

RURAL COMMUNITIES IN THE INLAND NORTHWEST

AN ASSESSMENT OF SMALL COMMUNITIES IN THE
INTERIOR AND UPPER COLUMBIA RIVER BASINS

RURAL COMMUNITIES IN THE INLAND NORTHWEST

CHARACTERISTICS OF SMALL
TOWNS IN THE INTERIOR
AND UPPER COLUMBIA RIVER
BASINS: AN ASSESSMENT OF THE
PAST & PRESENT

FINAL REPORT: PARTS I & 2

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Basin Ecosystem Management Project
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Dr. Chuck Harris

Co-Principal Investigators:
Dr. Greg Brown
Dr. Bill McLaughlin

College of Forestry, Wildlife and Range
Sciences
University of Idaho
MOSCOW, ID 83843

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Chuck Harris and Bill McLaughlin are professors in the Department of Resource Recreation and Tourism, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, ID; Greg Brown currently is an Assistant Professor at the Department of Forestry at Southern Illinois University in Carbondale, IL.

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PART 1

AN ASSESSMENT OF THE SOCIAL AND ECONOMIC CHARACTERISTICS OF COMMUNITIES IN THE INTERIOR & UPPER COLUMBIA RIVER BASINS

Dr. **Chuck Harris**

Co-Principal Investigators:

Dr. **Greg Brown**

Dr. **Bill McLaughlin**

Research Team:

Jean **Haley**

Chris **Wall**

Taylor **Pitman**

Stephany **Bales**

Lance **Krull**



EXECUTIVE SUMMARY

Research Goal and Premises

The goal of the research described here was to assess the characteristics and conditions of small, rural communities in the Interior Columbia River Basin (henceforth, the ICRB); this area includes the lower basin in eastern Washington and Oregon and the upper basin spanning all of Idaho and western Montana and Wyoming. This research was based on several premises:

- The small, rural community is an important scale for social assessment. For most residents of rural regions like the study area -- even those people living well outside the borders of incorporated towns and cities -- the community where they socialize, shop, and perhaps work or go to church becomes the focus of their social lives.

Social sciences **recognize** the significance of this scale of social organization. They include sociology, which focuses on social groups, organizations, and communities as primary units of analysis, and for which conflict and cohesion are “central forces driving change;” and anthropology, which is centered on social groups, communities, subcultures, and sometimes entire cultures, with a focus on tradition (Machlis and Forester 1994). Rural towns are too small to have neighborhoods, and the only other definable social grouping between individuals and communities is the socio-cultural groups and organizations that often exist within communities; while these groups are often influential in making things happen where they are located, most of the governmental, civic, social, and infrastructure mechanisms function at the community level.

The next highest level of social organization is one of polity: county government. Most data collected by federal and state agencies are reported at a county level. Unfortunately, in many places, conditions and changes in them at the broader level of counties only serve to mask the differences across communities in those conditions and changes and thus impacting their residents in different ways; this aggregation problem reflects the reality of the county as a political entity that, for many residents, may not be a meaningful social grouping and thus relevant unit of analysis.

- The characteristics and conditions of small, rural communities in the region are complex and constantly changing. The present study has examined the characteristics and conditions of the 387 small rural communities in the study area, in part with 1990 U.S. Census data on all communities and, in part, with in-depth, detailed data from a first-quarter 1995 survey of a systematic random sample comprised of 198 communities. The data from the community self-

assessments provide only a snapshot in time, while the in-depth case studies of communities experiencing significant change since 1980 provide information on communities in transition.

- In addition to describing community characteristics and conditions, the research also has examined the *resilience* of the region's communities, which is defined in terms of **a community's ability to respond and adapt to change in the most positive, constructive ways possible for helping mitigate the impacts of change on the community**. This concept was developed by the Science Integration Team of the Interior Columbia River Basin Ecosystem Management Project.

The resilience of a community is relative, so the study focused on degrees of resilience -- the communities can be thought of as representing a continuum from low to high resilience.

Also, a community's resilience can change over time, depending on changing community conditions. Communities can undergo different stages in their development, and different stages of development can reoccur, as reflected by the ongoing boom-and-bust cycles of the American West resulting in changes in different economic mixes and shifts in dominant industries at different points in time.

- The results on resilience presented here represent two kinds of information: residents' perceptions of their communities in 1995, and factual, documented information about community characteristics, such as their population size, actual response to change, and their actual economic structure in the first-quarter of 1995. Both kinds of information are important: Both the ways people see and know their community and believe it to be, and the ways the community actually is, can be important factors underlying a community's development and its responses to change.

Research Methods

Seven sets of data were collected for assessing community characteristics and conditions:

First, empirical data were gathered on all 387 small rural communities in the Columbia River

Basin available from the U.S. Census Bureau. In addition, a random sample of 198 communities

was selected (approximately half of all small rural communities in the region), and 1,350

representatives of these communities completed a "Community Self-Assessment Workbook;" they

then participated in community self-assessment workshops that provided data on their community's current characteristics and conditions (i.e., community character and attractiveness, social cohesion, civic leadership, quality of life, business attractiveness, economic diversity and resource dependence, and the community's preparedness for the future). Community officials were also contacted to provide other documented or recorded details about each community's character and conditions, (e.g., rate of population growth, economic changes, school and utility capacities, distance from major transportation routes or nodes, etc.).

A fourth set of data consisted of profiles of the economic structure of each of the 472 communities (towns and cities) and CDP's in the Columbia River Basin, based on estimates of the proportion of a town's total employment that is attributable to each industrial sector contributing to that town's economy. These data were developed in collaboration with regional economists Dr. Hank Robison and Steve Peterson of the University of Idaho; they provide a profile of each community's economy in terms of employment and earnings for industries, businesses and agencies, which were aggregated into 21 major industrial sectors.

The fifth component of the research assessed and analyzed the characteristics and experiences of 145 communities in the regions identified as *significant change communities*. These communities were indicated as undergoing major change by (1) state economic development officials, agricultural extension experts, U.S. Forest Service forest planners or economic development coordinators; or (2) U.S. Census population estimates indicating changes of +/- 20 percent since 1980. These data-collection efforts focused on identifying the kinds of changes occurring in these communities, the kinds of community responses that were made, and the effects or characteristics of all these factors in terms of community conditions, activities, and

lifestyles. A sample of 80 of these 145 communities were surveyed about the major changes affecting them and the impacts of these changes and their response to them.

