of the years the unit has been in existence then the result is acceptable. If the unemployment rate for Lake County is higher than both comparison counties and the difference between Lake County's rate and the next highest rate is greater than the difference between the comparison counties for over half of the years tested then the result is unacceptable. The result is also unacceptable if the rate is higher than and increasing in relation to both counties. Otherwise, the result is ambiguous (33-34).

Olson's overall finding was that community stability was achieved, with reservation. The finding was given with reservation because achievement of the employment policy goal was found to be ambiguous. The only test receiving an unacceptable rating was the regional share of employment, indicating a lack of employment opportunity in the area. The remaining indicators were determined to either be acceptable or ambiguous. The other three main policy goals--stability of forest industry, taxable forest wealth, and community--were found to be achieved, or acceptable.

Olson pointed out that a major assumption of his model was that Klamath and Harney Counties had an acceptable level of stability. He also stated that the strength of the model was in discovering problem areas, such as a relative lack of employment opportunities in the Lakeview Unit.

The most recent review of the unit was completed in 1990 by John Beuter and covered the years 1980 to 1989. The study was similar to the one done in 1980. Beuter used secondary data (social and economic indicators), public forums, and interviews to review the achievements of the Lakeview Unit in relation to its goals, and to assess public sentiment regarding the unit.

Beuter reported that there were some changes in demographic and economic conditions, but that none represented "... significant permanent change in the population or structure of the economy (5)." An extension of the economic base analysis conducted in the 1980 study showed that lumber and wood products continued to be the largest part of the county's economic base. The dependency index for lumber and wood products was 44, followed by federal government at 25, local government at 20, and agriculture at eight.

Beuter stated that the unit continued to have a significant effect on stability, citing that it supported the local wood products industry and was a factor in drawing new industrial enterprises to the area. He also concluded from a look at wood products employment in Lake and Harney counties that the early 1980's recession was more visible in Harney County.

Local public opinion remained overwhelmingly in favor of the unit. The Oregon Natural Resources Council lodged the only strong opinion against the unit.

The installed mill capacity at the time of the 1990 review was 90 mmbf on a one-shift basis. However, one mill was not operating at the time, leaving an operating capacity of about 60 mmbf. Bid appraisal ratios were up somewhat from the previous review period. The local remanufacturing industry was expanding, with a new millwork plant expected to open.

Concern about future timber supply was noted as an issue in the 1990 review. Harvest reductions throughout the forest were expected to occur in the near future for several reasons, including increases in habitat protection, and reduced yields due to changes in forest management practices. Table 5 shows the sales in the unit from 1950 to 1989.

Table 5: Lakeview Federal Sustained Yield Unit Sales, 1950-1989

Years	Total mmbf
1950-1959	604.2
1960-1969	563.3
1970-1979	671.8
1980-1989	658.9

Sources: Saubert, 1960; Usher, 1966; Culbertson, 1975; Beuter and Olson, 1980; Beuter, 1990.

The focus of this thesis is to discuss the effects of the SYU on the participating communities. However, objections to the unit from outside interests are worth noting to provide a more complete picture to the reader. There was objection to the establishment

of the unit from a mill located south of Lakeview in Willow Branch, California. The mill was excluded from the unit because it was located in California, beyond the borders of the Fremont, and because the mill capacity within the Lakeview/Paisley area was in line with the estimated amount of harvest that would be offered from the unit. The mill eventually closed, with the owners leasing another mill in Alturus, California. (For more information, see Saubert, 1960 and Usher, 1966.)

The second wave of opposition came more recently from environmental groups, largely from the Oregon Natural Resources Council. Their objections focused on the estimated losses to the national treasury as a result of reduced competition within the unit, and alleged lessor environmental protection within the boundaries of the unit than in other areas of the Fremont. (For more information, see O'Toole, 1990.)

Aside from the Willow Ranch mill, wood products companies outside the unit have accepted it (Beuter and Olson, 1980). Klamath County has supported the unit over the years. The County Board of Supervisors submitted a letter of support during the last review process (Fremont National Forest, 1991).

Current Situation

The SYU was identified in the 1989 forest planning process on the Fremont as a major issue. The importance of timber supply to the communities in the unit is discussed throughout the plan. It was determined at the time of the plan that the allowable sale quantity (ASQ) in the unit would be 60 mmbf for the next decade (42.2 ponderosa pine, 16.7 fir and other, 1.1 lodgepole pine; out of a total of 139.5 for the entire Fremont). This marked a 7% reduction in ASQ from the previous plan. The reduction came mostly in the historically low value lodgepole pine species, so was not anticipated to have a large impact on economic stability (Fremont National Forest, 1989a)

Since the 1989 plan, harvests within the unit have dropped sharply. In 1995, the volume sold in the unit was 5.3 mmbf. Of this amount, less than 2 mmbf was sawtimber¹. In the beginning of 1990, four mills were operating in the area: Goose Lake Lumber, Lakeview Lumber Products, and Fremont Sawmill's facilities in Lakeview and Paisley. Goose Lake closed in 1990. Lakeview Lumber closed in 1995. The mill in Paisley closed in the spring of 1996, leaving only the one Fremont mill in Lakeview operating. Fremont's total 1994 production was 45 mmbf (1996 Directory of the Wood Products Industry, 1995). The current one shift capacity of the operating mill is approximately 22 mmbf². Lakeview also has a millwork plant, a molding manufacturer, and a door manufacturer.

The current policy statement no longer contains the five hour man rule. It has a more complex set of definitions for "further manufacture" depending on species type and

¹ Source: Fremont National Forest. Lakeview, OR.

² Source: Fremont Sawmills. Lakeview, OR.

grade of material (see the Appendix). The policy also includes a monitoring requirement for mills operating within the unit. They must submit annual records showing, among other items, the extent to which material was manufactured, and the extent to which local labor and local contractors were employed (Fremont National Forest, 1991).

THE BIG VALLEY UNIT

Impetus

The Forest Service was discussing establishment of the Big Valley unit as early as 1944. The following comment in one Forest Service memo indicates that the Forest Service, rather than the community, was responsible for proposing the unit: “We feel that considerable local favorable sentiment can be built up for a public hearing (Bacon, 1948:4).”

An examination of original documents related to the unit revealed that there were three primary reasons for establishing the unit. First, it was felt that Big Valley was dependent on timber. A 1948 Forest Service memo proposing establishment of the unit described the Big Valley communities:

Adin is an old established community and did not spring into existence overnight, as is the case with many mill towns. Instead, it has experienced a slow steady growth that is reflected in its homes and business places.

Lookout is a ranching community within the proposed Unit that contains about 75 people. It is solely dependent upon livestock and ranching for its existence.

Bieber contains two sawmills and the camp of the Finney Logging Company. All of the logging around Bieber is on private land and all contracts have been let on a liquidating basis. This means that very little has been left on the private cutover land for future growth. The housing is not as substantial in Bieber as in Adin.

Nubieber is a small railroad town which does not depend on the lumber industry for its livelihood (Bacon, 1948:3).

A 1949 statement estimated that about 60% of the population in the valley was dependent on timber (“Information Concerning...,” 1949).

The second reason for establishing the unit was an expectation that private timber would all be liquidated swiftly, leaving the communities dependent on federal timber:

It is estimated that within five years nearly all the private timber will be cut and the lumbering industry in the area will be almost entirely dependent on

national forest timber. At that time a substantial drop in employment and lumbering is inevitable (“Information Concerning...,” 1949:2).

The local Forest Service employees apparently approached the large private timber holders in the area about establishing a cooperative sustained yield unit, but the owners were not responsive to the idea. They concluded that the “...lack of interest in better cutting practices by the private timber owners shows that the only solution for this area is the establishment of a Federal Unit for the Big Valley Working Circle (Bacon, 1948:4).”

The third reason behind the unit was the threat that federal timber could be hauled out of the area for processing: “Our objective should be to have the government timber milled in the Big valley area, and not to feed ‘a log hungry’ Klamath Falls (Bacon, 1948:3).” A 1944 memo also pointed out the “...real and imminent danger of outside competition taking timber to some other point for manufacture (Hanson, 1944:1).”

Although the suggestion for the unit came from the Forest Service, it was not without support in the local community. A summary of a hearing held in 1949 to discuss the establishment of the Big Valley Unit provided the following information:

- No one at the hearing opposed the unit, although some supporters held reservations about the operation of it; and
- Supporters testifying at the hearing included the Board of Supervisors in both Lassen and Modoc County, the Chamber of Commerce in Bieber, Susanville (the Lassen County seat), Modoc County, and various farm bureaus (Farr, 1949).

The district attorney for Modoc County, who was also the attorney for Edgerton Brothers Lumber Company in Big Valley, testified at the hearing and named several advantages of the unit:

- (a) the Big Valley communities would be assured of national forest timber in the future; (b) definite plans could be made for financing public and private facilities and the ownership of property with reasonable assurance of security and economic stability; (c) present employment opportunities should remain steady or possibly increase; (d) the tax base should remain steady (Farr, 1949:3).

The Regional Forester emphasized at the hearing that “...The purpose of the Unit was not to protect any one operator but, rather, to protect and maintain the stability of the communities in the area (Farr, 1949:3).” Still, there was some concern expressed by two individuals at the time of the establishment of the unit that the unit was primarily for the benefit of one operator in Big Valley (Rector, 1949).

Basic Layout

The Modoc National Forest covers 1,654,392 acres, with 83% in Modoc County, 9% in Lassen, and the remainder in Siskiyou County. Out of 117,459 productive acres

within the area of the unit in 1950, 82,185 were National Forest Lands, and the remainder were private. Eighty-four percent of the timber volume in National Forest ownership was ponderosa pine, with the remainder being white fir and incense cedar. Table 6 shows the extent of the wood products industry in Big Valley in 1950.

The original policy statement for the unit required that “not less than 80% of all national forest sawtimber sold in the Unit must be given primary manufacture within the Big Valley community...(Policy Statement, 1950:1)” Entry into the unit by new firms was permitted. The timber was to be offered on a competitive basis using standard Forest Service appraisal methods. The sawtimber budget was 9.1 mmbf.

Table 6: Big Valley Wood Products Industry, 1950

Sawmills and Logging Operations, Big Valley:

Town	Company Name	Daily Milling Capacity (MBF)	Daily Logging Output (MBF)
Adin	Edgerton Brothers Lumber Company	60	n/a
Bieber	Finney Logging Company	n/a	300
Bieber	Kleihorn Lumber Company	25	25
Lookout	Potter Lumber Company	12	12

Source: Forest Products Industry Directory of Western North America, 1950

Past Reviews

In 1956, a cover letter from Region 5 to the Chief of the Forest Service that was sent with the Modoc National Forest’s summary of the status of the Big Valley unit stated the following:

In summary, it is our opinion that the Big Valley Unit can hardly be accepted as an absolute essential to the stability of that community and that normal timber management procedures would have returned considerable public benefit [higher bids on the timber] without serious disruption to many persons. It seems also quite obvious that the Edgerton Brothers Lumber Company has unquestionably been the primary beneficiary of the Unit.

On the other hand, the Unit, because of its small allowable cut, can hardly be considered as disruptive to other areas and there has been no open sentiment for abolishment of it, or major revisions of the Unit (Correll, 1956:2).

The first formal review of the unit was completed for the period of 1950-1958. Harvey Mack (Division of Fiscal Control) and Fred Stillings (Division of Timber Management) (no date) conducted a review of background documents, an on-the-ground examination of the forest and comparative sites, interviews with local parties, and a comparison of population and employment in Big Valley and two communities in Siskiyou County, California.

Mack and Stillings noted that Modoc and Siskiyou Counties experienced large population losses in the eight year review period. They attributed the losses to reduced logging after the bulk of available private timber was liquidated, and the replacement of steam with diesel locomotives. Nubieber lost 61 of its 70 railroad employees.

By 1958, with improved highway systems, there was already concern about residents of Big Valley shopping in Klamath Falls or Redding. Private timber was essentially logged out by 1952, and was mostly milled in Klamath Falls. From the reviewers' descriptions, it seemed as though pressures from large changes outside the unit were quite evident in the early days of the unit.

The community of Adin has remained rather static for many years. Most of the houses and other buildings are quite old but are of a permanent nature. At the same time, a number of buildings and yards are poorly maintained reflecting very little pride in the community. Commercial facilities are very limited and are of the general store nature (Mack and Stillings, ND:6).

The reviewers stated that there was little hope to expand the existing lumber and agriculture activities in the area, and that, given the remoteness of the valley, there was little hope of attracting other businesses. Big Valley also apparently had less favorable climatic conditions than the comparison communities:

Because of the relatively small volume of timber available; because it is a poor agricultural area; and because there is very little potential for other employment and income, the Big Valley community has a continuing struggle to maintain a reasonable standard of living (8).

Mack and Stillings found that over half of the economy was supported by the lumber industry, given employment levels in lumber, agriculture, and the railroad. Big Valley was found to be the most dependent of the comparison communities. Big Valley lost 19% of its population (1,796 to 1,447) and 32% of its businesses (59 to 40) between 1950 and 1958. Three of the businesses lost were mills, although one new molding plant was built in Nubieber. Much of the employment in the lumber industry at the time was seasonal, based on weather conditions. The mills operated from six to nine months a year. The authors concluded that "...the timber available within the Unit is not sufficient to fully develop and support a progressive community (9)."

The reviewers' recommendation was to continue the unit without major change on the grounds that:

- Local public opinion favored it;

- The existence of one of the local mills had established a favorable market for Forest Service salvage sales;
- The unit provided a comparison for other non-unit communities;
- The reviewers believed that the unit could not be evaluated over a short period of time;
- The molding plant provided additional jobs and opportunity for local remanufacturing; and
- The major mill in the area had recently changed ownership and the new owners planned to increase production by bringing more logs in from outside the unit.

The authors' final conclusion was the following:

Major adverse economic changes have been experienced throughout the entire Modoc County area during the life of the Big Valley Federal Unit. These changes have been of such magnitude that they tend to eclipse much of the probable stability influence afforded by the Unit. It is therefore difficult, if not impossible, to evaluate its true value. Now that the economy is more stabilized relative to the physical potential of the area, its effect can be more adequately measured during the next five to ten years (21).

A second review was completed for the years 1959-1963. Following a similar methodology as that in the first review, Stillings (no date) presented descriptive information, including a brief history of the unit, and an accounting of the events within the unit for the years covered.

Changes during this time period included a further loss of 3% of Bieber's population and a 24% increase in Adin's population. A new mill opened in Bieber in 1963, but it had not been in business long enough to reverse the population loss there. The new mill reportedly located in Bieber because of the unit. The growth of Adin was attributed to stable employment at the mill there. The employment at the mill was now described in this review as "yearlong." Overall, the valley experienced a 3% loss in population. The third mill operating during this time was in Lookout. Stillings recommended continuation of the unit for the following reasons:

- It appeared to have a "stabilizing influence" in the valley, especially in Adin;
- Public opinion inside the unit and in the surrounding area was favorable;
- The local mills provided a reliable market for salvage material; and
- The new mill in Bieber provided for competition within the unit.

A third formal review was done for the period 1959-1974. Burton Clark (Timber Management Staff) and R.E. Lund (Timber Staff Officer) (no date) did not outline their methodology, but it appears that they followed similar procedures as those outlined for the

previous review. Two sawmills were still in operation in 1974, one in Bieber¹ and one in Adin. The annual allowable cut for the unit was raised from 8.3 to 8.8 mmbf in 1962, while the average production of the mills in the late 1960's and early 1970's was 21 mmbf, and the stated capacity of the mills was 30 mmbf.

The reviewers noted that outside sources of logs were essential to the mills. Once again, the reviewers stated that the isolation of the valley was a barrier to the establishment of new industries. Clark and Lund's summary did not differ much from that of the previous reviewers. The one exception is that they noted a shift towards more small log production from the forest, and they were concerned that the local mills were not able to process this type of material. The reviewers recommended that the policy be amended to allow sales to be offered outside the unit if no bids are received within the unit. This change was recommended in an effort to increase utilization of small materials and was seen as a "forced incentive" for the mills.

A review of the unit in the 1980's was done as part of the forest planning process. A public hearing was held in 1982 to discuss the future of the unit, and public opinion favored continuation of the unit (Weinmann, 1984). The Forest Service found that the unit was operating smoothly, and had no recommendations for modifying the policy statement. It was noted that bid ratios were higher outside the unit, indicating that the unit had an opportunity cost to the federal treasury (Bradley, 1984).

The most recent review was conducted in 1992 ("Resume...", 1992). The Forest Service compiled a "resume" for the unit, containing similar data to that of reviews done in the past. The report stated that the mills in the unit (two were operating at the time) were not equipped to handle significant supplies of small logs, and that the sales over the next 10 year period were expected to be mainly commercial thinnings of small logs.

The sawmills in Big Valley employed 101 people in 1991, a level similar to that in the 1970's. There was also a small molding plant in Nubieber employing 14 people. The total number of businesses in Big Valley had remained the same from 1974 to 1991, but there had been a shift from Adin and Nubieber to Lookout and Bieber. The Forest Service reported again that Big Valley was, and was expected to continue to be, dependent on agriculture and wood products. The community's isolation from large markets was identified as the principal deterrent to other types of business development. Table 7 shows a summary of sales in the unit through 1989.

¹ Main Industries purchased the mill in Bieber in 1968 (Charter and Lund, ND). This is the company that is still in operation today.

Table 7: Big Valley Federal Sustained Yield Unit Sales, 1950-1989

Years	Total mmbf
1950-1959	64.0
1960-1969	66.0
1970-1979	120.7
1980-1989	107.8

Source: U.S. Forest Service, Modoc National Forest, Big Valley Ranger District. Adin, CA.

Current Situation

The 1991 Land and Resource Management Plan for the Modoc National Forest called for an ASQ of 9 mmbf in the Big Valley Federal Sustained Yield Unit, out of a total 45.5 for the entire Modoc National Forest. The ASQ was down 33% from 13.5 in the previous plan period. The reduction was a result of provisions to meet preservation and biodiversity objectives on the forest (Modoc National Forest, 1991b). Since the plan was completed, the District Ranger has stated that a short-term increase in harvested volume during the early 1990's due to high levels of tree mortality would probably result in reduced offerings during the rest of the 1990's (Wheatley, 1995).

An ASQ of 9 mmbf accounted for only 23% of the reported mill capacity (two mills were operating at the time). The plan documents reported that earlier public hearings regarding the unit "indicated that the timber base supplied by the Unit was essential to the mills in the Unit (Modoc National Forest, 1991a:3-80)."

Today, there is one mill operating in the unit, Big Valley Lumber Company. The capacity of the mill is approximately 40 mmbf per year. Big Valley Lumber also operates a remanufacturing facility in Adin that turns furniture squares. It employs 13 people. They also own a facility in Nubieber that is currently used to load chips produced in Bieber and the company's plant in Burney¹.

The 1994 policy statement does not look much different than the policy of 1950. It still requires that 80% of sawtimber be processed within Big Valley. The policy defined primary manufacture as "when, as a minimum, logs have been cut into rough green lumber containing the various dimensions of lumber usually produced by the sawmills in the Big Valley area (Policy Statement, 1950:1)." An explicit statement was added to the 1994 policy excluding cull, or fiber, logs from the requirements of the unit.

¹ Source: Big Valley Lumber Company. Nubieber, CA.

V. COMMUNITY ASSESSMENTS

The community assessment portion of the interviews contained two sections: (1) questions about the health of, or conditions in the community, and (2) questions about community capacity. The following sections summarize respondents' answers to those questions. Unless otherwise noted, all data in this chapter is based on interview results. Excerpts from interviews are provided as illustration¹. The names of respondents are omitted to maintain anonymity².

THE HEALTH OF THE COMMUNITIES

Lakeview and Paisley

General Description

Respondents described Lakeview and Paisley as small, remote, conservative, close-knit, self-reliant, and inhabited by "quality people." They also described the communities as friendly, great for raising kids, quiet, and uncomplicated. They tended to describe it in terms of people, rather than physical features. But they also described it in terms of the industries or job opportunities--timber, agriculture, and government. Some respondents also mentioned the government presence in terms of the large amount of public land ownership.

A very, very pleasant place to live. A very, very friendly community. Real open and welcoming community. A place with good neighbors and good schools and good small town values (02057).

It's a relatively close-knit, independent, self-sufficient community. The things that we have here are because we determined that we want to have them...if you want a little league program, then you best be willing to be a coach...It is a place where you can become involved (01023).

Some respondents focused on changes when they described the communities. Changes they identified included a downturn in the economy, more young people leaving, an influx of retirees, an increase in government employment, and a more transient workforce.

¹ The use of "some" respondents indicates more than one respondent. If a topic was discussed by only one, or by most of the respondents, that was indicated in the text.

² Reference numbers following excerpts are there so that the researcher can note the location of excerpts in the transcripts.

Some people interviewed had lived in both Lakeview and Paisley. Most people seemed at ease talking about either community. A lot of respondents made reference to the county, rather than to specific communities. One respondent even stated that "Paisley is a part of us (Lakeview)."

Social Conditions

When asked about social conditions in the communities, many respondents spoke in terms of economic changes that they saw as affecting the social structure of the community. Some respondents stated that they were concerned with changes they have seen related to the loss of higher paying jobs. Many felt that this loss had resulted in a loss of the "blue collar backbone" that had existed. They also felt that the availability of lower paying jobs had brought a more transient workforce to Lakeview. Some have perceived an increase in poverty. People in both communities have been saddened by the mill closures and the related suffering in the communities.

...the community has changed socially, because those higher paying jobs are slowly leeching out of the community from the timber industry (02150).

We noticed the caliber of the people who have come in over the last five years has changed some. We are getting more of the transient type people coming in here and working (02139).

...I think we're going through a state of flux...it's been a relatively close, very tight community, and...we have had an influx of, I don't want to call them outsiders, but...non-natives...And I think we're learning to deal with that, which is new. I think we're seeing more minorities in this county, and community. That I think is positive; it forces us to deal with questions of how we deal with each other (01026).

Overall, respondents had very positive things to say about the social fabric of their communities. Many people are involved in the community. There are active service clubs, churches, emergency service volunteers, and annual community events that bring people together. Many of the respondents were proud of the support that people give one another, and the positive relationships that have been built over time in the communities.

Economic Conditions

When the interview turned to a discussion of economic conditions, people's responses became less positive. Changes in the wood products industry, coupled with low cattle prices, and a loss of timber receipts have people worried. Unemployment is high, job opportunities are scarce, and young people are leaving.