Finally, ten communities were identified as having already undergone major changes of the kinds most prevalent in the study area since 1980, and in-depth case studies of these communities were conducted that focused on gaining an in-depth understanding of the major changes

employment in the proportion of employment in traditional “economic base” industries: the largest towns (over 3,000 in population) have a total of 18 percent of jobs, on average, in those sectors, while in the smallest towns, those sectors account for an average 34 percent of all jobs.

- **The Vast Majority of Rural Communities Are Small (Less than 1,500 in Population), and A Community’s Population Size is Significant.** Generally, the larger communities in the region tend to be more resilient; not unexpectedly, those with larger populations tend to have a more developed, extensive infrastructure and manpower base to build upon. Also, the largest towns tend to have more diversified economies. These results support the 1993 analysis of the Westside FEMAT’s community assessment, which suggested that communities with high “capacity to adapt” tended to be larger communities, while communities less able to adapt “tend to have limited infrastructure, lower levels of economic diversity, less active leadership, more dependence on nearby communities, with weaker linkages to centers of political and economic influence.”

- **The Community Resilience Index Indicates The Ability Of Small Rural Towns To Manage Change.** The current study found that a small town's population size is, in fact, the single best characteristic for predicting its current conditions and likely response to change: larger towns tend to be more economically diverse and thus stable. The smaller and less developed a town is, the less vital, attractive, friendly, and attractive for business it is likely to be perceived to be by its residents. Overall, the communities perceived to be more vital, attractive, and healthy generally were the larger ones. A rural town's population size is the common thread for understanding its current conditions and likely response to change: statistical analysis indicates that larger towns tend to be more economically diverse, autonomous, and attractive for business, while the smaller a town is, the less vital, attractive, friendly, and attractive for business it is likely to be perceived to be by residents. The conclusion here is consistent with the basic premise of the plethora of community development handbooks and workshops provided in the 1970's and 1980's: if members of a small rural community want to "develop" their town, they should work to attract new industries and expand its economic base (which will indirectly lead to an increase in population).
- Significantly, the findings of both the self-assessment study and the community economic profiles suggest that the impacts of this improvement extend beyond the economic aspects of community development, whose significance has long been recognized and is reaffirmed here, to its social elements as well. Large rural communities typically represent a more advanced stage of social and civic development than small ones. The importance for community vitality

of active social groups and civic organizations, increased educational infrastructure, availability of services, success in obtaining development grants, and greater preparedness for the future -- all of which increase with a town's size -- reflects the benefits that towns with a critical mass of social capital and infrastructure are more likely to realize. An interesting question for future research, however, is at what size and level of community development the net benefits of growth are maximized, beyond which the social costs of further growth begin to exceed its benefits.

- Finally, our assessments of resilience and significant change communities make clear that change and resilience to it are found all across the various economic types of communities. Interestingly, towns perceived as timber dominant tend to be further from an interstate highway and relatively isolated, but they also tend to be relatively resilient compared to towns in which other industries were perceived to be dominant. The least resilient communities were those in which farming and ranching were perceived to be dominant. A complementary finding was that communities that have changed the most in the last five years tend to be more resilient, which was likely due to their greater experience with coping with change. Also supporting these results are the findings on population changes in towns smaller than 10,000 where mills manufacturing wood or paper products have closed since 1980: although 52 percent of these towns have suffered population declines, populations of an almost equally large proportion (48%) have increased. In total, the change in population of small towns in which mills have closed has been a net increase of 8 percent since 1980.

- **The Rates Of Growth Of Small Rural Communities Vary Across The Region, and They Are Changing in Other Diverse Ways.** The population in the region is continually changing, but with a clear trend towards growth: U.S. Census figures indicate that the population growth between 1988 and 1994 has been 12 percent in Idaho, 7 percent in Montana, 8 percent in Oregon, and 9 percent in Washington; in contrast, the U.S. population grew only 4 percent during that period. A large majority (70%) of the communities across the region reported that they had experienced a moderate to high degree of change since 1990. The largest proportion of Chelan County residents reported growth and population increases, by a 2 to 1 margin (65%). Other important changes included the conversion of agricultural lands to residential and commercial development (32%), an increase in retail stores (26%), increased traffic (23%) and increased crime (22%). A majority, over 55 percent, were somewhat to extremely concerned about the overall changes in their community.
- Growth in employment in the region also has far exceeded the national rate: while employment increased nationwide 8 percent between 1988 and 1994, it increased 28 percent in Idaho in that same period, and around 17 percent in the other states in the region. Recent changes in communities are due to a variety of broader economic influences such as global economic forces, economic diversification, plant modernization, and industrial downsizing (such as laying off company loggers and hiring independent gyppos to reduce the costs of benefits payments).

Some Preliminary Conclusions

- Small rural communities in the Columbia River Basin have always been changing and will continue to change; the idea of community *stability* is a myth that belies a variety of influences such as: the volatility of markets for timber, mining and other traditional extractive industries; the actions of private companies in modernizing and closing plants and periodically laying off or terminating workers; the decreased supply of timber from national forests, sometimes due to past inaccuracies in estimates of existing timber supply, current regeneration and future sustainability; decreasing employment in the industries as a result of all these changes; and the rapidly increasing in-migration of new kinds of workers and residents (retirees, new ethnic groups, etc.) into many of these communities.
- Although closures of mills, mines, and other resource-processing plants can have significant impacts in the case of some communities, past closures have had little effects on the overall community in the case of others. Many mills, for example, have closed, been sold, been opened again, and been closed again in a series of changes over past decades that have not always been related to public land management. Community growth, as indicated by population increases, has occurred in many communities that have lost mills, but not in others.
- Rural communities tend to be more *resilient* (i.e., adaptive to change) than was commonly assumed. Small towns in the Columbia River Basin are unique and complex, and generalizing about the kinds of towns that are resilient to changes is always contingent. For example,

many “timber communities” are fairly highly resilient and healthy, especially in comparison to small ranching and farming communities; with their amenities, diversifying economies, and population growth, the face of these towns is already changing. New policy initiatives could help small communities cope with the changes facing them, and public policy analysts could view the role of resilience in one of two alternative ways. One is that, if government resources are to be expended on rural communities, those lowest in resilience -- ranching and farming communities, in particular -- are the ones that most need to be supported. An alternative view is that, in the name of economic efficiency and equity, America should “cut its losses” in terms of communities that are “on the skids” and losing their human capital. Expending any more societal resources on these communities would not be worth the benefits derived; rather, government resources would be most effectively used on communities that are “at-risk” but have the potential to benefit most from those resources.