I think economically we're hurting. Primarily because of the timber thing--we've lost two sawmills and we're down to one, and that is not a good sign (01172).

The economy has really changed in Lakeview. It used to be the guys who worked in the mills were the guys driving new pickups, were the guys doing really well... And nowadays the guys in the mills, they make good money, but they don't make enough money. So you can see they're all driving older rigs--nobody buys a new rig anymore. And it's scary, and I think a lot of that has to do with the fact that they don't know from day to day if the job's secure, where it used to be--if you went to work in the mill, you were looking at 30 year[s]...(01083)

Respondents mentioned that there had been a few normal ups and downs in the past, but they generally thought the economy had been stable. They felt that this stability had been lost in the last few years, and that the loss was related to federal land management changes.

About 1960, at the top of the lumber industry's business, livestock were generally very good, a few little ups and downs but that's normal. We had one or two other businesses. A uranium mine came in, it was good for a few years. It wasn't good when it left from the standpoint of that the towns were overbuilt, the houses and so forth. Since the change in the timber industry, we have just struggled to maintain ourselves (01152).

...from a historical standpoint, everything had bounced along fairly well up until basically I would have to say '90 or '91. And then all of the sudden it went from consistency to inconsistency as far as forest management outputs... That related directly back to things we see in our county--the employment issues, closure of the mills--those issues, I think they're all directly related...(01022)

Timber, agriculture, and government are seen as the foundations of the local economy. Some respondents mentioned that there is a small amount of tourism, and that the influx of retirees has introduced income into the area. Others mentioned that government employment, long term ranch ownership, and the presence of locally-owned small businesses added to the stability of the economy.

Well again I think it has a pretty strong timber and agricultural base. Even with the closing of the mills and stuff I think that's still where the strength of the economy lays. The other sector that continues to grow is government, but I think that the foundations of the county are still agriculture and timber. Tourism is seasonal (02116).

Despite the recent losses in the economy, some respondents reported that the communities have not experienced a downturn of the magnitude expected.

It's staying fairly healthy, more than what I anticipated. I anticipated a little bit more of a downturn than what we have had. But it's stayed reasonably well. But there again one of the reasons for it staying stable is

there was quite a backlog of private timber that's being harvested, and of course will be used up if we can't get some more public timber back on line (02105).

Economic conditions--that's been a real struggle. With the closure of the mills, and the loss of jobs in this particular area, that's been real tough...It has put a strain on [business people], but it hasn't been a devastating strain...(02139)

...business wise...we're holding our own, doing all right. I don't see us going downhill. Something's doing it, but I can't pinpoint what (02172).

Overall Community Health

After discussions about social and economic conditions, respondents were asked about the overall health of the communities. Responses were mixed and seemed to depend on whether respondents placed more emphasis on social aspects (positive) or economic conditions (negative). Some people felt that the health of the communities was in flux, or that the communities were "on the verge" of becoming unhealthy.

I think it's in a time of flux and change that we're waiting to see...what's going to happen. [Economic health] I think [is] at a point of change, and it revolves around public land management...I think you'll find some people saying, no it's not [healthy], a little doom and gloom; others will say, no, we still have a lot of benefits and things here and we can't be doom and gloom... The bottom hasn't fallen out of [housing prices yet], which means there's still a need for people to be here. So it think it's going through a state of change. I don't think it's strong, like we're seeing Klamath Falls and some other communities...But it's not [disappearing] (01026).

I feel as long as we can maintain the economy, this is an excellent place to live (02031).

Respondents who felt the communities were unhealthy focused on economic conditions. They were concerned about:

- A lack of assets the communities have to draw other businesses;
- The threat of losing federal jobs;
- The loss of mill jobs;
- The replacement of higher-paying mill jobs with lower paying ones; and
- Residents shopping in Klamath Falls rather than locally.

Others noted that despite an economic downturn, many people were working hard to stay in the area because of the quality of life there.

I think that the people that have lost their jobs are still reluctant to leave because they like the community, this is where they want to raise their kids...(02117)

Those respondents that felt that the communities were healthy tended to focus on the social aspects of the communities and on the facilities found in the communities.

Lakeview is a healthy community as it is right now because it has lots of volunteers and the people that live here make their own activities and if they want something they just get together and do it...(01123)

The quality of life. I love living in Lake County. I have no desire to live anywhere else. And it's not because it's a great place to make money. It's not a great place to make money. It's a great place to live and have a family... We've got neighbors that know their neighbors and look after their neighbors (03003).

I've traveled a lot. And our facilities here as far as schools, hospital, emergency services...fire department...the airport we have--all of this is much better than a lot of communities this size (01099).

Definition of Health

When asked what they thought made a healthy community, respondents discussed:

- People--community involvement, volunteerism, how they treated one another and how supportive they were of each other;
- Good facilities in a community--schools, medical care, and services; and/or
- The existence of an economic base, or industry, and associated job opportunities.

Involvement. Citizens that have been there for more than the short term, so to speak...A stake in it (02118).

I think what makes it a healthy community is all of the services that are provided...We are blessed to have a hospital that services our area so we don't have to transport people out. I look at the school. And having had children go through the school system, I think along with the [scholarships], that's a part that is a real boon to our community, and that gives the opportunity for the youth to go beyond high school. I look at the business community, most of the goods and services I want are here. I look at social activities, the religious aspects, there are many churches in our area. I think we have a real good balance in our community...(02085).

I think the healthy community is something where people aren't always having to worry about their future. Where they have the confidence that there's going to be an economic base here for our businesses (02140).

Big Valley

General Description

Residents interviewed described Big Valley as small, rural, and remote. They considered the valley a good place to live and raise a family. However, respondents also felt that Big Valley was changing in negative ways. Changes experienced by the respondents included losses in the wood products industry, subdivision of ranches that had been family-owned for years, and a shift in the “type” of people moving in to the valley.

Some respondents talked about major changes in social interactions between people. Within their lifetimes, some people have seen the days of taking horse and buggy to visit neighbors in the valley, and have seen the advent of television, telephones, and better transportation. Changes in technology have altered the way that people interact with one another, and are seen as being a factor in the reduction of social gatherings in the valley. Still, there are some service organizations (e.g., Lions Club in Bieber and Adin) and churches, as well as social activities that are associated with the schools (e.g., supporting sporting events).

Social Conditions

Although many respondents felt that the overall population of the valley has remained about the same over the last four or five decades, they identified a shift in the “type” of people that make up the population. Retirees are one group of newcomers to the valley. They are sometimes referred to as “city folk,” and are often seen as having values different from the traditional rural values of long time residents of the valley. Not all “city folk” are retirees. Some were also referred to as “gentleman ranchers” who have purchased cattle operations and are part-time residents.

Another group of newcomers to the valley are poor and were described in a very negative light. Respondents described the valley as a place where people move for the welfare benefits and low cost of housing. Some respondents associated recent drug problems in the community with this group of newcomers.

There are people moving in here from other areas, but they’re not moving in here to work. They get on welfare or retire. Get away from metropolitan areas (01032).

This is probably the wrong thing to say, but there’s sure a lot of welfare. A lot of people don’t want to work that can work (01010).

Lassen County I feel is the welfare capital of the world, and because we are remote there’s a lot of welfare here. There’s no growth per se here. There’s a lot more enrollment in our schools, but that goes right back to the welfare in our area. People that are moving in, coming in to the area, are on welfare. It’s not people that have been here that have worked and been laid off that are on welfare (01021).

It's like Nubieber used to be a real town, now all it is is a sanctuary for welfare recipients (01032).

Economic Conditions

Most respondents described economic conditions in the valley as being poor. The valley has lost many businesses in the last 50 years, and few job opportunities remain. Those respondents that did not describe the economic conditions in an entirely negative light said that the conditions were probably just similar to other rural areas.

[In the 1940's and 1950's] it was a working class community. I'd say the average age of people here were mid-30's. Now it's more of a retirement community. When I was a kid, there was a sawmill in Adin, there was a sawmill in Bieber...and there were several sawmills in Bieber before that, I guess. Lots of logging. A lot of the private land...When I was a kid, in town there [were] three gas stations, a couple of restaurants, an old hotel, and apartment building--there was a lot going on. A lot of work. Now the economy is really depressed. Not that much work. There's the Forest Service and state jobs, schools. A little logging going on, but not much. Just the one sawmill left in Bieber...(02026).

Right now, probably just like every place else. Everybody's pretty careful and things are kind of down, not just in the lumber business, but just about everywhere. Keep looking for a light at the end of the tunnel, but nobody sees it right now (02039).

The economy is dependent on resource-based activities: ranching and farming, logging and wood products manufacturing, land management agencies, and a nearby mine. The mine is expected to close within about two years.

Very dependent on any type of resource-based activity. 100%. And I mean everything we do here starts from the soil and moves up through...There's mining, there's agriculture, and there's timber. And then everything else that's here is a result of those activities. Tourism is very minor in this area. There [are] some seasonal attractions here like hunting, fishing, but not in a big way. And so people's ability to sustain a living here are based on the resources that are produced in this area. Schools, medical, all the services, are all dependent on what happens with the resource (02015).

Overall Community Health

Respondents were asked if they felt that Big Valley was a healthy community. The overall response was yes, with reservations. Respondents thought it was healthy in terms of being a caring community, helping one another, and being a good place to raise a family, away from some of the urban problems such as smog and crime. However, most

saw the health of the community changing. They were concerned about future economic problems (e.g., closure of the mine), rising crime (especially drug-related), and the influx of what has been labeled as a non-working population. Still, respondents continue to find a lot of good in their community.

There's a lot of things that make a healthy community. There's things coming in right now that are making it not very healthy. It was very healthy as far as community support, as far as the people here come to make their community a community, a success, and everyone working together, caring for the person who works for them, or caring for the person that they work for...(01022)

I think it was better before. People were a lot more confident. I don't think the community was any better as a whole--they've always been supportive of their kids, and help when they can...(02049)

It's healthy--not big money, though. You live here because you like a small community, like to hunt, fish...It's a good number of people (01029).

I think it is [healthy]. The average income is probably way down because there are very few big paying jobs. Probably average income in the valley is probably some where around \$25,000, maybe 30. I think most of the people making \$25-30,000 stay here because they like it (01009).

While most of the valley may have been considered healthy but changing, Nubieber seemed to be in dire condition. The town has lost most of its businesses.

The people have changed more than anything. They were good people when we first moved here, they were beautiful people... This town used to be beautiful...but now no one cares about anything... people throw their garbage out in the street or around the buildings or anywhere...(01016)

Definition of Health

Respondents were also asked what they thought made a community healthy. The main theme in Big Valley was people helping each other, and being involved in the community. Others also mentioned the need for a diverse economic base.

COMMUNITY CAPACITY

Respondents were asked about the aspects of their communities that related to physical infrastructure, human capital, and social capital. Examples given for physical infrastructure included sewer systems, land available for development, distance from a larger urban area, size and diversity of businesses, and access to financial capital. Human capital was described as the skills, education, and abilities of the residents of the community. Respondents were asked to comment on the workforce and on local

leadership. Social capital was described as people's willingness and ability to work together for community goals. Respondents were asked how people did or did not work together on things that were for the benefit of the community¹.

Lakeview and Paisley

Physical Infrastructure

Transportation

The Lakeview area has a county-owned railroad that runs from Lakeview to Alturus, California. The county had to lobby to change a state law in order to allow them to own land outside of Oregon. The railroad is seen as a big asset for the wood products industry, and therefore for the local communities. Lakeview also has an airport, although it does not have regular service; it is served by charter flights.

While the county roads were considered excellent, the state highways that run through the county were a source of frustration for many respondents. Of particular concern to many was highway 140. It is illegal for trucks over a certain length to drive on portions of this road going east out of Lakeview. Respondents felt that this situation was a major hindrance for business development. In general, the fact that the communities were not on one of the major highways (interstates 5 or 84) was also seen as a limiting factor for business development.

Physical Surroundings

The Lakeview area was described as a geographically diverse place, surrounded by desert to the east and forests to the west. Both Lakeview and Paisley have abundant opportunities for outdoor recreation on public lands. There is also a ski hill near Lakeview that is run by local volunteers, and a golf course close to town.

Sewer and Water

The water system within Lakeview has excess capacity. The sewer lagoon system is scheduled for an upgrade and expansion. Lakeview has secured funds for the upgrade. Areas immediately outside of Lakeview, including the industrial park, are not serviced by water and sewer. This was seen as a hindrance to development. Some respondents mentioned that the community has debated different annexation options to expand the current service, but had not come to any agreement on the issue.

A good example is we have an incubator building in town that sits at the north end of the industrial park. A lot of land is available for development,

¹ Definitions and questions related to community capacity adapted from Doak and Kusel, 1996.

but there's no sewer and water out there... The physical infrastructure within the town itself is really in good shape, so it's more that there's not a whole lot of land available for development within the town (01048).

Paisley has excess sewer and water capacity. The community upgraded its sewer system about five years ago.

Financial Capital

There are four banks in Lakeview. They do not handle loans locally. Some respondents felt that financing from banks or other sources could be secured for projects that were well planned and could show a reasonable return on investment. Business people had to be willing to do a lot of preparation to get the financing, something that they may not have been used to doing. Others respondents stated that no banks are interested in agricultural loans today.

It's difficult to obtain financing here in Lakeview, even though we've got major banks in the area... None of the major decisions are made here, period. If you apply for any sort of loan through those main financial institutions, you don't deal here... In the past, when I first got here, I'd be able to go up to the bank, and practically on my signature, borrow \$20,000. Now it would take me a couple of months to be able to do that, going through all the steps (02154).

Funds are tight in Lakeview and Paisley. Measure 5 (a property tax limitation measure) and the reduction in timber harvest receipts have combined to put pressure on local public services. Some respondents were concerned about the ability of the communities to maintain or improve their infrastructure.

I think one of the limiting factors in some of this is getting back to a tax structure--land ownership and taxable bases... for infrastructure to grow there has to be a strong basis, foundation, for funding of that infrastructure. And, you know with 22% private ownership on which to base a tax structure, that's pretty tough... And we're dealing with that right now with county receipts and revenues and such (01028).

On the other hand, residents of both Lakeview and Paisley, or the county as a whole, have been willing to pay for community services, even in tight times.

I think we have a tremendous support for the school system. I think we have a really very good library system... Especially for a county the size of this one--and again those things like the extension and the library--the county has passed a tax base to support those at a time that things were plenty tough then... And I think that people want to work to keep as much of what they have that they see value in, that they can and they are willing to make some sacrifices to do it, which I think is pretty remarkable to get

that kind of support in a community that really is taking a hit economically (02119).

The boarding school project in Paisley is an example of how residents have worked to keep what they have. Paisley suffered losses in school enrollment when North Lake County built a high school, and again when the mill in Paisley closed. A new state law requires school districts to provide all grades, K-12. So, residents feared that they might not only lose their high school, but their entire school district. To combat their problems, residents decided to construct a boarding school to attract out-of-town students.

In the past, both towns have also relied on the benevolence of the sawmills, particularly Fremont Sawmills. For example, Fremont has purchased hospital equipment, emergency services equipment, and donated lumber for local projects.

Paisley had a bad blow with the sawmill shutting. Not just because of the tax base and the other financial parts, because probably the most significant part of the loss is because of the commitment of the company to the community with projects (03006).

Other

Respondents in Lakeview were very proud of their hospital and the long care facility incorporated with it. Paisley respondents were also proud of their Emergency Medical Technician (EMT) volunteers.

Limitations identified in Lakeview included a lack of housing, the remote location (and associated transportation costs) of the community, and the fact that the community does not have fiber optics (they have digital service). These were also seen as limitations in Paisley. In addition, respondents felt that land for development was limited in Paisley.

Overall, Lakeview respondents felt that there was room for considerable growth in Lakeview. However, there is disagreement among community members regarding whether or not growth is desirable. Paisley respondents felt that there was room for "realistic," small scale growth that was appropriate for the size of the community.

Human Capital

Workforce

Responses regarding the skill level of the local workforce were mixed. There are a wide variety of professionals in Lakeview that provide services to people in Lakeview and Paisley. Some felt it was easy to recruit people from the outside to fill other jobs, given what the area has to offer. Others felt that they were limited to what was available, given the current economic situation. Regardless of skill level, neither of the communities have especially large labor pools from which a new business could draw.

The people for the most part in this area are trainable... The force of people is limited. If you had a business that wanted to come in here (Lakeview)

and hire 500 people, it would be very tough to do. But if you wanted to hire 50-100 people, you probably could (02143).

We (Paisley) don't have the workforce in town to move in a large remanufacturing plant that would employ 100 workers... We do have people in the community that are available and capable of taking jobs in a shop or restaurant or owning or operating a motel, or any of those services we might be able to operate in the community (02059)

...maybe the down side if there would be one would be our isolation, it's not as if you could draw from another bedroom community (02087).

Traditionally, many skills in the workforce have been related to the wood products industry. Some laid off wood products workers who were close to retirement have stayed in the area. The younger and the more highly skilled have tended to move out, leaving some respondents concerned about the skill level of the available labor pool. The newer generation of wood products workers in the secondary manufacturing area has tended to be more transient than in the past.

Not bankrupt, but moving in that direction. There is an exodus of skills, particularly at the upper level (02044).

There have been problems recently in keeping good, skilled people in logging occupations. This has occurred for several reasons: the work is seasonal; it is hard for employers to compete with the benefits and wages provided by other employers, particularly by government agencies; and the state and federal governments have been retraining workers, for work outside of logging.

One human capital issue that existed both in Lakeview and Paisley was the government workforce. These employees were seen as skilled and educated, and as an asset to the communities. However, respondents were somewhat concerned about the transitory nature of the government employment.

One of the good things with the federal agency is they move people through so fast, that there are some well educated, experienced people that move through the agencies. I guess sometimes they don't really stay long enough for us to really take advantage of what they have to offer (01138).

Respondents felt that the opportunities provided to youth by the scholarships in both Lakeview and Paisley were an incredible asset. However, many were concerned that the youth who were educated were not able to return to their community because of a lack of job opportunities.

...we send so many of our kids out--educate them, send them to college, and then they're gone, because there's nothing for them to come back to...(02033)

...Lake County's greatest export are its children...because Lakeview is so stable and you're talking about a number of smaller businesses that are passed on from father to son maybe, there's not enough to draw back highly educated kids (02157).

There are exceptions to this situation. Many of the local professionals were from the area and returned after their education. Most people who were able to return to the area were able to do so because their family had an established business. However, respondents identified two concerns related to local small businesses. One was that some small businesses might be spread too thin among family members as other job opportunities become scarce. The other concern was that, given the current economic outlook, businesses might not be taken over by younger family members. The result would be a loss of some community goods and services, and increased spending outside of the local area.

Leadership

The mayor, town council, and county commissioners are the formal leaders in Lakeview. Sometimes the community has had to look outside for expertise to help them complete projects, such as their strategic plan. Some respondents criticized their leadership, others praised it. Overall, responses were not highly negative or positive. The biggest issue regarding leadership was disagreement about growth, about where the community ought to be headed.

There's a tendency a lot of times in that kind of mentality to make a place into something that it's not...I can see that happening here. And one of Lakeview's greatest strengths is what it is...(02122)

I think that in the community there's a sense that--they see people come in with all these great ideas and they sit back and wait--if it's a really great idea, it will stick. So in that sense, a very conservative community...(02161)

...we have a mixed bag, so to speak. We have a...non-growth aspect of our community. We don't want a certain type of people in our community, supposedly. And I think we have the other part of our community who recognizes we need some of these people to have the growth that we need. But overall, the leadership I think is quite good in this area (02143).

Leadership within the town of Paisley was not a large concern. Paisley is incorporated and has a formal leadership structure (e.g., they have a city council), but its small size does not warrant a large leadership structure. Aside from looking to the county government for leadership, Paisley also looks to local service organizations and business people.

Social Capital

Volunteerism was considered one of the strongest aspects of both Lakeview and Paisley. Newer residents reported that it was higher than in other places that they had lived, urban or rural. Most respondents were able to quickly cite several examples of community projects that were a source of pride. The county fair and 4H or other youth activities were especially important to them. No respondents had any negative statements regarding residents' abilities and willingness to work together for community goals. Respondents were proud of the fact that things were often accomplished because people volunteered together.

That's probably the greatest strength...in all of the communities in Lake County...the people that live in the various communities in Lake County are extremely concerned about their communities, about their viabilities, and the health of the people who live in them (03009).

I would say there's few communities that I think are much stronger than Paisley. The example I use--the community hall, after the fire...they were left without any building that was large enough to hold meetings and things like that. And the community hall was built with largely donated supplies and largely with donated labor (02060).

I think we're very fortunate. In my opinion, really all you have to do is identify something and you're not going to have any trouble getting people to band together and get behind it (01154).

The service organizations are very active. Respondents often cited many of the Lions Club's projects, including the community swimming pool, school sports fields, and work on the fairgrounds facilities.

Support from the mills has played a major role in these communities. Their contributions not only included the community equipment as described above, but also the purchase of 4H animals, the establishment of the largest educational fund, other contributions to youth, and the donation of lumber for community projects. Some respondents noted that as the wood products industry began to suffer, the mills were not able to give as much as in the past.

Other

The last question related to community capacity asked if there were other things effecting communities' ability to adapt that did not fall into one of the three categories discussed. Several people in the Lakeview and Paisley area were concerned about the role of the federal government there.

The greatest single control placed on the dynamics of this county for growth or for creation of jobs and employment is very strictly tied to the resource base, to the ground. That's where all the wealth of this county is derived from--the ability to grow and to provide commodities. It will

always be dictated...by rules and regulations of the federal government. That is the single largest contributing factor to any growth or diversity in the county is what the government rules and regulations will allow to be done with the land (03010).

Big Valley

Physical Infrastructure

Physical Surroundings

The main asset of the valley that respondents identified was proximity to natural resources, particularly timber. The valley has many recreational opportunities, including fishing and hunting. It has a large wildlife refuge, which some residents hope will prove to be a big draw to the community.

Some respondents felt that the proximity to the forest was less of an asset than it had been. They stated that the timber is gone, either harvested or dying from the effects of drought and insects.

The timber's been cut back so bad in the last few years. Pine country-- they've cut all the big timber, so all that's left is the stuff that isn't [very] good timber (B01037).

They've got a bunch of sales on this year, more salvage than anything. But when that's all gone, I don't imagine there'll be all that much timber harvested, green timber. There just isn't that much here (B01037).