- The history of Forest Service commitments and impacts on rural communities has been a continually evolving process. The nature of this process, changing societal values and the changing agency workforce reflecting those values, and the learning that is occurring within the agency, all underscore the importance of sound forest planning; information like that being provided with this research can be important for revising forest plans and planning individual projects. It can also be useful for the planning and management efforts-of the towns themselves and those of the counties and states in which they are located.

INTRODUCTION

Research Goal and Premises

The goal of the research described here was to assess the characteristics and conditions of small, rural communities in the Interior Columbia River Basin (henceforth, the ICRB); this area includes the lower basin in eastern Washington and Oregon and the upper basin spanning all of Idaho and western Montana and Wyoming. This research was based on several premises:

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The next highest level of social organization is one of polity: county government. Most data collected by federal and state agencies are reported at a county level. Unfortunately, in many places, conditions and changes in them at the broader level of counties only serve to mask the differences across communities in those conditions and changes and thus impacting their residents in different ways; this aggregation problem reflects the reality of the county as a political entity that, for many residents, may not be a meaningful social grouping and thus relevant unit of analysis.

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Why the Community Assessment?

Throughout history, communities and their residents have been shaped by the interplay of the forces that cause social change. The American West, for example, is sprinkled with ghost towns that stand as monuments to the power such forces can exert on communities and their residents. In the United States, such changes have traditionally been viewed as part of the natural course of things, with the outcomes interpreted as demonstrations of economic forces that were beyond anyone's responsibility to control.

Branch et al. 1982, p.5

The American West is experiencing a process of change that began with the region's settlement by immigrants from the nation's coasts and has continued on until today with the evolving economic, cultural, and human migration patterns in the United States. Also, potential changes in federal land management practices like those being examined by the Interior Columbia

River Basin Ecosystem Management Project can **affect** the physical, cultural, social, political, legal, economic, psychological nature of the human environment (Gramling and Freudenberg 1992). These effects are especially pronounced in a region having a large percentage of federal land, like the Interior Columbia River Basin (or ICRB).

The practitioners of social assessment presume that local, state and federal governments have a responsibility to help minimize the negative effects of the changes set in motion by social forces and **shifts** in land management policy — or, at least, to prepare their citizens for those effects. This report focuses on small rural communities in the ICRB, with the purpose of providing a better understanding of rural communities in the wake of current and possible future changes in natural resource management. The report explores questions that include: What is the current character of communities in the Inland Northwest and Northern Rockies? Do they want to remain largely as they are or do they seek change? What makes a community more or less resilient? How do communities view the future, and what are they expecting of it? How might the communities be impacted by potential changes in the policy direction of Forest Service and Bureau of Land Management? What is the capability of communities to deal with these changes and prepare themselves for the future? How can the government ease the transition of these communities and the social, political and cultural groups that are important components of them?

A Brief Summary of the "Westside" Social Impact Assessment Process Conducted by the Forest Ecosystem Management Assessment Team

The social science component of the "Report of the Forest Ecosystem Management Assessment Team" (or FEMAT), which was prepared in 1993 for the "spotted owl forests" west of the Cascade Mountains, is briefly reviewed for comparison.

The objectives of the FEMAT social impact assessment (SIA) were to:

1. Describe the nature and distribution of the social values and uses found in the range of the northern spotted owl.
2. Describe how these values and uses would be affected by various management options.
3. Identify how different constituents might be affected by the changes stemming from the options.
4. Identify opportunities or strategies for dealing with impacts of these consequences on people and their communities. (FEMAT 1993, p. 5)

The FEMAT process conducted by the "Westside" social assessment team included the following components (1993, pp. 6-8):

1. Commissioned papers to obtain expert opinions on a variety of issues having to do with the potential social impact of the range of federal options for the "spotted owl forests. "
2. An examination of Forest Service and the Bureau of Land Management public involvement records.
3. A survey of county extension agents throughout the region.
4. Two workshops with government employees and extension agents from around the region to assess the relative ability of communities to deal with possible management options and other changes in the region.
5. An assessment of the nature and value of the region's recreation, scenic and subsistence values by conducting a number of information-gathering efforts:

- A survey of Bureau of Land Management (BLM) and U.S. Forest Service (USFS) offices to see what information was available on these values. Recreation opportunities and visual quality objectives also were assessed, based on forests and districts land-use allocations.
- A case study of agency representatives from selected areas, including two days spent by BLM and USFS representatives together mapping the location and extent of various social values, with the purpose of assessing how management options would affect these values.
- A nominal group exercise whose purpose was to "...define barriers and impediments to integrated interagency resource management and to identify opportunities for overcoming them."

The FEMAT team was severely constrained by time (only a few months were available to complete a full impact assessment of the extensive "spotted owl forests" region). Nevertheless, as the team later wrote: "While acknowledging the limits imposed by the above constraints, we also want to assert that this social assessment represents one of the most significant efforts ever undertaken to examine the social consequences of federal forest management" (p. 5, FEMAT 1993).

The present research expands on their work and provides, in turn, a basis for gaining greater knowledge in the important arena of social assessment.

Why the Focus on Smaller Communities?

One of the simplest rules of ecosystem management is: think big. Much of the impetus for a region-wide, landscape-based assessment such as the ICRB Ecosystem Management Project has been precisely to follow this rule, while doing so with an emphasis on an integrated, multi-resource analysis. To assure sustainable ecosystems, the area to be managed must be large enough to account for species interdependence, allow for long-term adaptation and catastrophic

change, and assure the healthy functioning of the ecosystem at all levels. Unfortunately, bureaucratic, administrative and political boundaries have often been a hindrance to confronting and reversing the challenges to species conservation and a healthy ecosystem. As environmentalists often say: Nature knows no borders.

However, humans do. Region-wide, cross-agency coordination can be critical for providing a consistent message and overall direction to communities.