Sewer and Water

The condition and type of water service and sewage treatment varies by town within Big Valley. Bieber has a water service and a sewer system and as of 1990 had capacity for expansion. Adin residents obtain water from private wells and the community has been unable to secure funding for a water system. Adin has a sewer system that could handle some local growth, but the system has very serious infiltration problems (Steffen Robertson and Kirsten, 1991). Nubieber has only septic tanks and private wells. There are problems with the condition of the septic tanks and the wells, including problems with overflowing tanks during times of high water. There is currently a moratorium on building in Nubieber. Lookout also has only septic tanks and wells, but has not experienced problems like those in Nubieber.

Financial Capital

There is one bank in Big Valley; it is only open two hours per day. Decisions on loans are not made locally. Access to financial capital in the local area is limited. Respondents also felt that the community has had a difficult time garnering support to

improve their infrastructure, given that the valley is split between two counties, and that the towns are relatively far from their respective county seats.

One of the problems that we have is that Big Valley sits on the corner of two counties and it's split right down the middle...it creates all kinds of problems for us. Most people are cynical about the fact that services from the two county seats are inversely proportional to the distance to the county seat, and so in terms of getting a whole lot of other service at the county level, which is the only government at the local side, it's pretty limited (02004).

Other

There are a few small, locally owned stores in Big Valley. One major problem for local retail businesses has been the competition from larger operations in Klamath Falls and Redding. The improvement of transportation over the years has meant that more people have traveled to large cities to do the majority of their shopping. This has made it difficult for local businesses to remain viable.

Part of the problem for businesses here are things like Klamath Falls and Redding. Walmart, KMart and big stores like that. People will drive 100 miles now to buy things that 20 years ago or 30 years ago they just bought right here locally...that's why businesses are really having a tough go (02028).

We have good roads and access to big cities--that's probably what happened. Bieber at one time was bigger than it is now. But that's when the roads were bad and the cars weren't as good and it was a chore to go 100 miles to go shopping, so they shopped at home. And they don't do that anymore. They jump in their car and drive 100 miles...That's a problem--a lot of people shop out of the area. If they shopped at home things would be better (01053).

Assets respondents mentioned were good schools, a new medical building that houses expanded services, and the recent addition of cellular phone service. Many limiting factors were identified by respondents. They included the valley's remote location, a lack of land available for development, and a shortage of housing.

Human Capital

Workforce

Responses regarding the quality of the workforce in Big Valley were mixed. Some respondents felt that there were a wide range of skills and education levels in the community. Some who had been in hiring situations had found it relatively easy to find good people, although they might have had to train them. Others felt that jobs requiring

higher skill levels had to be filled by outsiders, and that it was difficult to find good help locally even for unskilled work. There was also some concern that young people from the area that became educated had to leave the area.

Well, one of the biggest complaints or comments I hear from the old timers, generations previous to me, are that they continually worry that the youth of Big Valley that come up and are able to obtain something other than a high school education generally are drifting away from the valley and do not come back. And the labor pool that's here--I wouldn't characterize them as untrainable, but basically it's a much lower skill level...I hear a lot of business people complain that they have a very difficult time recruiting people that have a skill level that they want for even rudimentary kinds of jobs (02004).

I've never seen that as a problem from our perspective. Good quality people. Sometimes we have to be willing to do some training, where we take people who have got a great work attitude, a great work ethic, but maybe they don't have some of the skills, so we do a little more training than other people (02018).

The community has few "professionals" aside from those that work at the medical center. People travel to Alturus or other larger communities to hire professionals such as accountants and lawyers. They also travel for some medical services.

Leadership

Respondents felt that there were few leaders in Big Valley. Since the towns in Big Valley are not incorporated, there is no local government or other formal structure where leadership might traditionally be found. The chambers of commerce (Bieber and Adin) and service organizations were looked to for leadership. Some felt that there were a few, good, dedicated people who had led community efforts, but were concerned that younger people were not getting involved.

We probably have two [leaders] (01030).

We've got very few leaders, but they're pretty dedicated...(01011)

Well, we haven't had a whole lot [of leadership] in the last 10 years (01054).

There was one case that some people cited as an example of leadership in the past. There was a proposal in the 1970's to realign BLM and Forest Service lands. A change in land management, and possibly the loss of the ranger district office in Adin, were perceived as major threats to Big Valley. People in the valley worked together to fight the proposal, and some larger communities looked to them for advice on how to do the same.

Social Capital

Many respondents felt that the community's ability to help individuals--for example, to raise money for people in need--was strong. Respondents cited examples where community members had raised funds to help those who were ill or who had lost their home in a fire. However, there was a mix of responses regarding whether or not people were able to work together for larger community goals. One respondent questioned whether or not the community had any goals.

It's kind of weird just thinking about it--everybody just does what they do and they've done it for so many years, I guess it kind of gets to where you really don't think about where your actual community is going (01004).

If it's a fun thing, or bereavement--everyone turns out. Ordinary work--no one turns out (01044).

There are several service and other volunteer organizations in the valley. Most activity takes place in Adin or Bieber. Volunteerism was reported by some as being an important aspect of the community. Some respondents also mentioned times when the local mill had donated funds or materials to local projects.

... a lot of times when you've got community projects, it's the lack of funds that make it not possible to do. And in a community like this, you'll see people doing things for nothing. Volunteering their time to have things work out and see things happen (01023).

If it's something they believe in, people work hard for it. They'll get behind it. Sometimes it takes a little prodding...(02042).

One example of struggle in the community was the end of Big Valley Days. Last year was the first in 20 years that the community event was not held. Some respondents said it was because of a lack of volunteers. Others said that there was conflict between organizers. The community pool in Bieber provides another example of some of the struggles Big Valley has faced in terms of community capacity:

They just... raised a bunch of money and [were] able to get some matching funds from the state to put in a swimming pool. So you see those kinds of efforts that even outstretch the capacity of the local government to support them... they have no operational funds to operate the swimming pool; they're having a really difficult time keeping that going even though they were able to get the capitalization to build the pool (02006).

Some people in the community felt that the pool should be opened up to residents of adjacent valleys in order to raise funds and keep it open. Others disagreed.

...I think one of the negative things is that the people of this valley are so proud of Big Valley, there's such a strong desire to keep it as Big Valley, that in the pool it hurt, because there were people who said we should

expand it into the other valleys...But no, by golly, it was going to be a Big Valley pool. And that was the voice that won. And now that's where you are. So you can get to the point where you're so strong and so proud that it ends up hurting you (02019).

Some respondents felt that people's involvement in the community has lessened, in part because they are too busy working harder than they had in the past. The mix of positive and negative responses regarding social capital seemed to reflect the fact that many people were concerned about changes in the community, as discussed in earlier sections.

VI. RESULTS

PERCEPTIONS ABOUT THE PERFORMANCE OF THE UNITS

The following two sections contain respondents' descriptions of the performance of their local SYU, organized around common themes that emerged from interview data. Each of the two sections starts with a description of the main ideas respondents held about what the SYU had done in their community. This general description is followed by ideas about what role the SYU played in the local community. These more specific ideas fell into one of six categories: (1) intangibles; (2) the wood products industry; (3) other local business people; (4) residents of the community; (5) local services; or (6) hindrances. Unless otherwise noted, all of the information in this section was derived from interview data.

Data from the two SYU case study areas indicated that the performance of the two SYU's differed greatly. This issue is explored below, following the individual discussions of the units.

The Lakeview Unit

Main Ideas

The main theme that emerged from the Lakeview unit was that the SYU had interacted with other factors in the community to improve the local quality of life. Respondents identified many positive relationships between the SYU and local services, businesses, and community involvement. At the same time, they emphasized that the communities in the unit had many positive attributes prior to the establishment of the unit and that these attributes also had a positive influence on the local quality of life. Respondents associated the SYU with the existence of most of the wood products manufacturing in the area, feeling that the SYU had protected primary mills and encouraged remanufacturing. This provided jobs and income, which were important for other things in the community to take place.

[People were] afraid of losing that unit--because it adds stability; it's stability to the people, the area, the schools; everything that's in this area was dependent on it (01070).

I don't think the unit has anything to do with [the cohesiveness of the community]. That's a historical commitment that the people who have lived here for 100 years, maybe not quite 100, but a lot of years...(01184)

One thing is interconnected to the other, so it probably wouldn't have been as good if it hadn't been for the stability of the unit. The unit helped these things be what they are...the locality helped it be like they are, and the

people themselves, where they come from, their attitudes helped, so you couldn't say it was just the unit that did it, but I think the unit was a contributor to the school, even the churches, I think they've donated lumber to build churches, and the lodges. But the fact that it created an income for many different families and these many different families then contributed to the lodges and contributed to the churches, contributed to the schools, yeah, one has an effect on the other, definitely (02029).

Respondents also identified additional benefits of having a wood products industry that operated in a SYU, rather than a "normal" wood products industry. Some thought that the SYU had helped the mills to operate continuously, absorbing ups and downs. Others discussed the benefit to community members and non-wood products business people of knowing what level of production would be in the wood products industry, given the existence of the SYU. They did not have to worry as much about whether or not a mill would be the successful bidder on a particular timber sale. This was all in contrast to the ups and downs and the uncertainty respondents felt non-SYU communities had experienced.

Intangibles

Three intangible benefits were found to be associated with the Lakeview unit: pride, security and improved community relationships. First, the SYU was a source of pride for people in Lakeview and Paisley. People there enjoyed the knowledge that they had something unique. Some respondents felt this uniqueness gave the communities potential political opportunities.

We've got something nobody else has. That's important today (03029).

I think it's important, it's always been important and will be...because we are a federal SYU approved by Congress, that gives us a uniqueness amongst others that are communities that are similar to ours...there's only a handful...[of] communities that have been recognized for being unique, that they for some reason or another that they have this special designation. And I think that that is something that maybe we haven't used as well as we could've...(01140)

I think it...puts us on the map, where we wouldn't be on the map as much. I think the politicians know of us and understand more of who you are and I think it's helped heighten the awareness of the public lands issues. You don't feel as much like a voice in the wilderness...(01034).

Second, the SYU generated confidence, a sense of security, and a sense of comfort in Lakeview and Paisley. Some respondents mentioned that recent events related to the unit (reduced harvest levels) resulted in the loss of some of these feelings. The feelings have been replaced by stress and apprehension.

Well I believe in a very positive fashion it did [something], yes. If nothing else, it created a sense of security. When they announced that it was going to be reduced, it created a great deal of apprehension...I think people were much more satisfied, they felt more secure, in other words they always looked, and they always have looked at the trees as being our major industry. And when the unit was put into place...it made people very comfortable...(01176-177)

It's important psychologically for the community to feel like they have some control over their destiny and their community. Some stability and some sense that there is a tomorrow. And that's really what the unit's always given, is a sense that it's ours--it's our future out there growing and we know that it is going to provide for us into the future. That was really important. Without that now, you see a tremendous amount of stress in people (03020).

It's generated some level of confidence on the part of the community. The community has for a lot of years felt very secure because of the federal unit. And I think that that's been a plus. Even now...they still cling to that, knowing that things aren't the way they were but they still have hope that maybe these things will turn around and the federal unit will again function the way it did in the past. So I think it has the supplemental benefit of providing kind of a security blanket for the community (02053).

Third, some respondents felt that the SYU had created an atmosphere that allowed for improved relationships between people. This was seen especially in relationships between Forest Service employees and commodity users.

I think it not only provided for economic stability, it provided for social stability. I think the relationship of government employees, particularly Forest Service employees, and a logging and milling community--the good strong, positive relationship that we have here is in no small part due to the fact that there is an economic stability generated by the unit. There is a commitment from both sides, and we seldom see that in the way the government normally sells timber, to whomever wants to buy it, where ever they want to haul it (02065).

I think it had an effect of working together, especially in our various civic clubs--Chamber, Rotary, Lions, all those people. Government, agriculture, cowboys. They really work together. And I think that the sustained yield and the working circle really helped that situation. Because if they had any particular fights or qualms, it usually got worked out very, very satisfactorily...people had to work together. And when it did work, they had something that other communities did not have. Pride of production and pride of their own job. Both government and the workers (03028).

I think [the Forest Service's] relationship with the ranching community is stronger because of the unit--that's really stretching it, obviously there's no connection there, but when you have that stable social relationship between the logging and manufacturing community, that influences the whole community (02075).

The Wood Products Industry

Lakeview and Paisley respondents felt that the SYU had been the key factor in maintaining primary mills in the area. Respondents recognized the benefit of having this employment and income in the communities. Respondents also felt that the significance of having these mills in the communities went far beyond jobs and income. The main theme that emerged aside from jobs and income was the benevolence of the mill owners. The mills have enabled both communities to enhance their quality of life. Some respondents felt that the roles the mills played were possible in part because the SYU forced operators to take a long term view of their businesses and their relationships with the local communities.

It's a volunteer town. And I think one of the things...might be that the mills were so supportive. If you needed something you could get the mills to contribute. And Fremont still does...(01163)

Fremont sawmill and the McDonald-Collins trust fund donated thousands of dollars to the hospital...the hospital is real important, and I know the sawmill bought their x-ray machine...The swimming pool...the sawmill ...gave them money to finish it...they used to have a lumberman's feed here after round up--somebody, either American Forest Products, Lakeview Lumber or Fremont, or Adams would buy the prize steer, and through the Rotary we would have a big dinner that was from the meat, and the food and everything was furnished by one of the companies every year (01016).

...the sawmills in these communities are so important to the social link--they are the business that probably has consistently given more to the community than any other business could or would because of its size. Your hospital would have been poorer for it, your social groups would have been much poorer for it. It's just the quality of life would have been a lot worse without these sawmills. There'd be no ambulance in Paisley...The sustained yield maintaining these sawmills in this community has done a lot more than meets the eye...It shows up in a lot of ways just in the number of employees and it has meant a lot to the quality of life in the community, to both of them. I can tell you very personally that the sustained yield, keeping that mill in Paisley for the years that it was there, and making it possible to be there has helped build a quality of life in Paisley that wouldn't have been attainable (03015).

...I think that commitment to the community has been fostered and enhanced by this unit. It's allowed you to take that long term look into the future and plan on being there (03020).

The federal unit by its nature is restricting on competition for community stability. So when you do that you do have some other effects. In other words a mill can't come in and cut and run because it's too hard to start up. So when there was a major timber sale that went to an outside entity that didn't have a mill, they came in and start a mill. They started for the long haul. So you forced the mill operators when they came in to look at the long range picture (01112).

Secondary manufacturing is also important in the Lakeview area. Lakeview respondents often attributed the existence of a large remanufacturing industry in the area to the SYU. In fact, the manager of Dame Moulding (now called Woodgrain), stated in 1975 that his company came to Lakeview because of the SYU (Lake County Examiner, 1975). Still, other respondents in the community felt that the primary mills could have done more to encourage secondary manufacturing before material was shipped out of the unit.

...the primary mills were designed to give a nucleus or a base for the secondary which came in and add value to the product, instead of shipping it out to Idaho or wherever it is. They gave the city and the county and the community another added shot, which was that manufacturing. And not only that they had a couple of large remanufacturers, and then they had two or three real small guys that turn around and bought from the secondary and the primary and made additional products, which was the creativity of it, which was initially why I said I thought [the sustained yield unit] met its goal and then some. It did a great job. It was designed to create jobs--on a long term basis so the citizens could raise their family and the businesses also could feed off of that inertia, and it worked well (02047).

As I say, when we were producing large volumes of timber, relatively speaking, that timber that was sold from within the federal unit from off the federal lands, that was processed here, provided the jobs...that's why we have Woodgrain Molding, we've got a lot of these other secondary wood manufacturers in town, in part because of the policy statement required that the logs be processed beyond just drying and cutting the boards. It had to be remanufactured to the next level. So, the material was available (01052).

That's the one thing I don't think that we really did. Some of the mills that were here that had this timber probably didn't develop enough secondary uses out of that, in other words I believe they could've put in some different milling processes in there themselves. Which adds a job in Lakeview (01069).

The good part of it is that we did have the remanufacturing here; the Forest Service I don't think really did an adequate job of policing it. When there was lots of jobs and lots of timber, nobody really cared, but as the timber supply really began to dwindle, and it was evident that they had to become much more sophisticated in the way they saw logs, that means eliminating people. And what really didn't happen is to get some of those remanufacturing jobs available here, rather than just the sawmills. Some of those happened, but it wasn't a result, I don't feel of the sustained yield unit; I think it was just market conditions; I don't feel that the mills here felt compelled because of the unit to do any of those things (02091).

Other Local Business People

Respondents felt that the SYU helped local businesses because of the income associated with the wood products industry, as mentioned above. Again, the respondents believed that the wood products industry would not have been there to the extent it was if it were not for the SYU, and that it would have operated differently without the SYU. Many felt that the stability associated with the SYU--knowing what to expect year to year--helped business owners plan and make investment decisions. Some of these respondents spoke from personal experience as business owners. One of the owners stated that the SYU had the additional effect of allowing his business to play a bigger role in the community through financial contributions.

You look at the mills in the unit, and they kept operating through thick and thin. So, the unit provided not only the stability of the sales, but because of that stability to the mills, the mills continued to operate. So they absorbed the ups and downs...One of the reasons is [the Forest Service] kept selling the timber, they kept buying the timber, so they had to keep processing it. That provides stability to the workers, the community, to the guy at the gas station, or the restaurant, the grocery store--knows he's going to have about the same workforce involvement and they came make about the same investment. So I think that it does impact them positively (02069).

I guess mostly it's just the good feeling of knowing exactly what you [were] going to have in a small area, in the community, and it was very important for local businesses and everything. They knew that that X amount was going to be here every year...when you have it, and knowing you [were] going to have it, you had a easier time making up your mind about whether to expand or modernize and stay modern, which is hard to do in today's business climate if you don't know what is going to be facing you next year. [Now] we don't know how much they're going to sell next year or the year after. It does make it harder to run a good healthy company, to keep it modern and invest in newer, changing equipment like a guy has to do anymore. It's harder to make that decision (02109).

I think when [the sustained yield unit is] in place, it does what it's supposed to, it does what it the intent was to stabilize the community... Not only the timber industry, but downtown, the business people in town have a more stable future, the restaurants, they know that these are people that are going to be here for a while and they can expand. The thing you hear about people now is--well we don't know if we want to expand; I'd like to add this on to my business, or... we don't know how long we can afford to do that because of the uncertainty Fremont, the uncertainty of Hart Mountain. If those go, what's going to happen to Woodgrain...(02146)

I know speaking from our own standpoint--it was beneficial to us and we [were] able to be a bigger player in local contributions, whether through fund-raisers or through or local 4H, FFA auctions and many kids went to school just by selling 4H animals that have been bought for a healthy price. Without a doubt it's had to play a big--asset to the community (02112).

Residents of the Community

Three themes regarding the relationship between the SYU and residents of Lakeview and Paisley emerged from the data. The SYU and the stability it afforded the communities enabled people to (1) invest in homes; (2) invest in their communities; and (3) stay in or return to their community. Respondents saw that it did this by protecting jobs and income and by providing the knowledge that the logging community and wood products manufacturers would be handling the same amount of material from the unit from year to year.

And I think stability would have been a lot different without the federal unit. I don't think you would've seen the people investing in homes, the long term home ownership and those things that come with stability (01036).

The woods work would still have been there. But the workers might have come in from Bend or come in from Klamath Falls or someplace else and just lived in trailer houses on the site during the season and then been gone. This way they established some type of residency in the community (02062).

...when you have economic stability, then that leads to other things. So I think more families that were perfectly comfortable thinking that they'd always be here, they didn't have to worry like a lot of mill workers do in communities this size--I can't buy a new car, I can't fix up the house, I'm not really going to get involved in this stuff, because if they don't get this next sale, we're going to be laid off for six months. And here the people didn't have to be preoccupied with that type of thing, they knew that to the extent the timber was available that the local mills would have that timber

and that they would have their jobs. So they could relax and be a part of the community (02068).

I believe the people...were able to make a living through their jobs, which kept them here. If they're going to go back to work for [low wages], you're not going to have the of volunteerism you have when they're making a living. And I'm not talking about a real good living. I'm talking about what's decent...But I'd say [volunteerism] was very high here when [the sustained yield unit] was working...And nobody wants to go out and work volunteer labor when they can't make a living. That just doesn't go together very well (01068).

It kept dependable people, reliable people that wanted to keep their jobs. The jobs situation being fairly small anyway, when somebody gets a hold of something good--it pays well, has benefits, they're not just some bum who's going to come in and stay for a month, isn't going to be the type of person that's going to be there. It's going to be somebody that has a home there or wants to get a home there, wants to live there. So it's going to keep in my opinion, it had a lot to do with keeping good, stable people there--reliable (02079).

...[the sustained yield unit] did provide jobs which kept the people here who were interested the town, that helped to develop those things--the social and economic development (02175).

...[people] couldn't come back even if they had the scholarships if they didn't have an economic stable community to come back to--I think I should say they wouldn't come back. If you're a pharmacist and you have a chance to come back and take over the family pharmacy or go elsewhere, if the family pharmacy is having a tough go because of the bust and boom cycle, you're a lot more likely to go to work for Fred Meyer or somebody where you know you're going to get paid and be able to pay off your student loans and raise your family...(01116)

Local Services

So far, the relationship of the SYU to the wood products industry, other local business people, and residents of the community have been discussed. On a broader scale, some respondents felt that the cumulative effect of having a larger population was to protect or provide a base for local services. Respondents described a threshold of population, below which a community could not support local services. Schools, medical services, and local business services were all seen as being a part of the relationship between the communities and the SYU. Again, the underlying assumption was that, without the SYU, there would be less activity in wood products, and what might remain would operate in a less consistent manner.

And it makes for a stable environment for social things to evolve, and they did. I don't think that you would have had probably even half of what's available had there not been a long term timber industry, for example, in Lake County (02129).

The economic life is the resources. And if you take one of them away, the school's going to be smaller, the hospital probably wouldn't be there (02101).

You need so many people to support just about anything...you couldn't have it if you did not have those people. You could not have a bowling alley if the town got down to 2000 or 1000 people...there's just not enough people to go bowl. You could not have a golf course if the town gets less than 3000 (02019).

[The certainty that logs would be harvested and manufactured locally] provides--remember I was talking about critical mass?--that provides the critical mass, the base off of which then you start getting other things sparking off of it. It helps the rest of the retail community, and it tells the retirees coming in, yes there's a stable base here, the hospital will be good, the schools will be good, the roads are going to be good. That's the bedrock. Everything else grows and relies on it. If you don't have the bedrock, you don't have critical mass, then you have people getting a little antsy and worried about their future. Like me...(02166)

...but to make any community first of all you've got have enough to make it viable so other businesses are going to come in. And we as livestock owners alone do not have that. We weren't big enough. We had two drug stores in place of one, two grocery stores in place of one little one. You have to have size enough to have competition and if you've got more business, prices are better, everything's just better. I'd hate to see it a little cow town of a 1000 people (01161).

Hindrances

Respondents identified two types of hindrances related to the SYU: (1) hindrances for the mills operating within the unit; and (2) hindrances for the community¹. Each of the respondents recognized that there were benefits that offset hindrances. First, issues related to the mills included the fact that the mills were somewhat limited in supplies (since they could not buy other Forest Service timber), and that the mills had to process several tree species.

¹ Many respondents discussed the current debate about whether or not to support the unit, given that there is one mill remaining and that the sales within the unit were relatively low in 1995. That debate is beyond the scope of this thesis.

I think it probably has hampered somewhat specialization within the wood products industry locally...but if that specialization had occurred...it wouldn't have occurred locally....The highly capital intensive forest products that are being produced today--big capital investments mean big supplies, and there are not big supplies here, i.e. this is not the place that those investments are going. We also have had to become a jack of all trades, rather than a master of one, because we cut six species...If the highest value for white fir is in plywood, we can't sustain a plywood plant for the white fir and still run a sawmill for the others. There's not enough, so we kind of had to put everything in one (01032-33).

...the mills that had the ability to buy more timber did much better because...to amortize their cost, they could run on a two shift basis, whereas we could only run on one. It's difficult. That's the thing about the unit--we had six different species here, we had no place to trade logs, we had to process those. Sometimes you may only have a partial truckload of that one species when you're finished. So you took a beating when you went to market, because there were about four different grades in that one truckload...But you always took the good, bad, and the ugly, and you knew that and you dealt with it (01106).

Second, issues related to the community included the possibility that the SYU had given the community a false sense of security, and that revenues returned to the community from timber harvest receipts were less than they would have been in a competitive situation.

You could probably say that because of our stability, we weren't forced to look at or do change. But when you look at communities like ours in eastern Oregon, I don't know if they change anyway (02039).

I guess the other side of it is that I think there is a possibility that...maybe we had a false sense of security in the later years. Thinking that we were isolated or insulated from what was going on in the other timber communities--what was happening there, that that wouldn't happen here. It probably led us a little further into not preparing ourselves for what was really going to happen. It kind of hit us a little more suddenly than it did in some of the other places that didn't have the protection of the federal unit (01143).

...I think that...we were hurt economically because we were not getting market price...Of course that would mean less money for county road funds, less money for schools, but there seemed to be an adequate amount of the during the boomtime anyway (02091).

...you might have an argument that would come in: the sustained yield unit may have impacted the fair market value, and therefore indirectly

impacted the schools. In which case you might say that was an adverse impact if the competition wasn't there (02162).

There's a question--let's sit there and say they bought the timber, there's not enough bidders, say one, maybe two, but they got the timber, say instead of paying \$300 they paid \$200. The government was losing \$100, is that what you call it? I don't know if they lost the \$100. But was it made up, did the mill make more money and pay income taxes through that direction? Did the workers here have a stable life? Pay income taxes? Nobody ever followed out the other side of it as far as I was concerned. There was a lot of people that didn't need anything from the government because of that. They were able to work, make a living, enjoy their life (01066).

The Big Valley Unit

Main Ideas

The main theme that emerged from interviews with Big Valley residents was that the SYU enabled the valley to maintain a mill. The SYU had done so by protecting local mills from competition.

It doesn't take a smart person to see we need it--we would lose timber to an outsider; big companies would come in here and buy the timber sales and ship it out of the area...I don't think the mill would be here [without the SYU], in fact I'm almost sure of it...the Forest Service can only furnish about half of what this mill needs to operate. If other mills come in and bought that half, then this mill wouldn't be able to operate, wouldn't stay here (01055).

...there's no doubt that there would not have been a mill here continuously over time without the SYU. I don't think anyone would question that (02007).

It's kept this mill going. I don't think that it could have survived some of the highs and lows without it, because they weren't big enough to go into competition as much as the boys like Roseburg and these big guys that can do it. So definitely, it's been good for us (02096).

It kept the mills going and it kept people working (01024).

Several respondents went further by saying that the maintenance of the mill had meant that Big Valley had not "blown away," or become a ghost town. Others felt that the community today would be smaller, might have less services, and would be more dependent on ranching if the SYU had not been in place.

... without it I think the communities would have folded a long time ago (01005).

It's very obvious that it did a good job, because look at the communities that don't have a cutting circle that have faded away completely. Because they didn't have something to protect timber. There were several old towns around that were nice little lumber towns at one time (01055).

..the plain fact is that we've watched community after community around us die when the mill went down, and there was a mill running in Big Valley that whole entire time (02007).

I think Big Valley is just like 100 other small timber communities--mill-based communities. The difference is probably that a lot of mills have gone out of business in places like--there's a place called Hilt over by Yreka, they just shut the mill down and the town just disappeared, there's nothing there... So, the biggest impact may be that yes, there is still a sawmill in operation here, and it's creating jobs (02034).

[Without the SYU] I think you'd have more, probably more of an emphasis on retirement-type people... You'd have fewer businesses and all those things that go on. You'd probably be more like Cedarville that became really agricultural based, probably like it was in the 20's and 30's; that would be the commerce in the area. There would be logging... the logs would be gone, leaving the area and going somewhere else (02023).

Many respondents felt that the utility of the SYU had diminished in recent years. Some who expressed this view felt that it was less useful because of the reduced availability of timber. This reduced availability was seen either as a result of Forest Service management practices, or because the forest (particularly the large ponderosa pine) had been destroyed.

Forest Service just has a new breed of Forest Service people that don't want to sell timber, and it's all over (01013).

Well the most important thing to do with this unit is the changes in the philosophy of the federal government... They have made it so difficult that no one--it's hard to buy a Forest Service timber sale and make any money. All the environmental aspects and the way you're bound contractually, and just attitudes in general (02037).

I don't think it does [anything] anymore. I think it did back when they were cutting big timber out of this country, but not now. I don't think it makes a difference anymore (01038).

I guess the thing was set up to try to help small communities and yeah I guess it has. But it's outlived its time. There's no timber base left anyway (02031).

Most respondents felt that the physical, social, and human capital of the valley had developed naturally. Others felt that the SYU did play a role in retaining local businesses and in allowing the community to benefit from the generosity of the local mill. Some respondents stated that the SYU simply delayed changes in their community. They discussed many other forces aside from the SYU, and aside from the wood products industry, that have affected their community.

Intangibles

A few respondents stated that there were some positive feelings in the community that they attributed to the existence of the SYU. Some feel that the SYU improved relationships between residents. For others, it provided a certain sense of security.

Not sure...it may, by keeping people here, created a friendlier attitude to live in, people know each other (02045).

I think it tended to bond people together--this is our unit, this is for us. And if you have a hearing...that is enlightening as to the emotion that is attached to this sustained yield unit that exists here... That's the official on the record, I think that what's not seen is--well people think that this is ours; it's a beautiful example of public land that people are saying yeah it belongs to the public, it's for the good of the public. We are the public right here (02020).

My husband would probably tell you that the unit, it wouldn't matter...I, on the other hand, like that teeny bit of security...you know that when there is a sale that we'll be the ones able to do the work (02027).

I think there's a sense of security, a little bit of a sense of security that exists...if you just took a sampling of a 100 people, you'd see varying degrees of that. Some of them it doesn't affect at all, it doesn't matter to them if it's here or not (02021).

One resident was unsure about the actual performance of the unit. However, he recognized the strong perception in the community that the unit had made a significant difference. Again, he pointed to a sense of security provided by the unit.

At least from the community standpoint there is a perception that this makes an incredible difference. So even of itself that perception seems to exist and permeate the community. Because even in some cases, people that are not directly impacted by the unit, for example cattle ranchers...speak very fondly of the sustained yield unit. So if nothing else

there is almost a perception of security given the community--which is kind of weird (02010).

The Wood Products Industry

Most Big Valley respondents associated the SYU with benefits directly related to the local wood products industry. As stated above, the main theme from the interviews was that the SYU allowed Big Valley to maintain a primary sawmill. Respondents identified three ways in which the maintenance of a mill in their community was important. First, respondents discussed the importance of local employment and associated dollars flowing through the economy. There was some discussion about how these dollars supported other local businesses. However, some respondents felt that the benefits of the unit were felt mostly by the local mill and its employees.

I know the mill has been good for the valley, and it would be terrible if we didn't have [Big Valley Lumber]...It's meant lots of employment and lots of activity (02086).

...it keeps the other guy from coming in and cutting it and then running away. They don't stay here, they just leave. They cut and run. And they don't even hire local people. They've usually got their own men. It's a short lived life they have...that don't help anything. They don't spend their money locally (02054).

The fact that we have a sawmill here--the sawmill hires us to log their timber, where if the sawmill wasn't here, the sawmills from Redding and Susanville and Lakeview or somewhere else would be buying the timber, and their loggers would be logging it. So it would have a definite impact on our community, because the people that would come in to work would be coming from somewhere else, and they'd go take their money back home and spend it somewhere else (02063).

I don't know just what the payroll of Big Valley Lumber is, but their payroll is large enough, and not only that the other things that the community, the other businesses that are supported in part by Big Valley Lumber, it's definitely benefited the community (02062).

It's a cold hard business thing, you know the mills is the ones that would want that. If somebody was a mill owner or going to be a mill owner. Basically that's the one it benefits to start with, then it trickles out, naturally, into the economy of the area (02098).

...it didn't help the economy that much, except the wages of the fellas who worked for them (02053).

Well I'll tell you what it did. What it did is it made several families wealthy... I personally believe the whole thing's unfair... I do not believe that the government should have sustained yield units to subsidized small business, because I'm telling you, I just think that it creates a lot of revenue that goes in the pockets of specific people and it's not like it's spread out through the whole community (02031-36).

Second, some respondents reported that the wood products industry provided employment opportunities that helped some ranchers. The mill or logging companies provided supplemental income for some ranchers who would otherwise be unable to stay in business or keep their homes in the valley.

Quite a few people who want to ranch... couldn't support themselves strictly on ranching operations, so they worked in the mill, worked in the woods. And so it's created an alternative source of income for people that wouldn't exist otherwise (02023).

It means livelihood for a lot of them. There's a lot of ranchers that have gone to work for the mill.... It seems like it's been more within the last 10 or 15 years that a lot of them have had to supplement their income. And a lot of them have gone out of the cattle business, they're still sitting on their places, but a lot of them are raising alfalfa, which is just a summertime project, so they work at the mill in the winter (02080).

Third, a few respondents reported that the benefits of the SYU enjoyed by the mill were sometimes shared with the community through donations. They mentioned the mill's role in community projects that were identified as assets in the community (e.g. the medical center and the pool).

...when the market's been good and the mills have made good money... Like Big Valley Lumber built some bleachers [at the high school]. Yeah I think it comes back there. But it depends on the economy. When the mills do well, they've always given back to the community (02037).

For example, Big Valley Lumber donated the land that the medical center sits on... those kind of people do play an incredibly key role on stepping forward to help... So again, yeah, there is a very indirect benefit, but it is directly tied in some senses. So those people--Big Valley Lumber being one of them, but certainly some of the big ranches and stuff--played a pretty large proportion in terms of the financial kind of contributions. It's pretty large. And they do play a leadership role... The capacity of the community to respond in those roles is enhanced because Big Valley Lumber is here (02011).

The swimming pool--[the mill owner] was really involved in the swimming pool. And whenever's there's anything to do with the athletic programs in

school, they're willing to donate--they donated lumber to build the bleachers--they always jump in. So even though they might reap benefits from the sustained yield unit, at the same time it comes back to the community in other ways (02062).

Other Local Business People

In the preceding section, it was noted that respondents felt that the SYU ensured the existence of the wood products industry, which in turn provided support for other businesses in the valley. No additional comments were made regarding how the sustained yield unit may have affected other local businesses.

Residents of the Community

As stated above, respondents felt there was a benefit from employment opportunities provided by the wood products industry, opportunities which were supported by the existence of the SYU. Few other affects on the residents of the community were mentioned. One exception was the idea that the SYU's maintenance of a local mill had allowed some young people to stay in the valley.

There's a lot of younger fellas that were born and raised and grown up here that end up staying in the valley because there's work here. So in that sense, there's opportunities, where if the mill wasn't here, they'd probably move away from the valley and go somewhere else. I think that way it's a plus. It's like a lot of kids that grow up here that don't go to college might end up working in a sawmill, but they go somewhere else to work in a sawmill. If there wasn't a SYU here...they might very well be working in the woods or the sawmill, but they'd be working for somebody else somewhere else. So it keeps a lot of the long time families still here (02064).

Local Services

Some respondents made an argument about a threshold of population similar to the argument made in Lakeview. They stated that by maintaining a larger population base, Big Valley was able to maintain services to its citizens that might not have been possible otherwise. One respondent added the idea that the SYU had provided for a stable population, and that this was also needed to maintain community services.

Population in schools--we were able to consolidate [the schools in the valley]. With the sustained yield unit keeping people here...we were more acquainted with people in the whole valley (01045).

It's been pretty tough for the small business people anyhow. A lot of it's just nip and tuck, like our restaurants and everything it's just--can you keep it open or not? If you just had that extra 50 people, it would make the

difference. So, it's always been that way. And without that mill, it would have been no question, some of them would have just had to have closed up (02096).

I'm sure, because of that you create a population base and so things go along with that, like a swimming pool. Trying to enrich the life that's here because you have the population base that's desiring that. So you've got the foundation to do those things that make life, really enrich life in some way (02023).

...everything else goes along with community stability--grocery store: can't just operate on a surge of people, needs stability. Also, community services like the medical center. Maybe wouldn't have had medical center, maybe wouldn't have attracted as many people (01030).

Hindrances

Most respondents felt that the SYU had not hindered Big Valley in any way. A few respondents discussed the possibility that the government, and therefore the community, received less timber receipts. However, they were not sure how much of an impact this might have had on the community, and recognized that this cost to the community was traded off with some of the benefits realized from the SYU.

Depending who you talk to, some of the tax payers feel that it's not really worth it that much anymore, because pretty much Big Valley Lumber Company has the monopoly--no competition...people feel like, maybe the taxpayers are getting raked over the coals, but locally, maybe it's a good thing that [it] does have a monopoly (01005).

There's at least a theoretical issue that has come out--that because there is no private competition, there's a monopoly, that the sales were not bid up, therefore the capacity of the Forest Service to collect dollars from the timber sales for roads and schools...is inhibited...How that trades off with what I just told you, who knows. It is really difficult to assess that...In the big picture that's a tough one to know. One of the reasons for that is that 25% fund goes back to the counties then that money comes back from the two counties...that impact gets diffused over the two counties, so...it gets more difficult to assess the direct impact on Big Valley (02012).

Summary

Big Valley respondents described a fairly simple relationship between the SYU, the maintenance of the mill, and associated employment and income provided because the mill was still in business. Most discussion of the performance of the SYU ended there. Fewer

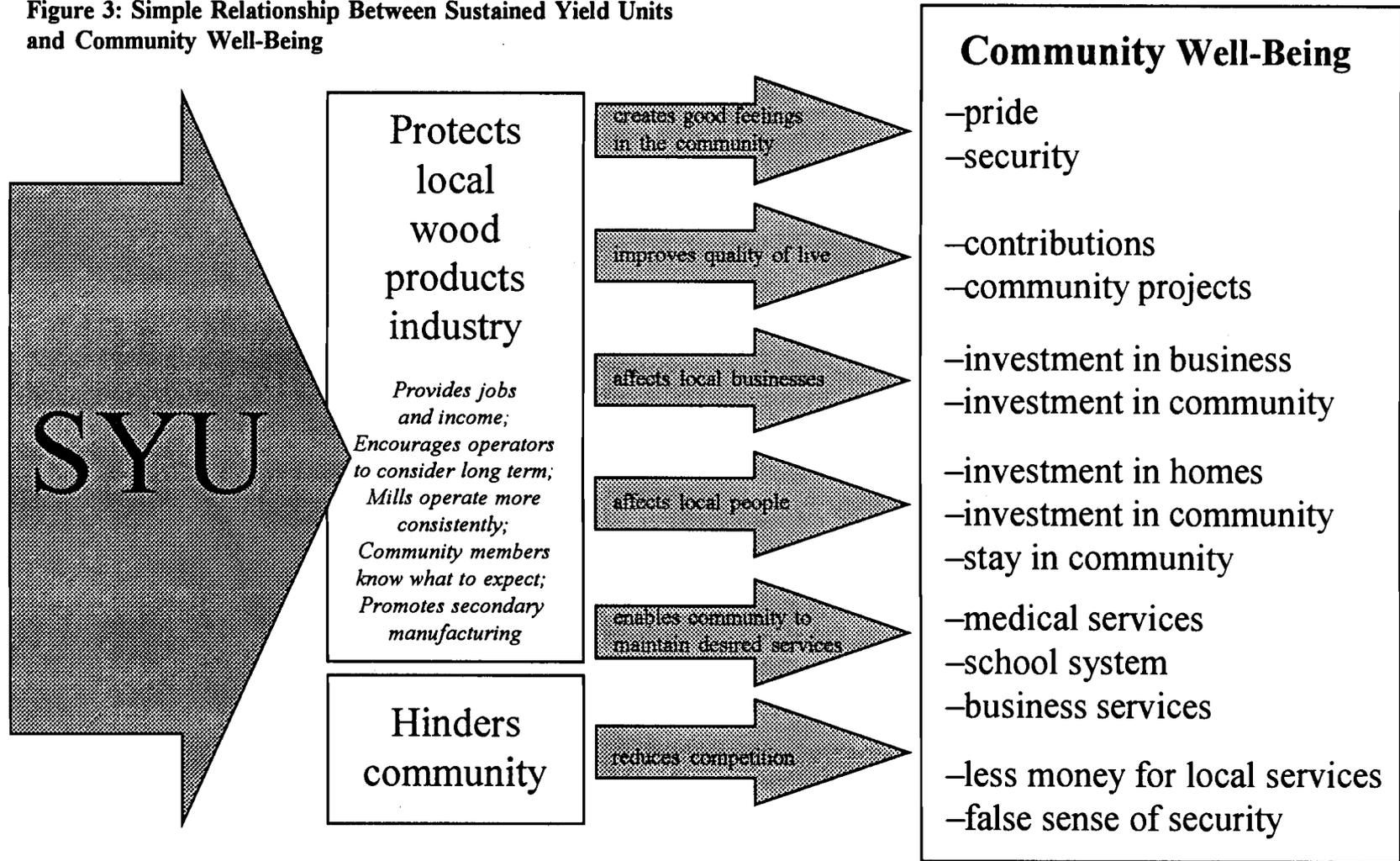
respondents discussed reasons why the existence of the mill was important, or what benefits beyond employment and income it provided.

Although not prominent in the interviews, aspects of a more complex hypothesized relationship between the SYU and community well-being were identified by some respondents in Big Valley. The assets that the community were able to obtain in part because of help from the mill, or the leadership provided by mill employees, were seen as positive components of community capacity. This was coupled with the employment and income associated with the wood products industry, a benefit to the economic well-being of the community. Therefore, the SYU was seen as a vehicle for maintaining or contributing to community well-being to some degree. Still, this all tied back to the idea that the SYU had kept a mill in the community.

A complex hypothesized relationship between the SYU and community well-being was much more apparent in the Lakeview unit. Respondents clearly identified what they saw were relationships between the SYU and many attributes they felt were important to the health or well-being of their communities. They spoke more about the mills' operation inside the unit versus mills outside the unit, and about the effects associated with knowing that a certain amount of timber would be manufactured in the area from year to year. A conceptual diagram was developed to illustrate this hypothesized relationship (see Figure 3). It summarizes the ways in which the SYU may affect communities, as described in the preceding sections.

The differences between the two units led the researcher to believe that the relationship depicted in Figure 3 was not complete. The next section will address other issues related to the SYU and communities and expands on the hypothesized relationship described here. Some of the issues identified in this section, such as other factors that have affected the SYU communities' well-being, are explored in further depth.

Figure 3: Simple Relationship Between Sustained Yield Units and Community Well-Being



EXAMINING THE DIFFERENCES IN SYU PERFORMANCE¹

After examining the Lakeview/Paisley and Big Valley interview results, it was apparent that the two SYU's played out very differently. Why did the SYU affect the communities in one locale in ways that it did not in another? The responses of those interviewed, as well as SYU reviews and other sources of data about the communities, revealed a great deal about the context in which the sustained yield units operated, and about possible conditions that may have affected how the units performed. A myriad of factors other than the SYU affected the health of the communities, or somehow interacted with the SYU's. These other factors fell into three categories: (1) local baseline conditions; (2) changing external conditions; and (3) changing local conditions. The following sections are again based largely on interview data. Interpretive comments explaining the differences between the two units, as determined by interviews and other data presented to this point, are also provided by the researcher.

Local Baseline Conditions

Respondents' comments throughout their interviews revealed several baseline conditions that were important to the development of their communities, and to the performance of the SYU. These conditions can be described in four categories: (1) physical; (2) industrial (wood products); (3) human; and (4) structural.

You could apply some of the same principles (sustained yield units) in another area, but if some little thing wasn't there, it wouldn't have gone that way (L02132).

Physical

Every community has a certain set of given physical characteristics that affect the social and economic make up of that community. It was evident from interview data that several of these physical characteristics played a role in the well-being of the case study communities. In some cases physical characteristics interacted with and impacted the performance of the SYU.

The first set of characteristics identified were related to the local forest base. These included such items as:

- Area or size;
- Ownership pattern (private versus public);
- Characteristics of the trees (species, age class); and
- Volume of timber available for harvest.

¹ The letters L or B have been added to the quote reference numbers to differentiate between Lakeview and Big Valley unit data.

The second factor identified was climate. The local climate determined the type of forest in the areas. It was also identified as a factor that impacted seasonal occupations, such as logging and ranching.

In everything, not just the logging--in your ranches, turning your cows out depends on the weather (B01010).

A lot of work is seasonal. Basically it's farming and logging and they're both real seasonal, so, there's some pretty skinny months for most of the people (B02055).

Both study areas had similar physical characteristics, including climate and isolation. They differed somewhat in forest base. Big Valley had a larger portion of private forest lands surrounding the area. Lakeview/Paisley has a larger public forest land base from which to draw supplies.