Unfortunately, larger-scale areas like watersheds, ecological provinces, or whole regions may not be the most appropriate level for conducting social assessment (Krannich et al. 1994). Historically, social assessments have focused on the level at which people experience the majority of their ties to other people, their work, the services they are provided, and their network of friends and family — that is, on the *community*. There is good reason for this. Local communities are more than just a place where people happen to live. In an essential way, communities “constitute the fabric of day-to-day life” (pp. 48-49, Krannich et al. 1994). Some analysts would go further to suggest that the slower pace in rural communities provides all of us with a fundamental tie to social norms and traditions. As Branch and associates write: “The linkages between community resources, social organization, and well-being and the important role communities play as administrative and participatory units make it essential that social assessments utilize an analytic framework that effectively focuses attention on the community” (pp. 25-26, 1982).

The Guidelines and Principles issued in 1994 by the Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment (1994; hereafter, the “Guidelines and Principles”) make the point that, ‘just as the biological sections of EIS's devote particular

attention to threatened or endangered plant and wildlife species, the socioeconomic sections of EIS's must devote particular attention to the impacts on vulnerable segments of the human population" (p.4, Guidelines and Principles 1994). In the case of analyzing the effects of federal land management actions and direction, the most critical may be small, rural communities. In addition to the centrality of small communities in the lives of people living in rural areas, rural communities may be especially vulnerable when they lack the leadership necessary to weather a complex set of changes (Israel and Beaulieu 1990). As conditions worsen and resources become more limited, local governments often are forced to transfer their decision-making and become more reliant on state and federal governments (Weeks 1990). This may further limit local initiative and creativity, especially in the face of economic downturns. In addition, small towns often lack the economic capacity to outlast downturns in a particular industry . They may not have enough skilled labor available to attract new business and compete (Malecki 1988; Powers 1994). Rural communities also often lack adequate basic infrastructure (i.e., water, sewage, etc.), much less the communications and information infrastructure that can be important for economic growth (Dillman et al. 1989). As a consequence of all these factors, the communities may also lack the financial resources and economic diversity to withstand changes that impact their economic base.

For all of these reasons and others, rural communities are especially vulnerable to change. Consequently, they are especially relevant level for social assessment. However, not all social scientists agree that the geographic community is always the appropriate level of analysis. Carroll (1994), for instance, makes the point that a "community" is "more than a municipality." When he refers to community, Carroll is

talking about groups of people such as Tar Heel shake and shingle workers, loggers, rural environmentalists, Native Americans and ethnic/cultural groups who gather special forest products. In many ways, the attachment these people have to each other, the land, special places and their life in common constitutes more of a sociologically definable community than the artificial boundaries of many towns. (Carroll 1995).

In the light of his and other similar concerns, the FEMAT social assessment team suggested a compromise position:

A definition of community has long troubled scholars, who recognize that even in specific locations shifting constellations of people comprise different communities with different purposes (for example, occupational communities such as loggers). However, geographic communities are important from an economic and policy standpoint, especially for isolated areas whose fortunes are linked to their location. They also embrace occupational communities; thus, programs directed at geographic communities likely will reach members of occupational communities and their families where they live. (p. 33, Clark and Stankey 1994)

In one sense, the present research deals with some of Carroll's concerns by exploring "special places" within the community and outside it. It is not a complete solution to the problem. Other analyses of the Interior and Upper Columbia River Basin have focused on the level of the stakeholder. Nonetheless, the community focus provides a wealth of information on the status, vulnerability, needs and aspirations of local communities — the locus of everyday life and the fabric of our society.

Major Findings from the Literature on Social Impact Assessments (SIAs)

The following points represent some of the more important, relevant conclusions found in the literature on social impact assessments (SIAs):

1. Social impact assessments should have more of a temporal component.

One short-coming of many social impact assessments has been that an assessment is conducted prior to the start or implementation of a project, but not throughout the life of a project (Geisler 1993, Gramling and Freud&berg 1992). Variables can change over the life of a project and in the long-term -- variables including federal policy, changing regional developments, human populations, land ownership, land value, and human values (Geisler 1993) -- and a change in any one of these variables can significantly alter the impact of a project or policy change. Also, the impacts of a project or policy can begin at the time a project or policy is initially mentioned, and at any time during the actual implementation of the project or policy (Gramling and Freudenberg 1992). As a partial response to this deficiency, the research on communities is presented in this report included an analysis of communities that have changed in the past, the nature of their changes, and their responses to these changes; this analysis provides insight into how similar communities might be expected to change in the future.

2. Public participation in SIA is essential.

In addition to the aggregation of data on the critical variables from secondary sources, a face-to-face exchange of information and ideas among active, involved community members was achieved for the current assessment in the workshop setting. Although the reasons for this approach are detailed in the methods section of this report, suffice it to say here that a wide body of research that suggests public participation in SIA is more effective in both the long and short-term than a "hands-off," technocratic approach to collecting data. Taylor and Bryan (1990), for

instance, observed that “the most effective practitioners of SIA have been those who have moved away from established work environments to undertake their work” (p. 43).

This point raises the practical component of the approach of the research taken here, which is that the local population is truly a source of expert opinion, especially in the case of subjective judgments for assessing communities. Local perceptions and attitudes, how the community is organized, and how its citizens think, perceive, and respond can sometimes be as important for the impacts of a project as the current situation in a community and the details of the project itself (Branch et al. 1982, Guidelines and Principles 1994).

The Guidelines and Principles (1994) point out the tendency to dismiss concerns of the local population as being imagined or perceived — as if they were irrelevant. Yet the positions of various interests are all formed by perceptions. How can officials and managers respond to them if perceptions are summarily dismissed? Dismissing a group or individual as “emotional” or “misinformed” does nothing but increase the resistance and conflict in a community. However, it would be costly and of questionable value to sample all individuals in each of the 198 communities, especially as we were seeking informed understanding of the particular structures and processes of small communities (e.g., quality of leadership, effectiveness of local government, etc.) that some community residents simply would not have: many of the questions about communities might be beyond the knowledge of those only superficially involved in their communities.