A third physical characteristic that respondents noted was the distance of their community to other, larger communities. Distance was seen as an important factor in terms of shopping outside the local area, as discussed in Chapter V. It was also seen as an important factor in competition for local timber. Both SYU areas were relatively isolated when the SYU began, but people recognized the threat of competition from other areas.

The relative isolation of the Lakeview unit was identified by some respondents as a factor in the community's success in establishing a unit. They recognized that it would have been more difficult to establish on the west side of Oregon, where competition at the time was more intense.

They probably picked Lakeview because of its isolation. In other words here is an isolated circle, there's nobody particularly anxious to move in on it...(L02039)

If it had been closer to a populated area there would have been too much pressure on it for people to bid on the timber (L01131).

Other respondents stated that the isolation of the community was an important factor for community capacity. Specifically, they felt that the isolation improved community relationships, or efforts to work together for community goals.

I think because of our isolation--probably had more to do with [community capacity] than anything else. I don't think it was the unit, per se (L02093).

And of course you're isolated, and if you don't do it, nothing happens, it's not a community that depends on other people to do something (L02101).

Finally, respondents noted the importance of unique physical characteristics to communities. For example, although proud of their local ski hill, some Lakeview respondents mentioned that it was "nothing like those around Bend." They also noted the difference it makes to a local economy to have "Crater Lake in your backyard."

Industrial

The wood products industry was in place in each of the study areas before the establishment of the SYU's. Three important factors related to the original sawmills in the area emerged from the data: (1) the number of mills; (2) the capacity, or size of the mills; and (3) the commitment of the mill owners to the local community.

Burns, I guess it's also true of Alturus, both of them had very dominant mills. Burns had Hines, which was a huge facility. Alturus had Calendor, a huge facility. So you had one mill that could cut everything that could possibly have come off the national forest... So that may have been a factor. We didn't have a dominant mill like that. We've always had more than one mill until just this year. We've always had competition within the unit (L01118).

Looking towards the future, one respondent speculated on the type of facility that would be appropriate for a new SYU, if any were to be established:

... a facility in this day and age that has the capacity to deal with small materials. And even diversification. Big Valley [Lumber is] doing some resaw stuff, furniture stock, has the power plant to deal with waste. If you can't respond to that internal diversification--just to cut boards isn't going to cut it in the future (B02013).

The commitment of the original sawmill owners in Lakeview and Paisley emerged as a very important theme. Major contributions to the community, such as the Collins-McDonald Fund, pre-dated the SYU. Respondents felt that the fact that the mills were family owned was important.

... when the market dropped instead of laying everybody off, Fremont Sawmill went on a three day week. The mills were good industrial citizens. They looked after their employees, which in turn helps the whole community... I think that when Fremont sawmill reduced their operation, they really took a loss in doing so, and I think that some companies probably wouldn't have done that (L02098).

... two of the mills that were here were family owned operations. I think they're the greatest to have in a small community. Because you're not answering to stockholders. So it's a lot easier for them and to encourage them to invest back into the community (L01107).

If the people at the mill had been different--they were old people, they had their money in the mill, in other words they weren't there operating it for a large corporation, these were family, people that had their own money in the mill. And [those] people think different than other people. They [were] here to stay, they were here to make money, and they did a lot of things for the community (L02028).

...the moneyed families that owned those mills probably go back to the old notion--I think that in that generation and in that era that there was that idea that if you're going to make money off that community or some poor soul, you have some responsibility to support that community...I think that is probably is what is a lot of the root--the feeling that we'll put back into the community some of what they've given to us. And I think that that's a big portion of the reason that you have those scholarships. And I think that Lakeview is really lucky that those are the kind of people that came in there, and that did establish the sense of community (L02137).

Both study areas had more than one mill at the time the units were established. Both also had mills whose total capacity exceeded the expected harvest from the SYU. The Big Valley mills' capacity outstretched the unit's harvest to a greater degree than the Lakeview/Paisley mills' did. This difference may account in part for the fact that the Big Valley unit mills were allowed to purchase National Forest timber outside the unit, while the Lakeview mills were not.

Although the mills in both areas contributed to the communities over time, Big Valley data did not show evidence that the original mill owners were especially involved in the communities. Evidence was strong in the Lakeview unit data that at least some of the original operators were important contributors to the community prior to the SYU.

Human

Respondents in both study areas felt that the people who had been living in the area prior to the establishment of the SYU played a big role in determining the social characteristics of those areas today. They talked about the quality or caliber of these residents.

Morally good people--a lot of those people came from back in the mid-west and south, back in Missouri, Arkansas, Oklahoma. Morally good people, a lot of them very religious, just a class of people that's just gradually disappearing. Things like--just work ethic and things like that--that's what's changing communities and lifestyles, it's not SYU's... (B02034).

I think that the people that were here made the difference... (L02101)

In both study areas, community support for their SYU has been a key factor in the continuation of the units. One Big Valley respondent suggested that support from an entire community was important for the success of a SYU.

A strong community, interwoven community support base, not just from the manufacturing facilities that benefit from having it there, but a sense from the entire community that understands the interrelationship between that resource base and how it effects the community. So having the whole community involved has to happen to make it work. It has to be at the

county supervisor level and the school district level and the chamber of commerce and the service groups and the churches, trade clubs, I mean down to little league and soccer, things that affect children (B02024).

Initial support for the SYU's differed in the two study areas. As noted in an earlier section, the impetus to establish the Big Valley unit came from the Forest Service, not the community. This was not true in the Lakeview/Paisley case. In that case, a handful of people, including a newspaper editor, a bookkeeper, and a lawyer, lobbied for the unit with the help of the local chamber of commerce. The fact that the push for the SYU came from within the community seemed to be an additional source of pride for today's residents of Lakeview and Paisley.

The Lakeview and Paisley respondents also described the SYU situation as an interactive one. The SYU provided benefits to the communities in some ways, but a lot of the characteristics, such as people's commitment to their community, were already there. These original characteristics enabled the communities to establish the unit. One particular aspect of the community that pointed to the interaction the respondents described was again the existence of scholarships prior to the establishment of the unit.

...the forest products industry is what set up the Collins-McDonald fund...the fund was set up I think in the '40's, before the federal unit. But I also think the community recognizes those contributions, and realizing the importance of those contributions and the industry to the community, and that may have been part of [the] driving [force]...when the community did set [the sustained yield unit] up (L01038).

Now the Daley fund of course predates the SYU. But they all went together to provide the community with kind of a distinctiveness--and that was stable, it educated its young people, obviously a lot of them had to go away to find jobs, but a lot of them came back, myself included...(L01113)

I don't think that the unit directly affected [community capacity], but certainly it's part of it. For instance, our scholarship deal was set up back in the 1920's when Dr. Daley passed away. It's hard to tell what's cause and what's effect--maybe those things had a basis in the reasoning when the sustained yield unit was set up--here's a community that's got some good things going, let's protect it. I think that probably is more likely (L02038).

Structural

There are several other factors that were important to the development of the study communities, and to the performance of the SYU's. The remaining baseline characteristics had to do with the structure of the communities prior to the SYU.

First was the size of the population. Respondents felt that the SYU was most appropriate for small communities that lacked a diverse industrial base. The second factor was related to this idea. The local business base--what goods and services were available for local purchase--was the second structural factor. Although people felt that SYU's were not appropriate for communities that were "too big," they also noted that the community should be large enough to support a local business base. A diverse business base can capture more benefits, because dollars can be spent locally. Big Valley lacked this local business base. Paisley did also, but the base was provided to some extent by Lakeview. Since both Lakeview and Paisley were in the same SYU and were closely tied, benefits could still be captured within the unit.

Good support systems...local business that get the benefits--if there's no where to spend the local money there to buy your products, there's not the benefits to the--if you have to go outside to buy your vehicles, your parts, your fuel, there's not the full benefits. If it has a well rounded business community that can take care of the people there, where there's an opportunity to spend the money locally--that's all the benefit of it, is if the money can't stay local and cause local employment, there's no benefit to the federal unit (L02113).

Third was the size and relative influence of other industries in the community (e.g., mining, logging on private land). Big Valley was hit especially hard by losses in industries outside the SYU. This will be discussed further below under "Changing Local Conditions."

Fourth was the existence of Forest Service or other federal offices in the community. Federal employees were mentioned often as having an influence on community capacity, often contributing their time and energy to community efforts. The offices also provided local employment and income and contributed to the threshold of population that some respondents felt was needed in a community to maintain services. Although both study areas had federal offices, they differed in the extent of federal presence. For example, Lakeview had a forest supervisor's office and a ranger district office; Paisley also had a ranger district office. Big Valley had a ranger district office in Adin, but the supervisor's office was in the county seat of Alturus.

Fifth was the existence of a formal local government structure. The fact that Lakeview is a county seat, and the associated leadership structure, contributed to the well-being of the Lakeview area. The Big Valley respondents were frustrated by their distance from their county seats, and the unincorporated towns of Big Valley had no local government structure.

Figure 4 summarizes the baseline conditions that were suggested as important to the development of SYU communities and eventually to the performance of the unit.

Figure 4: Baseline Conditions

Industrial (Wood Products)

- Two or more mills
- Mill capacity and technology appropriate for available supplies
- Commitment of local mill owners to local community

Physical

- Large proportion of local forest in public ownership
- Forest base suitable for supplying fiber for local mills
- Relative isolation from larger communities

Human

- Caring community members
- Broad based community support for SYU

Structural

- Relatively small population
- Large enough population to support local businesses and services
- Lack of diverse industrial base
- Existence of Forest Service or other federal offices
- Existence of formal local government

Changing External Conditions

Most of the baseline characteristics identified above changed over time, or their role in communities changed over time. Some of these changes were brought about due to large external forces. Three types of external changes emerged from the data: (1) changes in land management; (2) changes in the wood products industry; and (3) other changes or trends. Since these are large external factors, they do not differ in the study areas (although their impact may have differed).

Land Management

Most respondents discussed recent changes in federal land management practices. The recent events highlight the central role of forest laws, practices, and conflicts to SYU performance. Some respondents focused on the specifics of the timber sale process today, and the lack of timber that makes it through that process to the point of sale. Others spoke from a broader perspective, discussing the fundamental shifts they have seen in our nation's philosophy about timber harvests from public lands.

The reason for the most recent closures is because--we are dependent on federal timber in large measure--and nothing is getting out, even though there is no reason not for timber to be harvested. By the time you go through the matrixes, by the time you go through the screens, as a practical matter, nothing gets out (L01112).

I think probably around '91...the eastside ecosystem management review was initiated, and the east side screens basically shut down management, forest management harvesting activities on the east side, in Oregon, Washington, and Idaho...But I think up to that point...there were some competitive changes locally within the forest products, but supply wise, that was always very constant (L01023).

You've got to have a source of timber. A known source that's going to be there year after year. You can't go keep fighting the environmentalists on each and every--you can't (L01069).

It's not that [the trees are] not there anymore, it's that we can't have them anymore (L02080).

I think in terms of the long term, other forest policies, practices, regulations that are extraneous to the policy are going to have more impact than the policy itself (B02008).

One of the things that communities need to be concerned about today, that they weren't 40 years ago when we looked at a working circle is--federal regulations have kind of subtle over time moved us away from extraction

of natural resources to using our public lands for recreational purposes (L0146).

The problem is now that no one could foresee the changes in the national goals and our changing perceptions of what we want from our forest as a nation. Now, it is no longer functioning as it was intended. When it was set up, it was intended to be a commercial forest, multi-use, where recreation and commercial uses were all looked at together. The commercial part of the forest is changing dramatically. As a nation we're saying we're going to cut fewer trees, we're going to try to go away from that as a national need or desire...(L03012).

Wood Products Industry Trends

As noted previously, the Lakeview/Paisley unit is a closed system, meaning that the local mill cannot purchase Forest Service timber from outside the unit. However, the Big Valley mill can compete outside the unit for Forest Service timber. Mills in both units can buy private timber. Changes in the wood products industry, some related to the supply issue discussed above, but others related to changes in technology, have affected the SYU mills. Transportation improvements, the increasing size of wood products companies, and supply and demand issues were the most important factors that emerged. These were all considered important factors because they are all related to increased competition in the wood products industry. Therefore, they all affect the SYU's mills' ability to compete for timber outside the SYU. Since the Big Valley mills had to compete outside the unit for more of their timber supply, it is likely that these changes would have more impact on them than on the Lakeview mills. Many respondents felt that, given restored harvest levels in the units, the units might be more valuable today because of this heightened competition.

The transportation costs are so small in comparison to the value of the product anymore. Once you get it on a logging truck--I don't think a little mill would have survived here without [the sustained yield unit] (B02010).

Well, for Big Valley itself, the benefits we reap off of [the sustained yield unit]--it's as useful as it ever was, because...it used to be you didn't haul logs very far, it wasn't economical to move logs very far, where nowadays, it's nothing to haul logs a 100 or a 150 miles; so without the SYU, all the timber would be going out of the valley, would be no question about it. Because we're shipping logs on lots of private lands clear up into central Oregon and they're going clear down to Redding. So, without the SYU, they would definitely be leaving the valley (B02065).

I see them hauling logs somewhere east of Boise all the way to Ashland, and they haul them all the way here to Roseburg... They truck logs all over the place, it doesn't seem to be much of a limiting factor (L01148).

It's good to have competition, it's just that some of them are too big--the Sierra Pacific and those people, they can knock you out of business if you have to bid against them all the time (B02045).

[The sustained yield unit] did inhibit you from either being a giant or going away. And today, if you're not already a giant, you go away. Those that were on the open market for the last 100 years have grown into very large corporations or they were content or for other reasons to stay very small and find a niche. Those in the cutting circle, because of their very small population base to begin with, were very efficient at cutting to a certain level, and provided a certain level of jobs and stability. But you could never grow as a giant because your resources were tied to a certain level. If you take that away now, there would not be time to retool to before you went broke and were out of business (L03017).

Other Trends

Some of the other changes that have affected the SYU communities were discussed in Chapter V. These included improvements in transportation that have affected local shopping, a reduction in payments to counties as a result of reduced timber harvests, and state policy changes.

Another trend respondents identified was increased costs of running businesses or services. Given that the business and services in Big Valley were already working from a smaller population base and with very limited resources, it seems that these changes would have a bigger impact on their community than on Lakeview/Paisley. In other words, Big Valley was closer to this "threshold" of people that respondents discussed as being important in maintaining businesses and services. Where something in Lakeview might be cut back, something in Big Valley might be lost altogether.

... Safeway is coming into Lakeview, they're trying to buy out all these little pharmacies, but that's no different than anyplace else in the country, so I don't think those kinds of things have anything to do with the unit. Big is the thing anymore, or that's the way trends seem to go, that's just the way the whole country is (L01133).

The little fire districts and stuff here are running on a shoestring and the problem we have is that more and more there's training standards, there's equipment standards, there's things that they have to meet that are imposed at the federal or state level, but no funds for them to meet that... (B02007)

It's just hard to compete. Insurance, liability insurances, things like that, have tripled or quadrupled in the last 10 to 15 years. It's just things like that. But I've just seen these small businesses just gradually, one after the other, go out of business over the years (B02028).

Respondents in both areas also discussed technological change as an important driver of change in their communities.

Rural communities have lost some of their infrastructure over the years as far as some of the merchants--like Paisley used to have banks and newspapers, and things like that--when communication became good enough that those things were no longer necessary locally. And the ranches bought some modern equipment and they didn't need 15 workers to run the horses any more, they only need five to run the tractors (L02063).

Finally, respondents also identified in-migration of retirees and others to rural areas as an important trend. Based on statements by respondents about the impact of in-migration, Big Valley has been affected more dramatically in recent years by in-migration than Lakeview/Paisley.

... within the last 25 years, there have been a lot of people moving up here from L.A., from the bay area. They have lots of money, they build homes to retire (B01007).

I drive around town all the time, and I notice all these places for sale, and they've all been selling really well, within a month, month and half there's a sale pending sign on them, and it was just driving me crazy. I couldn't figure it out. So I stepped into to of the real estate agents and I said who is buying these homes, and they said retirees--they're coming in here...I said why did they pick Lakeview, and they said, well they come out of LA, San Francisco, wherever, Portland, Spokane, Seattle, they're tired of the hustle and bustle of the freeways (L01073).

Changing Local Conditions

The preceding section discussed large external forces that affected the study area communities. There are also site specific conditions that have changed. These site specific conditions are related to: (1) the local forest base; (2) the structural aspects of the local community; or (3) the SYU policy.

Forest Base

The conditions of the contemporary forest base was an issue in both study areas. The forests have been affected by drought, insect infestation, and past harvests. The condition of the forests has, and will continue to have, impact on harvests, and therefore also on the local wood product industries and communities. Big Valley respondents talked about how little sawtimber was available, either from private or public lands. The mill does not own any of its own forest lands. Although there were concerns in Lakeview/Paisley about forest health, the scenario given in those communities was less bleak than that in Big Valley. Also, the mill in Lakeview has acquired private forest lands over the years, and has been able to use some timber from those lands for the mill.

Well there were forest fires, and that took care of some of it. When it burns it, you've got to take a lot more out... We had about 6 or 7 years of drought that didn't do the timber industry a lot of good here (B01039).

There was a mill in Lookout, there was two mills in Nubieber, there's been a mill in Bieber for quite some time, there was two mills in Bieber, Adin had a mill. And now you got one mill. Simply because all the big timber is gone and everybody quit (B01038).

...our large old growth forested timber is gone, I'm not saying that we don't have timber, and I think probably we're producing annually more board feet of timber today in the raw, in trees, than we were years ago when we had all these old growth, mature trees. We have a younger forest, and it's all growing (L01156).

Structural

The wood products industry in the SYU was not the only industry in the study area communities during the existence of the SYU policy. Other industries played important roles in the communities, and sometimes overshadowed effects of the SYU. Big Valley was influenced by the coming and going of a large private logging operation. The situation respondents described regarding this private logging operation was the type of situation that SYU's were supposed to help avoid. Still, the presence of large private timber supplies near Big Valley meant that this type of practice had a large impact on the community.

The 50's, that's when we had that big logging company in here and the school boomed like 100 overnight. They just loaded their houses up, put them on logging trucks...and they just brought them down and built a whole little community in Bieber, and I mean it was just bugging all the time...They were here about six years, and they had gotten all the timber out that they wanted and they moved on ... (B02082).

You have to understand that probably a large percentage, in the 40's and 50's and even in the 60's, a large percentage of the timber that was cut in these sawmills was private timber, not National Forest. In fact, I would say from 1940-1965, I bet you 70-80% of the timber milled in these sawmills was private timber, which had nothing to do with the unit. And when that timber base ran out, that's when things changed (B02034).

Big Valley also saw the railroad come and go in Nubieber. That situation was similar to the logging operation; a large number of railroad workers lived near the railroad stop, and when the railroad stop became obsolete, they quickly left. More recently, there have been changes in ranching, such as subdivisions of ranches, that have affected the

community. Finally, the valley will also soon be faced with cutbacks at the local mine, and eventually closure of the mine.

I know the railroad was a big boom. For a long time, probably Nubieber was probably 8 or 900 people by itself. I bet there isn't 200 there now. Used to be a theater there....different things there because there was a lot of people there connected with the railroad. They had their own work crews stationed right there that lived in the community (B02047).

The Lakeview/Paisley area has been influenced by government employment and by ranching. The only industry that seems to have come and gone in this area that had a big impact was a uranium mine in the 1960's.

Both Alturus and Burns have had real boom times when they were going just--people were moving in, businesses were moving in and housing costs were going up, and they really were having a good time economically. We've never had that, with the one exception of when the uranium mill came in 1960. And that would turn out to be a boom and bust also. But I'd much rather have the stability of no busts and forego the booms. Because the booms are illusionary. Having gone through the uranium boom and bust in Lakeview--it did a lot of harm to a lot of people. Because things are booming, people come in and they invest in businesses--bowling alleys, restaurants, what ever type of business you want. And they invest on it based upon where they are when the boom is going on. Well when the bust comes along, that business is broke and those people either move away, file bankruptcy, get a job with the government, or spend the next 30 years paying off the debt they incurred in it (L01115).

The Policy Itself

Another factor that played a role in the performance of the SYU's was how the unit itself was designed: its size (harvest levels), rules on remanufacturing, and rules regarding purchasing outside the unit. For example, the fact that Lakeview had been able to maintain remanufacturing facilities was attributed in part to the remanufacturing requirements in the local SYU policy. There was also more emphasis in the Lakeview policy regarding employing local labor and hiring local contractors. The current policy statement for the Lakeview unit also includes very specific requirements for monitoring the wood products industry's compliance with the policy.

There were some impressions in the Big Valley area that the open nature of the unit had allowed the local mill to grow too large for the local resource base, yet the mill was not large enough to compete with the giants in the industry. On the other hand, Lakeview and Paisley respondents felt that the closed nature of the policy there had kept the mills a reasonable size.

I think that they should build [the mill] to the size of the annual cut. This mill here grew too much. Now they have to go out to supply this mill. If they could just have a mill that could get by with what private timber, and

what allowable cut on the FS timber... If you just had a mill that would cut what they allow, plus the available private timber in the area (B01057).

I would have to believe that [the sustained yield unit is] of declining value, simply because at this point, the capacity of the mill has outstretched the resource base available. Now how much that 8-12 mmbf a year that's still allowable to cut allows them to leverage, I don't know... Versus back in the 50's and 60's when, my perception is, the little mill here in Adin, basically the capacity of the mill, in some respects, didn't out distance what was available. So it certainly played a much bigger role at that point (B02013).

You could have had a unit in Burns. Quite frankly maybe they should of. Because there you had a situation where you had a major employer, a very major employer, the only running sawmill there, and he went out and tried to get what he could on the open market, unaffected by a unit. Without realizing that his presence in that community was absolutely critical, and without it there--his impact on the community was substantial. I think a SYU would have forced them in Burns to have taken a different path. They would have geared for an extremely long term level of manufacturing based on what was available, rather than gearing up to a point of trying to be a very major player in an area and then no longer being in business. I think that that mill in a SYU would still be there, still be providing jobs in that area...(L03019)

[The mills] couldn't constantly have gone on growing. They couldn't keep adding new and bigger things and building new plants. They had to survive on the economy of their existing scale. And again, people don't do this, you see businesses constantly getting larger and larger, gobbling up each other, until it collapses and someone else can start the cycle over again...(L02066)

The size of the unit harvest and the open or closed nature of the units seemed to be important differences between the units. Lakeview and Paisley mills were not competing on other National Forests. Whatever was sold in the unit had to be processed locally, and, until recently, was enough to support a substantial wood products industry. On the other hand, Big Valley mills did have to compete for a large portion of their supplies. There was less assurance that the local mills would have enough to keep operating, or that they would be able to do so in a consistent manner. One way that these study units differed from the troubled Vallecitos and Flagstaff units was that these units allowed free entry of new firms. Respondents (mostly in Lakeview) discussed how the policy was for the community, not for any one mill, as any company was free to enter the unit if they were willing to make the commitment and make the investment.