Nonetheless, the widely divergent views of community residents can have value for understanding potential impacts: “Although individuals of different ideological persuasions can be expected to differ greatly over what they would prefer, such people can be expected to arrive at

reliable estimates as to what will happen, regardless of their preferences” (p. 236, Freeman and Frey 1986). This same point can be made about perceptions of general recent conditions in their community. The community assessment workbook and workshops used in the present research took advantage of this wealth of local knowledge and the opportunity to involve community residents through the sharing of their perceptions of their communities.

3. The extent to which rural economies are dependent on natural resource extraction is being questioned.

Changes that shifting demographics, evolving technologies, clashing values and conflicts over resource uses have brought the rural West are closely tied to the region’s shifting economic base and priorities. It has commonly been asserted that the resource extraction industries are the most essential industries for rural economic survival. However, as economies change and retirement incomes become more important, this may not be the case (Rasker 1993, 1995; Powers 1994).

Rasker (1993) examined what he called the two “myths” about the Greater Yellowstone Ecosystem: (1) agriculture and the resource extractive industries are the only basic industries; and (2) promotion of the extractive sectors is often deemed to be necessary and desirable, because all that rural communities have available to them is the timber, oil, gas, and minerals found on the land. Rasker concluded that retirement income in the Greater Yellowstone Ecosystem area was a larger part of the regional economy than grazing, mining and timber combined. Furthermore, he warned that continued emphasis on resource dependence and over-reliance on export-oriented development “places the local economy at the mercy of economic forces outside its control” (p. 117, 1993). Johnson (1993) goes so far to suggest that some rural Northwest communities

resemble “developing countries” in that resource management decisions are made by agencies or corporations headquartered elsewhere, resources are exported with little value-added processing, and much of the income that is generated flows out of the community.

Powers’ (1994) conclusions from his study of the North Cascades Ecosystem were similar to Rasker’s. He found that in 1991, retirement-related income was eleven times as large as income derived from lumber and mining in the North Cascades. Powers argues that a healthy environment leads to a healthy economy and that environmental quality is anything but non-economic: “The primary economic resource should be seen as the high quality natural environment, and extractive activities that threaten to degrade the environment should be assumed to be incompatible with local economic stability” (p. 12, 1994).

Significantly for this thesis, the economic calamity forecasted for the Northwest following the imposition of Option 9 has never occurred. The *New York Times* reported in 1994 that “three years into the drastic curtailment of logging in federal forests, Oregon, the top timber-producing state, has posted its lowest unemployment rate in a generation, just over 5 percent.” The newspaper article noted that, although Oregon had lost 15,000 jobs in the forest industry in the previous five years, the predicted number was 100,000 job losses, and the state had gained 20,000 jobs in high technology, with workers being retrained for some of those jobs.

Of course, there is not complete agreement with these kinds of analysis. Although past forecasts of economic disaster may not be occurring on a statewide level, some have suggested that arguments of minimum impacts on rural communities still are questionable (Lee 1991, Lee et al. 1991). For example, some researchers note that economic changes also bring lifestyle changes that may be significant: as Krannich et al. (1994) suggest: "(I)n some cases...alternative economic

activities may be incongruent with the social meanings associated with resource use and the lifeways of some cultural groups” (p. 52). A purely economic analysis overlooks some impacts on certain occupational groups and misestimates their ability to adapt and change (p. 152, Carroll and Lee 1990).

4. Much of the SIA literature focuses on social responses to a specific project and its consequences, while the focus of the Westside FEMAT was on the levels of communities’ “capacity to adapt” to an array of possible changes in forest management activities.

The FEMAT social science team termed the ability of a community to weather a change in federal land management “community capacity.” The panel it convened from Washington, Oregon and California identified a number of factors that affected a community’s capacity to adapt to change, including but not limited to: economic diversity (the most often mentioned); the degree of timber dependence (including employment and the availability of private timber); local leadership; location; history of community-based improvement efforts; community cohesion and conflict; civic involvement; local control of resources; community attitude; cultural identity; population size; and income levels (FEMAT 1993).

Unfortunately, the history of the literature on risks to communities has largely focused on economic analysis (FEMAT 1993). While the current research on the ICRB acknowledges the importance of economic studies (this report includes a separate economic analysis of the region), the community approach being taken here reflects the concerns of the FEMAT investigators that economic analysis alone provides a narrow definition of how communities depend on natural resources. Timber dependence or any kind of economic or industry dominance in a town, while important for some communities within the study region, was not the sole focus of the current

assessment. The Westside analysis, it might be noted, concentrated on forest management issues and attempted to transcend simplified polarizations such as "owls vs. jobs" to explore how "communities are more than just bedrooms for wood workers" (p. 66, FEMAT 1993). That assessment stressed that the rural community's connection to natural resources is more than just a pay check; it has often been the basis of the community's customs and culture. Exploring these connections means that community assessment must move beyond easily measurable, objective data to subjective attitudes and perceptions such as measures of "quality of life." Branch et al. (1982), for instance, recommend an approach to measuring social well-being that combines objective and subjective measures, including rates of the usual indicator behaviors, the access to resources by various groups, and the perceptions of community and individual well-being.

Many of the factors the FEMAT panelists identified as affecting community capacity have to do with the hard-to-define concept of "quality of life." Branch et al. (1982) suggest some of the factors affecting quality of life:

Among other things, these factors can include feeling a part of the community where you live; knowing where you stand in relationship to other people; having a sense that you and people in your community have control over the decisions that affect your future; knowing that your government strives to act in ways that benefit everyone equitably, rather than benefiting just a privileged few; living without undue fear of crime, personal attack, or environmental hazard; and feeling confident that your children will get a fair start in life. (p. 7)

Researchers with limited time and money can only go so far in measuring these factors within a community, but the current research reflects Krannich et al.'s (1994) concerns with the well-being and quality of life experienced by affected individuals, groups and populations. This

assessment research shares their suspicion of the reliance on easily measured social indicators, such as employment and income levels, crime rates, and divorce rates.

These kinds of concerns were integrated into the current study's "critical variables" and indices to assess a community's capacity to weather change (or the "risk" to that community). Also, other kinds of connection and dependence, such as how community members value the "special places" in and around their communities, were examined, and the ways they form another component of community capacity or cohesiveness considered. Conducting an assessment that moved it beyond simplistic and thus questionable indicators was exactly the purpose of measuring the 12 critical variables examined in the present study.