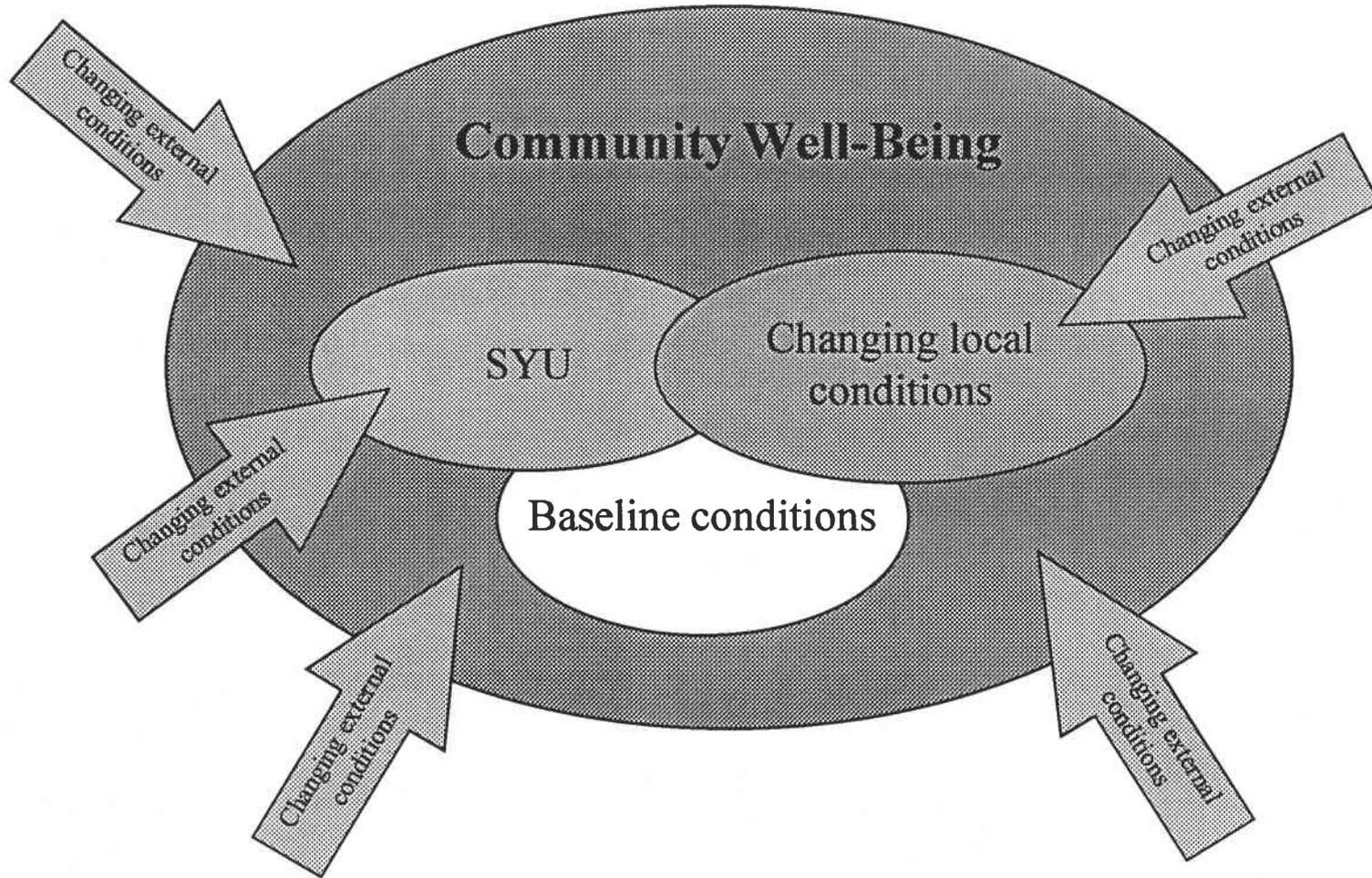
SUMMARY

The effects of SYU's are best looked at in the context of many other factors that are a part of the local community, as well as larger external factors affecting the community. The first conceptual diagram produced in a preceding section was expanded. This new diagram places the SYU in the context of baseline factors that are hypothesized as having an influence on the relationship between SYU's and community well-being. Changing external and changing local conditions were added to complete the picture (see Figure 5). Baseline conditions, changing conditions, and the SYU all interact and influence community well-being.

In the case of Big Valley, many contextual factors overwhelmed the effects of the SYU. Put another way, the lack of certain factors or the existence of some circumstances reduced the effectiveness of the SYU in Big Valley. On the other hand, the existence of some factors meant that the Lakeview/Paisley unit, in combination with these factors, played a largely positive role in community well-being.

An important caveat to recognize is that the data presented in this thesis reflect what happened given the context from 1950 to 1996. The social and economic world in which we operate continues to change. However, this model is useful today because it points to some of the factors that may be important, and it provides a general framework to think about these factors. It also leads to ideas about future research aimed at continuing to build an understanding about forest policy and community well-being.

Figure 5: Hypothesized Relationship Between Sustained Yield Units and Community Well-Being



PERCEPTION VERSUS REALITY

Most of the evidence used in this study to generate a theory about the relationship between SYU's and community well-being was derived from interviews, which recorded residents' perceptions about what happened in their communities over the years. Further investigation was undertaken to begin to explore the degree to which people's perceptions are supported by objective measures of reality. It was also undertaken to provide examples of how one might go about testing some of the hypothesized relationships that have been discussed.

For the comparison of people's perceptions versus reality, Lakeview was used as the example study area. Burns and Alturus were used for comparison. Respondents and SYU reviewers had suggested these two communities as appropriate comparisons for Lakeview. The following quote provides an example of how many Lakeview respondents compared their community to Burns and Alturus.

If you compare Lakeview to other communities that are very similar to us, then there's a marked difference--obviously more than one possible reason--but one of the things has been that we have had a relatively stable economy through times with other communities have been going through timber bust and boom. If you compare us to Burns, the county seat of Harney County, with Alturus, the county seat of Modoc County--there's a marked difference in the three communities. We're all county seats, we're all rural, sparsely settled counties that are remote and that are natural resource dependent because we all rely traditionally on forestry and agriculture, mainly cattle ranching. There's also some crops, which [are] alfalfa and hay crops, grass and hay. They have had tremendous ups and downs, going from boom times when timber prices were high to bust times where all the mills closed. Now if you take either Burns or Alturus, they have both had all their mills closed time to time, then they'd start out and maybe they'd have as many as three mills going, and then they'd all close again when things went--so it's really been disruptive for their communities. Since Lakeview had the SYU, probably 1950 when it was first implemented, we have never had mills close because of boom and bust (L01111).

Three Comparisons

Three comparisons were made between the communities. First, Lakeview respondents felt that their population had been stable, while Burns and Alturus experienced ups and downs. Census data from 1940 to 1990 were compiled to examine this perception (see Figures 6 and 7). Alturus' population has not changed by more than 10% in any given 10 year period since 1950. Lakeview and Burns have each experienced three ten year periods where their population changed more than 10%. Lakeview lost a

large percentage of their population between 1960 and 1970. Burns did the same between 1980 and 1990.

One problem with examining population change in this manner is that it may mask large year-to-year fluctuations in population. However, reliable historical information is only available on 10 year intervals from the census. Why else might people's perceptions regarding their population seem to differ from reality? One possibility is that Burns' recent large loss in population between 1980 to 1990 may be fresh on the minds of Lakeview respondents. Lakeview's population does seem to have been more stable than Burns' from 1970 to 1990. Still, the actual population figures over the history of the SYU do not support Lakeview respondents' perception that the stability of their population was especially different than that of Burns or Alturus. Another possibility is that respondents' perceptions were based on personal experiences, rather than knowledge of total population figures. They might have based their statements on whether or not the people that they have known for years are still living in the area.

Second, Lakeview respondents suggested that it had been easier for Lakeview residents to invest in homes. Census data on home ownership in Lakeview, Burns and Alturus were compared (see Table 8). Since occupancy rates (the percent of housing units actually occupied at the time of the census) differed among the communities, ownership rates were calculated based on the number of all *occupied* housing units and based on the number of *all* housing units. In both cases, Lakeview's rate is lower. Why did respondents' perceptions differ from this measure of home ownership? Again, a possibility is that respondents were relaying personal experiences--instances where they knew someone had invested in the area and had attributed his or her ability to do so to the existence of the SYU. Such experiences may be important to the respondents, and to the well-being of the community, but may not reflect overall trends in the community. Another possibility is that the occupancy rate from the 1990 census is not a sufficient indicator for home investment over the life of the SYU. However, historical data are difficult to gather for these small communities.

Table 8: Occupancy Rates in Lakeview, Burns, and Alturus, 1989

	Lakeview	Burns	Alturus
Occupancy Rate	88%	86%	91%
Percent owner-occupied housing (of all occupied housing)	63%	66%	64%
Percent owner-occupied housing (of all housing)	55%	57%	58%

Source: U.S. Bureau of the Census.

Figure 6: Historical Population in Alturus, Burns, and Lakeview

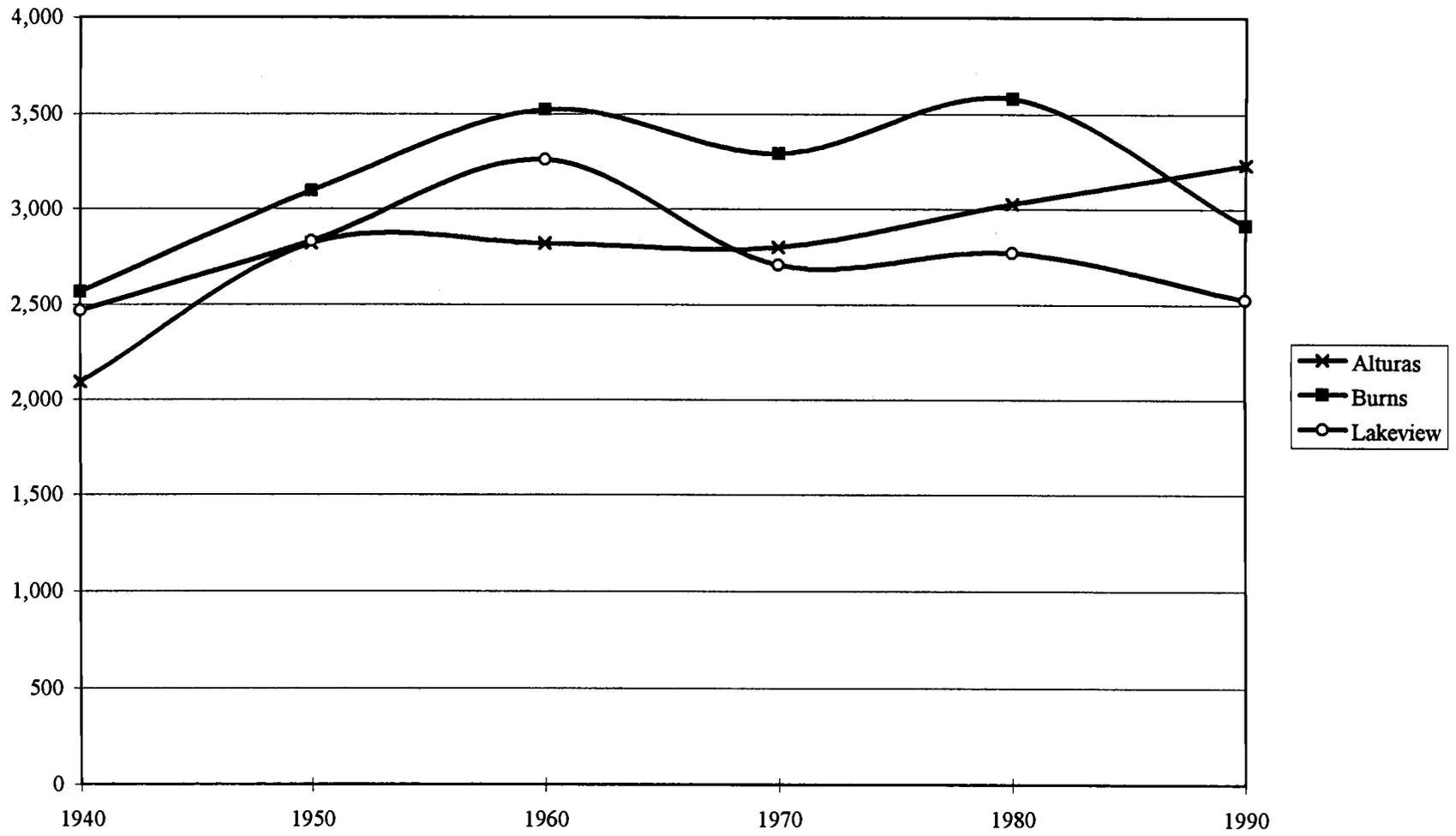
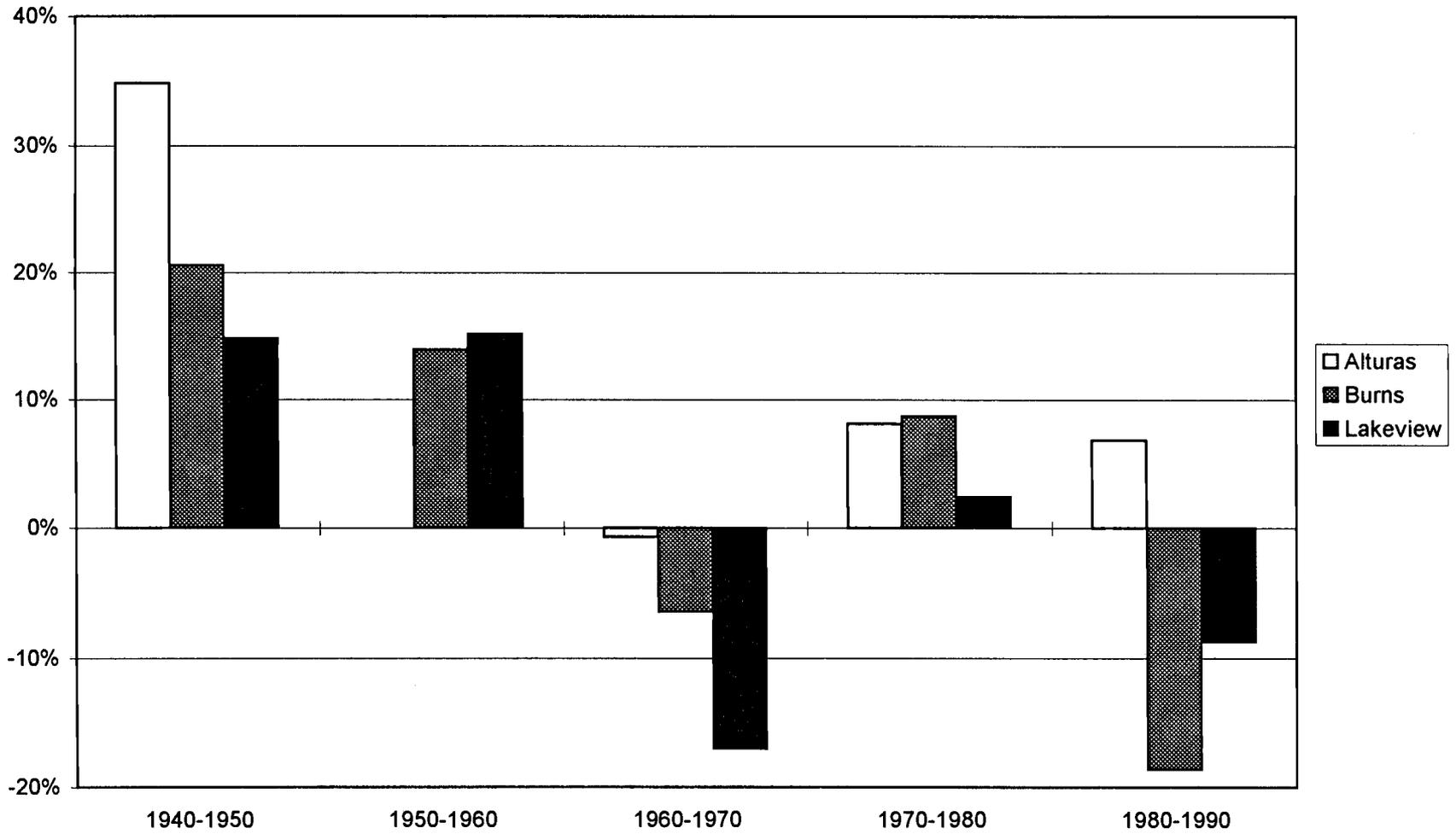


Figure 7: Percent Population Change in Alturus, Burns and Lakeview



Third, Lakeview respondents reported that their community had more services than other communities. Their medical center was most often mentioned. Both Burns and Alturus have a hospital, a clinic, dentists, optometrists, and several doctors. Alturus also has a convalescent home. It is beyond the scope of this study to examine the quality of the medical care, or the difficulty communities have had in maintaining their medical services. However, the extent of medical services in each of the communities appears more similar than the respondents indicated.

Discussion

A response to this analysis might be to ask: if people's perceptions do not reflect objective reality, then what is the value of learning about perceptions, or the value of this study? There are two ways to answer this question. First, it may be that people's perceptions *do* reflect reality, but that the appropriate objective measures for comparison have not been identified. It is difficult to find objective, quantitative indicators that are necessarily measuring the same phenomenon that people are describing. A seemingly objective measure, like stability of population, can also be subjective. What people may really be talking about is not total population, but whether or not the same people and businesses--the people and businesses respondents know--are still in the community. Single measures also may not be able to capture the whole of the experiences that people have had over a lifetime.

Some indicators that might have been more appropriate for comparison are difficult to compile. Little data are available on an annual basis for small communities. For example, an attempt was made to collect information on business licenses to help understand stability in terms of business starts and closures. However, the data were not reliable in part because if businesses miss renewal deadlines, they are counted as having closed. The data were also available for only a relatively short time period.

Also, the objective indicators often chosen to measure well-being assume that certain values are important in the community studied. For example, the objective measure of income is often used as an indicator of well-being. Yet, many respondents in this study stated that residents were willing to forego some income to maintain their way of life. An objective indicator of well-being, such as income, can be useful to monitor change or make comparisons amongst communities. However, subjective reporting can be used to understand the relative importance of things to community members.

The second answer to the question is that people's perceptions matter. They matter to the people who hold them. They matter to researchers who are trying to understand social phenomenon. They matter to policymakers who are trying to evaluate policy problems. One social researcher had this to say about perceptions:

We must remember that even if the combined and summarized perceptions of many interviewees vary from what related statistics show, "perceptions are reality" for the individual and the group. Statistics may or may not be

accurate, depending on a variety of factors... However, when one understands what people truly believe, regardless of what quantitative data may indicate, one is better prepared to deal with the social phenomena being assessed (Canton-Thompson, 1994:3).

Perceptions are also important as we think about today's policy emphasis for the Forest Service and rural communities. The main focus for Forest Service rural community work is on community-led and community-based efforts (Unger, 1994). This focus means consideration of the viewpoints of the rural community residents.

Perceptions reflect something in the respondents' experiences. The reader should understand that the Lakeview unit in particular has been an important part of the history and culture of the area, as well as a source of pride. Did the SYU change people's behavior? This study indicates that people, at least in the Lakeview unit, believe that the unit, in conjunction with other factors, did change people's behavior. It also points to areas where further research can be done related to that question.

VII. CONCLUSIONS

SYU'S RELATIONSHIP TO COMMUNITY WELL-BEING

This study indicates that sustained yield units have at least the potential to contribute positively to community well-being. However, there is not a simple relationship between SYU's and community well-being. The relationship is affected by baseline conditions, or existing attributes of the community. It is also affected by external factors. Many of the external factors identified in this study, such as technological change and immigration, are consistent with factors identified in previous community studies. Finally, the relationship can be affected, and sometimes overwhelmed, by local changing conditions.

One point of debate this analysis raised is: Does the SYU maintain something that is already in place, or does it somehow contribute to or add to what was already there? Evidence from this study suggested that there was an interaction between the SYU and what was already in place in the local community. In some ways, the SYU allowed things that had always happened to continue to happen. In other ways, it actually provided an additional benefit, enhancing the quality of life in the communities. However, the data did not show evidence that the SYU "created," for example, social capital. What was already in place in the local community was a key factor.

Another issue this analysis raised is: How do we know if people's perception that the wood products industry would not be as large, or would not be there at all, without the SYU is accurate? The answer is we cannot know for sure. However, we can examine their argument to see how plausible it is, given their experiences and the evidence presented so far. Their perception is based on the following:

- At the time the Lakeview SYU was created, a large company with large private landholdings adjacent to the Fremont National Forest had mills in Klamath Falls and Bly, where their private timber was harvested. It was anticipated that this company might also begin to purchase and remove timber from the Fremont, taking it outside of the Lakeview area for processing.
- At the time the Big Valley SYU was created, large amounts of private timber were being hauled out of the valley for processing. It was expected that National Forest timber might also be purchased and hauled away from the area for processing;
- Their communities are isolated, and they recognize the increasing importance of transportation and distance to large markets;
- The communities have seen many mills around them close over the years;
- In Lakeview, a representative of the molding manufacturer has publicly stated that the company would not have moved to Lakeview if it had not been for the SYU.

Given this information, people's perceptions do not appear to be irrational or unfounded. One way to strengthen the understanding of the relationship between SYU's and community well-being is to undertake further research comparing SYU and non-SYU communities (see below).

THE SYU IN TODAY'S POLICY CONTEXT

Many researchers have stated that the "community problem" is a complex social and economic problem. As such, policies designed to address it should consider much more than just timber harvests. This study indicates that although SYU's are concerned primarily with timber harvests, they do have the potential to affect a complex array of social and economic conditions in a community. They are not incompatible with today's policy directions.