THE ASSESSMENT OF COMMUNITIES FOR THE ECOSYSTEM MANAGEMENT PROJECT

The assessment of communities as initially conceived was to focus on their demographic, cultural and civic aspects; economic conditions were approximated through resident perceptions of the economic diversity of their communities and their dependence on various resource-based industries. A process for community self-assessment was deemed particularly important. It became apparent that collection of data reflecting the temporal dimension of community experience, capturing communities' responses to changes and the longer term impacts of those responses, would be important. Information on the economies of the individual communities was not available, and obtaining it was deemed infeasible until half-way through the study period. Eventually its value and significance were recognized and some, although minimal resources, for obtaining this information were provided.

The Community Self-Assessment Study

Developing a Strategy for Sampling Communities

Originally, the scope of work outlined for the community assessment team by the ICRB Ecosystem Management Project was to identify 10 of the region's counties growing the fastest in population along with 10 of the fastest declining counties. (Population growth or decline was based on the percentage change in total population to account for different 'population sizes.) The community assessment team would select two communities from each county (for a total of 40 communities) to study.

On closer consideration, this approach posed a series of problems: One problem with sampling at the county level is the lack of any evidence of any statistically significant relationship between growth or decline of county populations with the rise and fall of individual communities, the focus of our study. Communities vary greatly within counties, as much as they do between counties. A secondary challenge was to develop a basis for selecting communities, given major differences in characteristics such as size, growth rates, land use, and geographic setting.

One solution was to abandon relying on counties as a frame of analysis. The focus was shifted to the communities themselves, and a list of the 40 fastest growing and fastest declining communities was generated.

This change, however, led to another consideration: What about communities whose population remained constant? A third category of communities of this kind of minimal population change was added. Three categories of communities would be sampled with a sample of 20 communities from each category, for a total of 60 communities.

A problem with this approach was that it led to a lopsided selection of communities that would not be representative of the region. For instance, the group of communities in the category of *declining communities* consisted largely of communities with populations less than 100, where relatively minor loss of population has a profound effect on any percentage change in population.

The sampling strategy based on population change was abandoned. Instead, a research design based on a simple random sample, without considering population change, was developed that would yield a representative sample of communities from across the region, with a variety of populations and sizes.

A final problem encountered was the inclusion of “Census Designated Places” (or CDPs), which are unincorporated communities that “comprise densely settled concentrations of population that are identifiable by name, but are not legally incorporated places;” examples would be suburbs of cities or towns within Indian Reservations. To qualify as a CDP for the 1990 Census, an unincorporated area must have met the following criteria (in all states except Alaska and Hawaii): 1,000 or more persons if the CDP is outside the boundaries of an urbanized area (UA) delineated for 1980 census or a subsequent special census; 2,500 or more persons if it is inside the boundaries of an urbanized area; and 250 or more persons if it is outside the boundaries of a UA delineated for the 1980 census and within the official boundaries of an American Indian reservation recognized for the 1990 census. Although the Census Bureau has identified and delineated boundaries for CDPs since 1950, the boundaries of CDPs have no legal status, nor do they have officials elected to serve traditional municipal functions. It was decided that CDPs that were suburbs of cities were not to be included in our sample, based on the assumption that the fate of a suburb of a city -- Spokane, for instance -- would rise and fall largely with its city, and not, as with a smaller, isolated community, on its own. Given that CDPs are unincorporated areas, the only ones included in the present study were ones associated with towns on reservations.

The sampling element that was finalized for the study was the community. Thus, the present research focuses on the 387 small communities in the ICRB that are incorporated towns with populations of less than 10,000. To ensure statistical significance and an adequate number of cases to conduct multivariate analyses, a sample was needed of as many of those communities in the region as possible: Half or approximately 194 communities were targeted to be sampled as a

reasonable number given potential budgeting and logistical constraints. These communities were selected randomly.

Development of The Community Self-Assessment Process: What and Why?

*We recommend that further region-wide assessment should include a community self-assessment component. Self-assessment is a logical part of any mitigation measure as it will reflect the values of people living in the communities; provide a vehicle for integrating local knowledge in policy decisions; and contribute to a sense of community-level ownership in the resulting recommendations. . . . self-assessment may prove beneficial by stimulating **dialogue** about local conditions among locals that can lead to community self-development.*

FEMAT (1993, p. 75)

Because of time constraints, the Westside FEMAT social assessment team had been limited in its assessment of communities to a survey of extension agents to gather information about the communities they worked in and around. In the present assessment, the researchers visited many of the communities themselves and learned directly from “key informants” about their communities: these are citizens who are active and involved in their communities and who have a greater knowledge of the workings of their communities -- the politics, history, resiliency, cohesiveness, and so forth -- whom we have called “opinion leaders.” The researchers concluded that the most effective and efficient way to conduct the research and involve local publics was to organize focus groups comprised of a optimum number of these community opinion leaders to represent a variety of backgrounds and view points, thereby enabling these key informants to express their own view of themselves and where their communities were going, from a broad range of backgrounds and viewpoints within that community. The information sought from these

groups, then, was not observable, recorded data, but the perceptions of community members and their attitudes about how possible future projects would be received and their likely impacts.

(R)esidents' perceptions often do not correspond exactly to objective changes, but perceptions can have a powerful influence on individual and social action. If people perceive that they do not have access to resources, for example, they can be as closed off from the resources as if a formal system blocked their availability.

Branch et al. (1982, p. 36)

The community assessment workbook was designed to enable community members themselves to dispassionately describe the characteristics of their communities and changing conditions in them in a careful, thoughtful, and balanced way. There are a number of sound reasons for seeking this "insiders perspective." Common sense suggests that active, involved community members will know their community best and can provide the best source of information. Moreover, the researchers can have their own set of "outsider's" assumptions and biases about the functioning of different communities. As Palinkas et al. (1985) note:

Unless the investigator can take into account his own culturally constituted set of theoretical and methodological limitations, he can never hope to understand the present pattern of social relations or make projections concerning future changes in the social, cultural, economic, and institutional life of the communities. In order to secure this understanding and make projections with any confidence, an insider's perspective is necessary. (p. 15)

Neutral investigators can play an important role in gathering a variety of opinion about a community, of facilitating the sharing of information, and filtering through the various viewpoints within a community. Although community members can, of course, have their own biases and viewpoints, they are the biases of insiders, of actively involved community members who are the

experts on their communities. As Branch et al. (1982) have observed, in addition to knowing what changes will be occurring, "(i)t is also necessary to know what those changes will mean to the people who will be affected by them" (p. 8).

It is unclear why anyone from the communities would accept results about local communities if at least some of the local "experts" weren't consulted. "People will not support what they don't understand," write Clark and Stankey (1994), "and they cannot understand that in which they are not involved" (p. 35). Who can blame a community for being suspicious about a study conducted from afar that treats them as little more than demographic data, or where outsiders discuss with outsiders what must be occurring in that community?

A Literature Review of Critical Community Characteristics

Two surveys of recent research were conducted for the assessment: one was a phone survey of researchers currently studying topics relevant to the assessment to familiarize the researchers with the present state-of-knowledge on rural communities, and particularly resource-based communities, and the second was a literature search to review other sources for understanding the key characteristics of communities. The first informs much of the background and discussion found elsewhere in this report, while the second is the focus of this discussion. The various articles and books cited here have dealt in one manner or another with the characteristics of communities in general, and, in many cases, with the characteristics of rural communities in particular. The list is not exhaustive, but the literature reviewed provides a solid theoretical and empirical basis for the "critical variables" and their operational definitions as used in this study.

Community Character

Every community is unique, and residents have their own feelings and perceptions about a community's attractiveness or character. Community attractiveness is a combination of many things that are often highly subjective, ranging from the community's visual appearance to the places outside the community that contribute to its attractiveness. An important component of community character is the level of attachment that residents have for a community.

The attractiveness of a community of a community has generally been couched in terms of the areas surrounding the community. The "appropriately aesthetic setting" (Pulver 1989, p. 6), "environmental integrity, and physical beauty" (Johnson 1993, p. 7) of these surrounding areas is described as being an important draw for new residents and businesses. Castle (1991) states that "an important part of rural development strategy is to make the rural areas attractive as places to live" (p. 47). Powers asserts that "attractive qualities associated with the social and natural environments become both important determinants of local economic well-being and important source {sic} of local economic vitality" (1994, p. 9). Thus, the attractiveness of a community's surroundings is viewed as a potentially important factor in that community's economic well-being.

Attachment to place is an important component in how people feel about the character of their community, and is generally characterized as having several different components. The indicators used by O'Brien and associates (1994) to measure residents' attachment to community were perceptions that a community is an ideal place to live, satisfaction with a community as a place to live, having a lot in common with other people living in the community, and feelings that they fit in the community. Brown (1993) distinguishes between community satisfaction and community attachment. Community satisfaction is measured by evaluation of a community as an

ideal place to live, the desirability of the community as a place to live, and satisfaction with life in the community. Community attachment is measured by social interaction, the degree to which residents feel they fit in the community, and how much residents had in common. Brown also includes length of residence and organizational involvement and membership as variables. Goudy (1990) uses local bonds, including friend and relative networks and organizational memberships, and local sentiment, including feeling at home in the community, interest in knowing what's going on in the community, and response to the possibility of moving away as indicators of community attachment. As is indicated above, and has been emphasized in the literature (Stinner et al. 1990), community attachment is multi-dimensional.

Community Cohesiveness

The ability of a community to manage the ongoing changes in society can be greatly affected by the capacity of the residents to work together to get things done (Johnson 1993). This capacity to work together is referred to as the cohesiveness of a community, or more generally as the sense of community. Communities with greater cohesiveness are more willing, and more able, to work together to achieve goals, to complete projects, and, particularly important today, to manage change.

The cohesiveness of a community, as defined above, has been addressed by several authors in the literature, and consists of several components. One component is the ability to organize and cooperate to achieve goals or complete projects (Howell and Bentley 1986, Johnson 1993; Lackey et al. 1987, Poplin 1979). A second component is the capacity to achieve goals (Lackey et al. 1987, Shaffer 1990). The availability and quality of local leadership is also cited as

an important factor in the ability of communities to get things done (O'Brien et al. 1991, Lackey et al. 1987). Shaffer cites a "positive attitude toward experimentation" (1990, p. 76) as being important, and further asserts that

the greatest asset communities have in their struggle to maintain economic viability is not distance, natural resource base, or current economic structure but their own creativity and insight" (p. 85).

Thus, a willingness to take chances and try new things becomes an important factor as well.

There is an additional factor that appeared in the literature which merits special attention. In addition to the above factors, it has been proposed that communities which have successfully engaged in community action in the past will be more likely to, and more capable of, doing so in the future (O'Brien et al. 1991, Shaffer 1990). The idea here is that with community action, as with many other things, practice makes perfect.

Community Services

Community services are those things, provided by either the private or public sectors, that contribute to the livability and desirability of a community. Included under community services are things such as fire and police protection, schools, medical facilities and personnel, retail facilities, recreational facilities, churches, etc. All of these factors combine to make a community more (or less) livable in the minds of actual or potential community residents.

A search of the literature did not yield an operational definition of community services that was as comprehensive as is being used in this study. The majority of the literature dealing with community services deals with the subject of medical services in general, and with mental health services in particular.. Pulver describes a "high-quality living environment [as including] access to

good schools, excellent health care, physical security, recreational and cultural opportunities, [and] satisfactory housing and public amenities” (1989, p. 6).

Christenson studied libraries, education, law enforcement, medical services, state parks, cultural activities, public parks, recreation, child care, food stamps, industry, apartments, and family doctors in his research on the quality of community services (1976). In a study of contentment with local services by Rojek and colleagues (1975), factor analysis yielded four clusters of service types: medical services, including hospital-medical facilities, medical doctors, and dentists; public services, including streets and/or roads, water supply, fire protection, and police protection; educational services, including elementary and high schools; and commercial services, including shopping facilities, recreational facilities, job opportunities, and educational services for the physically and mentally handicapped.

Two important points about services appeared in the literature examined. The first is that the availability of services can play an important role in attracting retirees to an area, and retirees can have a significant positive effect on economic stability (Cook 1990). It is not a major step to also assume that services play a role in attracting other types of individuals, urban refugees, for example, to an area. The second important point is that “the evaluation ‘of whether a service is *adequate* or not is clearly a value judgment based upon the preferences and expectations of the person making the evaluation’! (Williams 1976, p. 204). Thus, although the availability of services may attract newcomers, it may be **difficult** for a community to plan for a level of service delivery that will either attract or deter potential new residents, or make a community more livable.