The Lakeview unit's policy, with an emphasis on promoting remanufacturing, is consistent with efforts to help communities diversify their economies in part by encouraging value-added processing. However, SYU's do not address several aspects of new policies, such as promoting a diverse range of resource uses or providing technical assistance. Certainly one policy does not have to address *all* policy objectives, but could the SYU policy be modified? Could it somehow be expanded to include other resource uses? For example, the Forest Service might require that local labor and contractors also be used in ecosystem restoration projects. Some have suggested that the SYU concept might be modified to be an "ecosystem unit," where the sustained yield of all forest outputs would be considered. For example, processing associated with special forest products might be limited to the local community.

If someone were to establish a SYU today similar to the ones established almost 50 years ago, what does this exploratory study suggest about criteria that could be used for choosing appropriate sites? The following criteria were suggested by this study:

- Forest base--a forest base that is large enough and suitable to support a competitive wood products industry.
- Dependence--A clear dependence on Federal harvests. This would in part reduce the likelihood that actions in other industries would outweigh the affects of the SYU. Relative isolation would play a role in this, as it is a barrier to attracting industries.
- An involved citizenry--Evidence of social capital; impetus for the SYU from within the community.
- Community structure--A small community, but with a substantial local business and service base, and a local government structure.

One lasting criticism of the SYU policy is that it interferes in the free market. Is this a reason to altogether dismiss future consideration of the policy? Such intervention is not uncommon today. Government programs such as the Small Business Set Aside intervene in the market, trying to level the playing field to protect or nurture something in our society. The fact that we still support programs like this one indicates that the SYU

policy should not be ignored simply on the grounds of a free market argument. At the time SYU's were established, interference with the free market was the accepted price in the effort to achieve community stability. Although this policy has often been analyzed as an economic policy, its goals were more social in nature.

IMPLICATIONS FOR FUTURE RESEARCH

Sustained yield units have been looked at in the past generally in light of relatively short-term economic effects. How did employment change? How did it change relative to employment in other communities? This thesis was an attempt to explore other effects of SYU's. Respondents' perceptions in the case study communities indicated that there were other effects. This exploratory study has led us to further questions about SYU's and the relationship between forest policy and forest-based communities. Future research can build on this study in several ways, including (1) expanding this study to other SYU's, or to a broader sample of SYU residents; (2) conducting comparative studies of SYU and non-SYU communities; or (3) conducting longitudinal studies of forest-based communities affected by new forest policies.

Expanding the Study of SYU's

A study could be undertaken that included all of the SYU's. One could examine the other existing SYU communities in light of this study's suggested baseline and changing conditions to see how different conditions in the other communities interacted, and to see if the patterns discovered in this study hold up in other SYU's.

Research on SYU's, including those studied here, could be also continued via a broader survey of SYU community residents. The survey could contain questions similar to those used for this study, but modified based on the results of this study. For example, the survey could ask people whether they agree or disagree with certain statements related to the effect of the SYU on community pride, volunteerism, or business decisions. The study could be designed as a quantitative survey. It could provide more information about the extent to which certain beliefs regarding the SYU's and regarding the well-being of the communities are held.

This study also raised the following question: If the SYU does have an effect on communities, is the effect lasting? The emphasis for forest-based community policies today is on building capacity within a community so that the community can effectively meet challenges and accomplish goals using local skills and assets. If a SYU has improved local capacity in some way, what happens if the SYU is dissolved? If the time comes that one of the currently operating SYU's is dissolved, knowledge about the long term implications of this would be valuable.

Comparisons of SYU and Non-SYU Communities

The methodology used here can be modified and expanded to non-SYU communities (e.g., Burns and Alturus). Such a study could provide valuable comparative information. The fact that this study examined two SYU's made the study much stronger than if only one SYU had been included. Still, expanding the research to compare SYU and non-SYU communities would provide an even more complete picture. It would facilitate the examination of respondents' perceptions about how other communities developed differently than their own. It would allow the researcher to explore whether or not some of the community characteristics that respondents attributed to the SYU developed in other communities as well. If so, the question of how these characteristics developed in non-SYU communities could then be explored. This research would also provide insight into why the SYU respondents' perceptions seemed to differ from objective indicators.

Research could be undertaken to further test and explore the hypothesized relationship between community well-being and SYU's that was developed in this study. Tests like those shown at the conclusion of Chapter VI could be carried out to explore differences between SYU and non-SYU communities. Research questions might include:

- Did mills in SYU's operate in a different manner than those not in SYU's (e.g., were their layoff patterns different)?
- Were there differences between the relationships of SYU communities and the Forest Service versus those of non-SYU communities and the Forest Service?
- Were migration patterns in SYU communities different than in non-SYU communities?
- Did residents of SYU communities feel more secure than those in non-SYU communities? If so, did this security translate to changes in behavior, such as in home ownership, business investment, or volunteerism?

Reliable historical data on items such as volunteerism or investment are difficult to find. Alternatively, one could carry out a contemporary longitudinal study comparing the beliefs and actions of SYU and non-SYU community residents. After baseline data were collected for the communities, periodic surveys could be conducted over the coming years. For example, one could use this study to develop survey questions for residents of Lakeview and two comparison communities with a wood products industry. Research questions would be similar to those listed above. For example, it would be interesting to address how residents and business people make investment decisions, and to what extent those decisions are based on events in or characteristics of the wood products industry. Unfortunately, a study that began today would be confounded by the current federal timber harvest situation.

Longitudinal Studies of Forest-Based Communities

Another alternative would be to do a similar study to those described above, but apply it to other community policies. For example, a longitudinal study could be undertaken to compare Adaptive Management Area communities with other communities.

It would be useful to track information about AMA communities and “control communities” over time so that it is not as difficult to put pieces back together later. Without this long term vision for research, we will continue to be frustrated with efforts to pull together historical data to reconstruct past behavior. Again, research questions would follow some of the questions raised by this study, but might be broader than those focused on a comparison of SYU and non-SYU communities:

- What are the specific conditions in these communities that give rise to change?
- How does one community develop differently over time than another?
- How secure do people feel? How does this feeling of security affect their behavior?
- Why do people move to forest-based communities, or move away from them?
- Why do people in these communities decide to expand a business? Start a business? Go out of business?
- What role does the commitment of local wood products industry owners to the community have?
- Why does a positive or a negative relationship between forest-based communities and local land management agencies develop?
- Why do people in these communities give to their community or volunteer?

The above research ideas and questions are starting points for future studies on forest-based communities. Studies that undertake these questions will further add to our knowledge of the relationship between forest policies and forest-based communities.

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Note: Most documents are also on file with the author.

APPENDICES

A. 1944 FEDERAL SUSTAINED YIELD MANAGEMENT ACT

(2) ecosystem function and management, including forest ecosystem research, biodiversity, forest productivity, pest management, water resources, and alternative silvicultural systems;

(3) wood as a raw material, including forest products and harvesting;

(4) human forest interactions, including outdoor recreation, public policy formulation, economics, sociology, and administrative behavior;

(5) international trade, competition, and cooperation related to forest products;

(6) alternative native crops, products, and services that can be produced from renewable natural resources associated with privately held forest lands;

(7) viable economic production and marketing systems for alternative natural resource products and services;

(8) economic and environmental benefits of various conservation practices on forest lands;

(9) genetic tree improvement; and

(10) market expansion.

(d) Facilities and equipment

(1) Authority

Grants made under this section may be used to update research facilities and equipment available to facilitate the conduct of state-of-the-art research in forestry, natural resources, and the environment.

(2) Priorities and criteria

The Secretary, in consultation with the Cooperative Forestry Research Council appointed under section 582a-4(b) of this title, may develop criteria and priorities for the awarding of grants for use under paragraph (1).

(e) Recommendations

The Secretary shall request the Cooperative Forestry Research Council referred to in subsection (d)(2) of this section to provide recommendations regarding grant priorities.

(f) Term

The Secretary may make grants under this section for periods of not to exceed 5 years.

(g) Authorization of appropriations

There are authorized to be appropriated such sums as may be necessary to carry out this section.

(Pub. L. 101-624, title XII, § 1232, Nov. 28, 1990, 104 Stat. 3543.)

CODIFICATION

Section was enacted as part of the Forest Stewardship Act of 1990 and as part of the Food, Agriculture, Conservation, and Trade Act of 1990, and not as part of the McIntire-Stennis Act of 1962 which comprises this subchapter.

SUBCHAPTER IV—SUSTAINED-YIELD FOREST MANAGEMENT

§ 583. Establishment of sustained-yield units to stabilize forest industries, employment, communities and taxable wealth

In order to promote the stability of forest industries, of employment, of communities, and

of taxable forest wealth, through continuous supplies of timber; in order to provide for a continuous and ample supply of forest products; and in order to secure the benefits of forests in maintenance of water supply, regulation of stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife, the Secretary of Agriculture and the Secretary of the Interior are severally authorized to establish by formal declaration, when in their respective judgments such action would be in the public interest, cooperative sustained-yield units which shall consist of federally owned or administered forest land under the jurisdiction of the Secretary establishing the unit and, in addition thereto, land which reasonably may be expected to be made the subject of one or more of the cooperative agreements with private landowners authorized by section 583a of this title.

(Mar. 29, 1944, ch. 146, § 1, 58 Stat. 132.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 583a, 583d of this title.

§ 583a. Cooperative agreements with private owners; privileges of private owners; recordation of agreements

The Secretary of Agriculture, with respect to forest land under his jurisdiction, and the Secretary of the Interior, with respect to forest land under his jurisdiction, are severally authorized, for the purposes specified in section 583 of this title, to enter into cooperative agreements with private owners of forest land within a cooperative sustained-yield unit, established pursuant to said section, providing for the coordinated management of such private forest land and of federally owned or administered forest lands within the sustained-yield unit involved. Each cooperative agreement may give the cooperating private landowner the privilege of purchasing without competitive bidding at prices not less than their appraised value, subject to periodic readjustments of stumpage rates and to such other conditions and requirements as the Secretary may prescribe, timber and other forest products from federally owned or administered forest land within the unit, in accordance with the provisions of sustained-yield management plans formulated or approved by the Secretary for the unit; shall limit the time, rate, and method of cutting or otherwise harvesting timber and other forest products from the land of the cooperating private landowner, due consideration being given to the character and condition of the timber, to the relation of the proposed cutting to the sustained-yield plan for the unit, and to the productive capacity of the land; shall prescribe the terms and conditions, but not the price, upon which the cooperating private landowner may sell to any person timber and other forest products from his land, compliance by the purchaser with such conditions to be required by the contract of sale; shall contain such provisions as the Secretary deems necessary to protect the reasonable interest of other owners of forest land within the unit, and shall contain such

other provisions as the Secretary believes necessary to carry out the purposes of this subchapter.

Each cooperative agreement shall be placed on record in the county or counties in which the lands of the cooperating private landowner covered thereby are located, and the costs incident to such recordation may be paid out of any funds available for the protection or management of federally owned or administered forest land within the unit. When thus recorded, the agreement shall be binding upon the heirs, successors, and assigns of the owner of such land, and upon purchasers of timber or other forest products from such land, throughout the life of such cooperative agreement.

(Mar. 29, 1944, ch. 146, § 2, 58 Stat. 132.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 583, 583d of this title.

§ 583b. Establishment of sustained-yield units to stabilize sale of timber and forest products

The Secretary of Agriculture and the Secretary of the Interior are further severally authorized, whenever in their respective judgments the maintenance of a stable community or communities is primarily dependent upon the sale of timber or other forest products from federally owned or administered forest land and such maintenance cannot effectively be secured by following the usual procedures in selling such timber or other forest products, to establish by formal declaration for the purpose of maintaining the stability of such community or communities a sustained-yield unit consisting of forest land under the jurisdiction of the Secretary establishing such unit, to determine and define the boundaries of the community or communities for whose benefit such unit is created, and to sell, subject to such conditions and requirements as the Secretary believes necessary, federally owned or administered timber and other forest products from such unit without competitive bidding at prices not less than their appraised values, to responsible purchasers within such community or communities.

(Mar. 29, 1944, ch. 146, § 3, 58 Stat. 133.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in section 583d of this title.

§ 583c. Agreements between Secretaries of Agriculture and the Interior, or with other Federal agencies having jurisdiction over forest land

Each of the said Secretaries is further authorized in his discretion to enter into cooperative agreements with the other Secretary, or with any Federal agency having jurisdiction over federally owned or administered forest land, or with any State or local agency having jurisdiction over publicly owned or administered forest land, providing for the inclusion of such land in any coordinated plan of management otherwise authorized by the provisions of this subchapter when by such a cooperative agreement he may be aided in accomplishing the purposes of this subchapter; but no federal-

ly or publicly owned or administered forest land not under the jurisdiction of the Secretary establishing the sustained-yield unit concerned shall be included in any such plan except in pursuance of a cooperative agreement made under this section.

(Mar. 29, 1944, ch. 146, § 4, 58 Stat. 133.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in section 583d of this title.

§ 583d. Notice: registered mail and publication; costs; contents; request for hearing; time; determination and record available for inspection

Before any sustained-yield unit authorized by section 583 or 583b of this title shall be established, and before any cooperative agreement authorized by section 583a or 583c of this title shall be entered into, advance notice thereof shall be given by registered mail or by certified mail to each landowner whose land is proposed to be included and by publication in one or more newspapers of general circulation in the vicinity of the place where the timber is located, and the costs incident to such publication may be paid out of any funds available for the protection or management of the federally owned or administered forest land involved. This notice shall state: (1) the location of the proposed unit; (2) the name of each proposed cooperator; (3) the duration of the proposed cooperative agreement or agreements; (4) the location and estimated quantity of timber on the land of each proposed cooperator and on the Federal land involved; (5) the expected rate of cutting of such timber; and (6) the time and place of a public hearing to be held not less than thirty days after the first publication of said notice for the presentation of the advantages and disadvantages of the proposed action to the community or communities affected.

Before any sale agreement made without competition and involving more than \$500 in stumpage value of federally owned or administered timber shall be entered into under this subchapter, advance notice thereof shall be given by publication once weekly for four consecutive weeks in one or more newspapers of general circulation in the vicinity of the place where the timber is located, and the costs incident to such publication may be paid out of any funds available for the protection or management of federally owned or administered forest land within the unit concerned. This notice shall state: (1) the quantity and appraised value of the timber; (2) the time and place of a public hearing to be held not less than thirty days after the first publication of said notice if requested by the State or county where the timber is located or by any other person deemed to have a reasonable interest in the proposed sale or in its terms; and (3) the place where any request for a public hearing shall be made. Such requests need be considered only if received at the place designated in the notice not later than fifteen days after the first publication of such notice. If a request for a hearing is received within the time designated, notice of the holding of the hearing shall be given not

less than ten days before the time set for such hearing, in the same manner as provided for the original notice.

The determination made by the Secretary having jurisdiction upon the proposals considered at any such hearing, which determination may include the modification of the terms of such proposals, together with the minutes or other record of the hearing, shall be available for public inspection during the life of any coordinated plan of management or agreement entered into in consequence of such determination.

(Mar. 29, 1944, ch. 146, § 5, 58 Stat. 133; June 11, 1960, Pub. L. 86-507, § 1(17), 74 Stat. 201.)

AMENDMENTS

1960—Pub. L. 86-507 inserted "or by certified mail" after "registered mail".

§ 583e. Remedies against private owners: jurisdiction: final orders: "owner" defined

In addition to any other remedy available under existing law, upon failure of any private owner of forest land which is subject to a cooperative agreement entered into pursuant to this subchapter to comply with the terms of such agreement, or upon failure of any purchaser of timber or other forest products from such land to comply with the terms and conditions required by such agreement to be included in the contract of sale, the Attorney General, at the request of the Secretary concerned, is authorized to institute against such owner or such purchaser a proceeding in equity in the proper district court of the United States, to require compliance with the terms and conditions of said cooperative agreement; and jurisdiction is conferred upon said district courts to hear and determine such proceedings, to order compliance with the terms and conditions of cooperative agreements entered into pursuant to this subchapter, and to make such temporary and final orders as shall be deemed just in the premises. As used in this section the term "owner" shall include the heirs, successors, and assigns of the landowner entering into the cooperative agreements.

(Mar. 29, 1944, ch. 146, § 6, 58 Stat. 134.)

§ 583f. "Federally owned or administered forest land" defined

Whenever used in this subchapter, the term "federally owned or administered forest land" shall be construed to mean forest land in which, or in the natural resources of which, the United States has a legal or equitable interest of any character sufficient to entitle the United States to control the management or disposition of the timber or other forest products thereon, except land heretofore or hereafter reserved or withdrawn for purposes which are inconsistent with the exercise of the authority conferred by this subchapter; and shall include trust or restricted Indian land, whether tribal or allotted, except that such land shall not be included without the consent of the Indians concerned.

(Mar. 29, 1944, ch. 146, § 7, 58 Stat. 134.)

§ 583g. Rules and regulations: delegation of powers and duties

The Secretary of Agriculture and the Secretary of the Interior may severally prescribe such rules and regulations as may be appropriate to carry out the purposes of this subchapter. Each Secretary may delegate any of his powers and duties under this subchapter to other officers or employees of his Department.

(Mar. 29, 1944, ch. 146, § 8, 58 Stat. 134.)

§ 583h. Prior acts as affecting or affected by subchapter

Nothing contained in this subchapter shall be construed to abrogate or curtail any authority conferred upon the Secretary of Agriculture or the Secretary of the Interior by any Act relating to management of federally owned or administered forest lands, and nothing contained in any such Acts shall be construed to limit or restrict any authority conferred upon the Secretary of Agriculture or the Secretary of the Interior by this subchapter.

(Mar. 29, 1944, ch. 146, § 9, 58 Stat. 134.)

§ 583i. Authorization of appropriations

Funds available for the protection or management of Federally owned or administered forest land within the unit concerned may also be expended in carrying out the purposes of this subchapter, and there are authorized to be appropriated such additional sums for the purposes of this subchapter as the Congress may from time to time deem necessary, but such additional sums shall not exceed \$150,000 for the Department of Agriculture and \$50,000 for the Department of the Interior, for any fiscal year.

(Mar. 29, 1944, ch. 146, § 10, 58 Stat. 135.)

SUBCHAPTER V—FOREST FOUNDATION

§ 583j. Establishment and purposes of Foundation

(a) Establishment

There is established the National Forest Foundation (hereinafter referred to as the "Foundation") as a charitable and nonprofit corporation domiciled in the District of Columbia.

(b) Purposes

The purposes of the Foundation are to—

(1) encourage, accept, and administer private gifts of money, and of real and personal property for the benefit of, or in connection with, the activities and services of the Forest Service of the Department of Agriculture;

(2) undertake and conduct activities that further the purposes for which units of the National Forest System are established and are administered and that are consistent with approved forest plans; and

(3) undertake, conduct and encourage educational, technical and other assistance, and other activities that support the multiple use, research, cooperative forestry and other programs administered by the Forest Service.

B. POLICY STATEMENT FOR THE LAKEVIEW FEDERAL SUSTAINED YIELD UNIT

POLICY STATEMENT for the
LAKEVIEW FEDERAL SUSTAINED-YIELD UNIT
AS AMENDED ON (2/18/92)

I. General Objectives

The objective of the Act of March 29, 1944 (58 Stat. 132;16 USC 583-583i), is to maintain a stable community or communities primarily dependent upon the sale of timber or other forest products from federally owned or administered forest land. This policy statement is designed to facilitate the accomplishment of this objective for the communities of Lakeview and Paisley. A further objective is to annually harvest the full sustained-yield production (Allowable Sale Quantity [ASQ]¹ and non-chargeable volume²) from the Federal Sustained Yield Unit (Page 3, Section V). The ASQ is developed through the Fremont National Forest Land and Resource Management Plan (Plan)³. This policy statement only directs where and how the available ASQ and non-chargeable volume is to be processed. The Lakeview Federal Sustained-Yield Unit was established by the Chief of the Forest Service, on October 10, 1950, hereinafter called the Unit. Applicable provisions to effectuate this policy statement will be included, as conditions of sale, in timber-sale agreements for the sale of National Forest timber in the Unit.

II. Limits of Manufacturing Area

All timber sold for commercial use from National Forest System lands within the Unit, except as otherwise provided, will be required to be manufactured within (a) the Lakeview community, which is defined as the town of Lakeview and the adjacent area within a radius of six miles of the Lake County Courthouse; or, (b) the Paisley community, which is defined as the town of Paisley and the adjacent area within three miles of the center of town.

Exceptions to the foregoing manufacturing restriction will be made by the Forest Supervisor only: (1) to meet serious emergencies requiring the removal and utilization of timber at rates which are in excess of the capacity of manufacturing facilities in the Lakeview and Paisley communities; (2) to permit the removal and use of timber from rights-of-way over National Forest System lands granted to operators whose plants are situated outside of the Lakeview and Paisley communities; (3) to facilitate the economic harvesting of isolated tracts or of small amounts of timber closely associated with privately owned timber; (4) to make timber available, in amounts not exceeding five percent of the timber available for cutting during any period, for small mills within or near the Unit when primary manufacture at such points is cost efficient; (5) to remove material or species unsuitable for sawlogs⁴ which may be utilized as pulp, or products other than sawlogs, for which no market exists within the manufacturing area; (6) to remove dead timber resulting from fire, windthrow, insects, diseases, or other causes when following usual sale procedures would result in a significant loss to the Government through deterioration of the timber involved; (7) to consummate exchanges of land which do not reduce the amount of timber available for sale in the Unit; (8) to remove timber that has been previously offered for sale within the Unit and upon which no qualified bids were received; provided that no such sale will be offered outside the Unit until the appraisal has been reviewed by the Forest Supervisor; and, (9) to provide for the primary manufacture of wood chips or other products from young timber stands, or from normal logging residues within the Unit boundary but

¹ Net live timber (timber meets utilization standards of timber sale contract).

² Dead timber (timber meets utilization standards of timber sale contract) and other timber not in ASQ which may be live.

³ See Appendix II A(3)

⁴ Material which does not meet utilization standards of the timber sale contract.

outside the designated manufacturing area when primary manufacturing at such location is cost efficient.

III. Definition of Manufacture, Further Manufacture, and Remanufacture

1) Manufacture

The term "manufacture" as used herein is defined as the primary or first stage processing of logs by sawmills, veneer plants, and whole log chipping facilities.

In sawmills, first stage processing will be the manufacture of rough green lumber produced at the green chain.

In veneer plants, first stage processing is considered to be the production of green veneer ready for shipping.

First stage processing for whole log chipping facilities is considered to be the production of green wood chips ready for transport.

The following forest products will be excluded from the foregoing manufacturing stipulation:

Christmas trees,

Pine cones, forest greens, etc.,

Resin-bearing material (stumps),

Fuelwood, posts, poles, pilings, house logs, and similar other products.

2) Further Manufacture

The term "further manufacture" is the processing of lumber pursuant to Appendix II-C.

3) Remanufacture

The term "remanufacture" is the processing of products beyond further manufacture and beyond the production of green veneer, chips, sawdust, bark, and other such materials.

IV. Sale of Timber

Timber will be offered for competitive sale from the National Forest System lands in the Unit in accordance with Forest Service directives and the provisions of applicable laws and the regulations of the Secretary of Agriculture.

In addition to the normal requirements for purchasers of National Forest timber and unless the Forest Supervisor authorizes other action pursuant to the Unit Policy Statement; timber from National Forest lands within the Unit shall be sold only to bidders who: (1) agree to comply with the Unit Policy Statement and, (2) make a satisfactory showing of ability to meet the conditions in the Unit Policy Statement.

Such showing will be made when the bidder has:

- (1) Demonstrated from the previous calendar year's actual accomplishments that all Unit Policy Statement requirements have been met; or,
- (2) A written agreement, which is acceptable to the Forest Service with a Unit concern to meet these requirements; or,
- (3) Plans accepted by the Forest Service to meet these requirements.

The sale program for the Unit will be designed to obtain active competition for the purchase of the timber and efficient logging and manufacturing operations of varying sizes.

Unless approval by the Regional Forester is given in advance, purchasers who have been awarded sales within the Unit shall not bid on, or otherwise become involved in, other offerings of National Forest timber outside the Unit for primary manufacture within the Unit or within the Lakeview or Paisley communities.

National Forest timber will continue to be available in sufficient amounts to satisfy the needs of bona fide settlers, miners, residents, farmers, and prospectors for minerals, for personal and domestic use, in accordance with existing laws, regulations, and Forest Service policies.

V. Rate of Cutting

The ASQ and nonchargeable timber volume of National Forest timber in the Unit, which govern the average amount of timber that may be sold annually, will be stated in the Plan currently in effect. The Forest Service (with public involvement) can, at anytime, revise the Plan. Harvest volumes include ASQ and nonchargeable timber sale volume. Events such as a national emergency, a major conflagration, an extremely damaging insect or disease attack, or other disaster of severe consequence, or periodic resource surveys which produce new resource information will normally warrant the amendment or revision of the Plan if needed⁵.

VI. Unit Manufacture, Further Manufacture, and Remanufacture

The economic stability of the dependent communities of Lakeview and Paisley will be furthered by the greatest reduction and utilization of waste in the woods and at manufacturing plants, as well as by Unit manufacture, further manufacture, and remanufacture of the products of primary processing.

To this end, each purchaser of National Forest timber from the Unit is required to further manufacture their lumber products in the Unit to the greatest practical degree⁶. All material that can be remanufactured within the Unit will be available for sale at competitive prices⁷ to other Unit processing concerns. Such material, when offered but not purchased, may be shipped out of the Unit.

Further manufacturing and remanufacturing of primarily processed veneer, whole log chipping products, and other wood fiber (non-lumber) products is encouraged within the Unit.

⁵ Refers to the National Forest Management Act (NFMA).

⁶ See Appendix II C.

⁷ See Appendix II A(2).

In conducting timber harvesting activities and related road construction work, and in Unit manufacturing and further manufacturing operations, local labor and local contractors will be employed by Unit purchasers insofar as practicable⁴.

VII. Accomplishment of Objectives

All purchasers are required to provide the information described in Appendix I.

A review will be accomplished:

- (1) Normally, during the Forest Planning Process, or more often if needed, the Forest Service will analyze the results obtained through the application of these policies in the management of the National Forest timber resource to determine whether or not the objectives of the Unit are being attained.
- (2) When the closure of all the manufacturing facilities occurs for a period of six months or more in either Lakeview or Paisley. In case of such closure, it will be considered prima facie evidence that the objectives of the Policy Statement are not being met.

Each analysis will include, but will not be limited to:

- (1) Plan output offerings and harvest during the analysis period.
- (2) The efficiency of operating practices being employed both in woods and processing plants and the degree to which new plant facilities are provided to keep the wood utilization program for the Lakeview Unit in step with technical advances made by the pine industry elsewhere.
- (3) Waste utilization in the woods and in manufacturing and remanufacturing plants in the Lakeview and Paisley communities.
- (4) The extent to which National Forest timber from the Unit is further manufactured and remanufactured in the Lakeview and Paisley communities.
- (5) The extent to which local labor is employed.
- (6) Whether any changes are desirable in the exceptions listed in the second paragraph of Section II of this Policy Statement.

If it appears that the objectives of the Unit are not being substantially achieved, an advisory public hearing will be held to consider proposals to correct the unsatisfactory conditions. If such hearing fails to develop practical ways and means of adjusting this program to more fully meet the objectives contemplated by the Act of March 29, 1944 (58 Stat. 132; 16 USC 583-5831), the declaration establishing the Unit may be revoked. If it is determined that objectives of the Unit are satisfactory, the program outlined in this Policy Statement may be continued without interruption or substantive change.

⁴ See Appendix II B (1 and 2).

Appendix to the Lakeview Federal
Sustained-Yield Unit
Policy Statement

Appendix I

Monitoring

The purchaser of National Forest timber from the Unit shall provide appropriate records annually, the accuracy of which has been certified by a Certified Public Accountant. This is to enable the Forest Service to accurately analyze the following:

- (1) Primary manufacturing accomplishment in thousands of board feet MLT (Mill Lumber Tally) for lumber, square feet 3/8 inch basis for veneer, and bone dry units for whole log chips by species.
- (2) Further manufacturing accomplishments by MLT volume processed by species and grade:
 - a) surfaced(S2S)/dry
 - b) rough/dry
 - c) rough/green
 - d) other condition
- (3) Volume of material remanufactured by Unit purchasers including chips from all residues.
- (4) Volume of material by species and grade sold in the Unit for remanufacturing.
- (5) Volume of chips produced from other than whole logs in bone dry units and volume of hog fuel in bone dry tons⁹.
- (6) Percentage of the local labor force working in logging, road construction, manufacturing, and further manufacturing. This includes labor working for contractors, subcontractors, or other agents.
- (7) Number of local contractors employed. The number of non-local contractors employed.
- (8) Documented reasons for use of non-local labor and for use of each non-local contractor.

In addition, records documenting both the availability and the sale of products or materials will be maintained by Unit purchasers and will be provided to the Forest Service upon request.

⁹ Chips: Bone dry unit is 2,400 pounds, dry basis. Hog Fuel: Bone dry ton is 2,000 pounds, dry basis.

Appendix II

A. Glossary of Terms

- (1) Local - Labor or contractors that have a continuing operating headquarters (home or office) within Lake County or within 35 miles (air miles) of the Lake County Courthouse.
- (2) Competitive Price - Price that a seller, willing but not compelled to sell, would take and a purchaser, willing but not compelled to buy would pay. In cases of dispute brought to the Forest Service for resolution the following will be used as guides: Prices not to exceed 105 percent of the prices paid for similar materials sold by Unit mills from previous week's transaction or, in the event that the record of such recent transactions are inadequate, transaction evidence as currently published in Random Lengths or similar publications will be used.
- (3) Plan - Fremont National Forest Land and Resource Management Plan (1989) and as amended or revised.

B. Unless otherwise agree to "practicable" means:

- (1) Timber Harvesting - Available and capable to complete the project at no more than Forest Service appraised estimates plus the pro rata share of the appraised profit and risk estimate and at standards and specifications set forth in the timber sale contract.
- (2) Road Construction - Available and capable to complete the project at no more than Forest Service appraised estimates plus the pro rata share of the appraised profit and risk estimate and at standards and specifications set forth in the timber sale contract.

C. Definitions of the minimum requirements for further manufacturing to the "greatest practical degree":

- (1) For ponderosa pine, white pine, and sugar pine:

<u>Grade</u>	<u>Degree of Manufacturing</u>	
Moulding Stock	Dry	100%
All Shop	Dry	100%
	Surfaced (S2S)	90%
All Other Grades	Dry	95%
	Surfaced (S2S)	95%
- (2) For white fir and lodgepole pine:

All Grades	Surfaced(S2S)/dry	90%
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- (3) For incense cedar or structural grade timbers:

	Rough Green	100%
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- (4) Railroad Ties:

All Grades and Species	Rough Green	100% ¹⁰
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¹⁰Not more than 10% of any species except lodgepole pine will be manufactured into railroad ties.

Approved as Amended in 1992

Submitted 12-23, 1992

Signature redacted for privacy.

✓

Approved 2/18, 1992

Signature redacted for privacy.

✓

***C. POLICY STATEMENT FOR THE BIG VALLEY FEDERAL SUSTAINED
YIELD UNIT***

POLICY STATEMENT
BIG VALLEY FEDERAL SUSTAINED-YIELD UNIT
(Amended September 1994)

MODOC NATIONAL FOREST

I. UNIT PURPOSE AND OBJECTIVES

The purpose of the Act of March 29, 1944, (58 Stat. 132; 16 U.S.C. 583-583i) is to stabilize communities, forest industries, employment, and taxable forest wealth; to assure a continuous and ample supply of forest products; and to secure the benefits of the forest in the regulation of water supply and stream flow, prevent soil erosion, amelioration of climate and preservation of wildlife.

Pursuant to this Act, the Big Valley Federal Sustained-Yield Unit (Unit) was established by the Chief of the Forest Service to provide the maximum feasible permanent support to the Big Valley community from the lumber industry. This policy statement therefore is designed to facilitate the accomplishment of these purposes by requiring that sawtimber designated to be harvested from within the established boundaries for the Unit will be sold under conditions designed to promote the following objectives:

1. Maintenance of steady employment opportunities in the Big Valley community, both within each year and from year-to-year.
2. Employment of local resident labor.
3. Opportunity for those living within and near the Unit to obtain lumber for their local requirements.
4. Efficient operation and maintenance of, and addition to, plant facilities to keep them in step with technical advances in forest products utilization and manufacture which are feasible for adoption under the economic conditions of the Big Valley area. This means, as a minimum, sufficient yard facilities will be available for drying all lumber and sufficient planning mill capacity to be maintained to surface approximately 50 percent of total production.

II. SALE OF TIMBER

1. Except as noted below and as otherwise approved by the Regional Forester to meet emergencies, not less than 80 percent of all national forest sawtimber sold in the Unit must be given primary manufacture within the Big Valley community, hereinafter also called the Big Valley area, which is defined as that portion of the Pit River Drainage commonly known as Big Valley as shown on the enclosed map, and includes the towns of Adin, Bieber, Lookout, and Nubieber. Sawtimber is defined as material suitable for the manufacture of lumber and meets the minimum specifications as to size, percent sound, and net scale specified in the Forest Service timber sale contract. The term "primary manufacture" as used herein shall be considered to have been accomplished when, as a minimum, logs have been cut into rough green lumber containing the various dimensions of lumber usually produced by the sawmills in the Big Valley area.

2. Cull (fiber) logs are exempt from the requirements cited herein. Cull (fiber) logs are logs 8 inches or larger in large-end diameter, 10 feet or more in length and containing less than 25 percent sound material.

3. National forest sawtimber and other forest products will be offered for sale on a competitive basis. Standard Forest Service appraisal methods will be used in arriving at advertised rates. In determining the time and amount of such offerings, consideration will be given to the fact that there are established in the Big Valley area sawmills with a total capacity more than sufficient to utilize the projected sawtimber cut of the Unit.

4. National forest sawtimber and other forest products shall continue to be available in sufficient amounts to meet the needs of bona fide farmers, settlers, miners, residents, prospectors for minerals, and ranchers, for personal and domestic use, as provided by law and by regulation.

5. Processing or manufacturing restrictions for forest products other than sawtimber may be established from time-to-time following an advisory public hearing to consider the proposal and upon the recommendation of the Forest Supervisor and approval of the Regional Forester.

6. Applicable provisions to effectuate this policy statement will be included as conditions of sale, in timber sale contracts and permits covering national forest sawtimber and other forest products in the Unit.

III. ALLOWABLE SALE QUANTITY

1. The average annual amount of sawtimber volume planned to be offered for sale within the Unit is determined by the Allowable Sale Quantity (ASQ) in the Forest Plan. The ASQ is established during the land and resource management planning process, and is defined as the quantity of timber that may be sold from the area of suitable land covered by the Forest Plan during the planning period (one decade). The ASQ is usually expressed on an annual basis as the average annual ASQ. The ASQ for the Modoc National Forest, and that portion of the ASQ attributable to the Unit, will both be stated in the Forest Plan. The portion of the suitable land base attributable to the Unit will be stated in the Forest Plan or the planning records. The Forest Service (with public involvement) can, at anytime, amend or revise the Forest Plan. It is understood that the ASQ is an upper limit and not a guaranteed volume. The Forest Service will strive to meet the sale volume projected for the Unit, but compliance with Forest Plan standards and guidelines and protection of ecosystem sustainability take precedence over timber sale or other output objectives.

Therefore, pursuant to the Forest Plan, for the period October 1, 1992, to September 30, 1999, the average annual sawtimber volume planned to be offered in the Unit is as follow:

	<u>MMCF</u>	<u>MMBF</u> 1/
Pine Type	.452	2.8
Mixed Conifir Type	.758	4.7
Low Productivity Lands (NIC lands) 2/	<u>.241</u>	<u>1.5</u>
Total	1.451	9.0

1/ MMCF = Million cubic feet

MMBF = Million board feet (scribner)

2/ NIC = Non-interchangeable component; mostly ponderosa pine, not suitable for intensive timber production.

2. The ASQ for the Unit currently includes only sawtimber. Additional volume not chargeable to the ASQ (unregulated sawtimber and forest products other than sawtimber) may be sold from time-to-time within the Unit. An estimate of the nonchargeable volume to be sold on the Forest during the planning period is stated in the Forest Plan.

3. It is recognized that market and operating conditions, budget, or other factors may not permit the planned sale of timber at the above-stated Unit's average annual ASQ rate in any single year. Sales of regulated sawtimber therefore will be programmed to promote the attainment of this average rate within plus or minus 5 percent for the plan period. No such program attainment target for unregulated sawtimber and forest products other than sawtimber will be attempted.

4. Adjustments to the ASQ to reflect changes in utilization, marking policy, improved timber inventory information, including more reliable growth and mortality data, unanticipated timber losses, a national emergency, and acquisition of private lands, or other significant factors, may be made at any time upon recommendation of the Forest Supervisor and approval of the Regional Forester.

IV. MAJOR CHANGES

Before any major changes are made in this policy statement, an advisory public hearing will be held at which interested persons will be invited to express themselves on the advantages or disadvantages of the proposed change. A "major change" would be, but not limited to, the following:

1. Proposed changes in the ASQ that would result in an increase or decrease of 20 percent or more in the portion of the ASQ attributable to the Unit;

2. Proposed changes in manufacturing restrictions on sawtimber or other forest products;

3. Proposed changes caused by catastrophic events, or new or existing laws affecting management of National Forest System lands.

V. ACCOMPLISHMENT OF OBJECTIVES

Beginning on October 1, 1999, at not more than 10-year intervals thereafter, the Regional Forester will analyze the results obtained through the application of these policies in the management of the national forest resources to determine whether or not the objectives of the Unit are being attained and whether circumstances warrant continuance of the Unit.

If, as a result of any such study, it is determined that the objectives of the Unit are being satisfactorily accomplished and that the objectives would not be met if the declaration establishing the Unit were revoked, the program outlined in this policy statement will be continued without interruption or change, except for necessary updating of timber sale specifications and the planned sale volume for the next interval.

If on the contrary, studies reveal that the desired management objectives of the national forest resources are not being accomplished; or, if for any other reason, it is found that the objectives for the Unit are not being substantially achieved, a public hearing will be held to consider proposals calculated to correct the unsatisfactory conditions and to adjust the program outlined herein. If such hearing fails to develop practical ways and means of attaining the objectives contemplated by the Act of March 29, 1994, (58 Stat. 132; 16 U.S.C. 583-583i) the declaration establishing the Unit may be revoked.

VI. REVIEW AND APPROVAL

This Policy Statement for the Big Valley Federal Sustained-Yield Unit is approved as amended:

/s/DAVID A. HARCHARIK (for)
Chief, Forest Service

October 18, 1994
Date

D. INTERVIEW PROTOCOL

ID _____

Date/Time _____

INTRO: Thanks again for taking the time to meet with me. Your willingness to do this interview is critical to the success of my project. I want to remind you too that your responses to the questions will be confidential--I won't report any information with your name on it. Is it okay if I tape our conversation? I'll just use the taped information later to fill in my notes. No one else will hear it. Yes/No _____

We'll shift gears a couple of times during the interview. I'll let you know when we're changing topic areas. If I go too fast, or you think of something you want to add later in our conversation, just let me know. There are no "right" answers to any of these questions. I'm interested in your thoughts on these topics. If there are any questions you do not want to answer, or if at any time you want to end the interview, please let me know.

Okay? Are you ready?

OPENING

How long have you lived in the area? Where (approximately)?

PART ONE: COMMUNITY ASSESSMENT

Part of my study entails assessing and describing the characteristics of [*Lakeview/Big Valley*]. I'd like to talk about the characteristics and conditions in the area. I realize that there may have been recent, perhaps significant, changes in your community related to the forest. I'm going to ask that you try to think over the longest time period you are knowledgeable about. When you talk about the community, please try to be specific about the time period you're referring to.

How would you describe [*Lakeview/Big Valley*]? What do you think about when you think of [*Lakeview/Big Valley*] (unique or defining characteristics)?

How would you describe the social and economic conditions in [*Lakeview/Big Valley*]?

Do you think that your community is healthy? Not healthy? Why? (How would you define "healthy?")

Is this the way it's always been? [*If not,*] How has it changed?

One of the concepts people (researchers, policy makers) today are finding useful is “community capacity.” Basically, they’re talking about a community’s ability to adapt and to meet the needs of local people. It includes a community’s ability to respond to threats or to capitalize on opportunities.

There are three components that have been identified as part of capacity. One of them is “physical infrastructure.” What’s meant by that are the physical assets of your community—things like sewer systems, land available for development, how close it is to a larger urban area, the size and diversity of businesses, access to public and private timber, the ability to process the timber locally, and the presence or absence of local wood remanufacturing. It also includes financial capital in the community.

What do you think are the important aspects of physical infrastructure in your community?

How are they important?

A second component to capacity is called “human capital.” It refers to the people in your community—what skills education, experiences, and abilities they have. You might think about the general population of your community, as well as your local leadership.

What do you think are the important elements of human capital in your community?

How are they important?

The last component of capacity is called “social capital.” It has to do with local people’s willingness and ability to work together for community goals. You might think about how people work together—how they may or may not cooperate and coordinate on things that are for the benefit of the community.

What are the critical elements of human capital in your community?

How are they important?

Given that community capacity has to do with the “ability of a community to adapt...and to meet the needs of its residents,”¹ can you think of any other factors related to capacity that we’ve missed?

PART TWO: THE SUSTAINED YIELD UNIT Okay, now we’re going to switch gears and talk more specifically about the SYU. I’ll start with some broad questions about the SYU, then go into some more detailed questions about what effects the SYU might have had on your community.

Are you familiar with the SYU, or cutting circle, on the [*Fremont/Modoc National Forest*]? (*If not, or only vaguely, provide a short verbal description of the units and what policymakers intended the units to do.*)

Has the SYU done anything for your community? [*If so,*] What?

Do you think the policy has met its goals?

Do you think that it has had other effects that might not been a part of its original goals? [*If needed, ask them to “explain more...”*]

Are there things about your community that are different from other communities--things that you think are different because your community has a SYU? [*If needed, ask them: Can you think of any specific examples (specific communities, specific instances)?*]

What do you think the community would be like today if it had not had the SYU?

¹ Definitions and questions related to community capacity adapted from: Doak, Sam and Jonathon Kusel. 1996. “Social Assessment of the Sierra Region: A Focus on Socio-Economic Status and Community Capacity.” Sierra Nevada Ecosystem Project Social Assessment Part II. S.C. Doak & Associates. Portland, OR.

Other probing questions *[If someone identifies something that they think has happened because of the SYU]:*

Can you explain how [XX] relates to the SYU policy? (How does that relationship work?)

How would I go about finding out more on [XX]?

Do you think [XX] would have happened without the SYU policy? Or, would it have unfolded differently some how?

Finally, there are a couple of things related to capacity that I'd like to follow up on.

You identified some essential components of your community's capacity. Do you think that they would have developed "naturally," or do you think that the SYU had any effect on them, either positive or negative? *(If needed, remind them of what they said earlier in the interview; can take them one by one.)*

Has the SYU afforded your community any opportunities?

If so, has your community been able to take advantage of these opportunities?

Has the SYU hindered your community in any way?

I'm also interested in how the characteristics of your community may have affected how the SYU worked.

What, if anything, do you think may have been unique about your community that affected the impact of the SYU?

Is the SYU more or less useful for your community today than it was years ago? If so, what has changed within your community to make it so? What has changed outside of your community to make it so?

If another community proposed to create a SYU, what do you think that community would need to have (assets, characteristics) in order for the SYU to be useful to them? What advice would you give them?

CLOSING

Okay, we've made it through most of the interview! The people I'm interviewing in the area were identified as people who are knowledgeable about the [Lakeview/Big Valley] area, each of you in unique ways. I'd like to just learn a little more about you and your experiences in the [Lakeview/Big Valley] area before we close the interview. *(Ask these questions only if this information hasn't come out in the interview so far.)*

How does your family make a living?

How old are you? (10 year range is okay: 20-30, 31-40, 41-50, 51-60, 61-70, 71+)

Are you involved in any local clubs, civic organizations, or planning committees?

I two final questions:

What would you do to make the SYU policy better; or do you think the policy should be "retired" altogether?

What have I forgotten to ask? (What did I leave out?)

THANK YOU. Okay, that's the end of the interview!

Can you think of any other people in your community who you think I should talk to as part of this study? Who might have views similar to yours? Dissimilar?

Again, thanks so much for your time. Your insight today will be a tremendous help in my research.

Some time in the fall, I'll be sending a copy of my thesis to your community for public use. If you have any questions in the mean time, please give me a call. Do you still have my phone number? If I need to clarify anything from our interview today, is it okay if I call you?

Thanks!