Community Autonomy

The degree to which communities are economically, socially, and physically linked to neighboring communities, to the region, and to the nation as a whole, has implications for the autonomy of a community. Community autonomy refers to the control that a community has over “events and activities that occur within [its] boundaries” (Poplin 1979, p. 150). In the past, rural communities had great control over their own destinies, but, particularly with economic matters, these communities are being **affected** by forces “far broader than those that originate within or can be controlled by the communities themselves” (Freudenburg 1992, p. 328). Small, rural communities are often at the mercy of decisions made in board rooms in distant cities.

The concept of community autonomy is not without a certain duality, however. On the one hand, autonomy can be viewed as a positive and necessary community characteristic. Warren states that a “barrier to effective community action is the loss of community autonomy over specific institutions or organizations located within it and closely inter-meshed with the community's welfare” (1972, p. 16). He goes on to assert that the increase in bureaucratic policy-making has further eroded the ability of communities to determine their own destinies. This erosion is portrayed by Warren as a negative development.

On the other hand, community autonomy has been portrayed in negative terms. Castle has stated that the “rural areas that are the most prosperous are those that have close economic links with more densely populated areas, frequently large urban centers” (1991, p. 41). Wilkinson has asserted that “what most small towns and rural areas need is to become somewhat more urban and less isolated from resources and institutions of our essentially urban society” (1986, p. 8). In

each of these cases autonomy, or the lack of connections to the larger, more urban **society**, is seen as detrimental to the well-being of a community.

Economic Diversity

The economic diversity of a community is the mix of types of industries and businesses in a community, and the employment opportunities that that mix presents (Belzer and Kroll 1986). Many rural communities have economies centered 'around a particular industry, often of an extractive nature, and the economic well-being of those communities is subject to local, national, and global changes in those industries (Gramling and Freudenburg 1992, Johnson 1993, Freudenburg 1992). Economic diversity in small rural communities is related to the concept of natural resource dependence, which is discussed in the next part of this section.

Gramling and Freudenburg use the term "economic overadaptation," stating that "a straightforward measure of economic overadaptation involves the degree to which a region's economic fortunes have become tied to a single industry" (1992, p. 229). Many of the industries that communities have overadapted to are subject to national and global policy and economic fluctuations, and these communities are less able to maintain control over their local economies. Freudenburg utilizes an "addictive economy" metaphor to describe communities that are unable to break the habit of dependence on industries that have been the traditional mainstays of the local economy (1992). Johnson has stated that "in recent years, rural communities have sought to diversify their economies to avoid excessive reliance on a single resource such as timber" (1993, p. 3).

The important point of the above citations is an emphasis on the need for a variety of industries and employment opportunities in a community. Regardless of whether the economy of a community is centered on a natural resource, such as timber, or a large industrial plant, the lack of economic diversity is problematic for the community. By diversifying the local economy, a community minimizes the damage that can be caused by a downturn in a particular industry.

Resource Dependence

Many small rural communities are dependent upon natural resources found on the land surrounding their communities. This dependence can be on a variety of resources, including forest products, mining and minerals, grazing and ranching, farming and agriculture, outdoor recreation and tourism, and commercial fisheries and aquaculture. Some communities are dependent on two or more natural resources. As stated previously, the concept of resource dependence is closely related to the concept of economic diversity. In many communities which are dependent on a single industry, that industry is natural resource related.

Most of the definitions used for resource dependency have been presented in economic terms (Machlis and Force 1988). The *Revised ERS County Typology*, a USDA publication, places counties into categories of resource dependency based on percentages of total labor and proprietor incomes in those counties (Cook and Mizer 1994). (Although the ERS typology is a county typology, the definitions used are relevant for communities, as well.) The emphasis on economic definitions of resource dependency has minimized the social and cultural implications of resource dependency, as well as the non-economic meanings that people attach to natural resource occupations (Machlis and Force 1988). Dependence on single industries in general, and

on natural resource industries in particular, has been linked with economic instability (Powers 1994), and resource dependent communities face the same problems (as described above) of any community which lacks economic diversity.

Many of the natural resources that communities depend on are found on federal land, and changes in federal natural resource policy have implications for resource dependent communities. The values of the larger society are changing, as is the interest in how the public lands are managed. Resource extraction as ecologically undesirable "is foreign to [the] traditions [of rural communities]; their jobs and businesses have depended on natural resources extraction and use" (Castle 1991, p. 49). In addition to being subject to national and global economic changes, resource-dependent communities are now subject to significant changes in how the public views the management of public lands.

Attractiveness For Business

As the role of computers has increased, and the communications infrastructure has improved, businesses have become able to relocate to areas where they would like to be, as opposed to where they have to be. The physical beauty and other characteristics of many rural locations are a large draw for businesses wishing to relocate, often from large cities (Barkley et al. 1991, Pulver 1989, Johnson 1993). In addition to scenery and small-town congeniality, however, these areas must provide the things companies need in order to do business.

The literature has described a number of factors that are important to firms wishing to relocate, or to people who might wish to start new firms in rural communities. A well developed communications and information infrastructure has been mentioned as an important business need

(Dillman et al. 1989, Pulver 1989). Communications infrastructure is necessary in today's computer age. Access to transportation is necessary for businesses (Pulver 1989), as is overnight delivery service (Malecki 1988). The availability of capital, and of bankers willing to lend it to new ventures, is also viewed as necessary (Fendley and Christenson 1989, Pulver 1989). Access to knowledge (Pulver 1989) and to technical personnel (Malecki 1988) are additional draws for new businesses wishing to relocate.

Quality of Life

Quality of life refers to those factors that make a community a comfortable , safe place to live, a tense, dangerous place to live, or something in-between. Quality of life is a catch-all phrase of sorts, and deals with factors ranging from clean air and water to friend and family networks (Campbell and Converse 1972, U.S. Environmental Protection Agency 1973).

Quality of life has many components, covering a wide range of factors. Campbell and Converse state that:

the meaning of [quality of life] obviously differs a good deal as it is variously used but, in general, it is intended to refer either to the conditions in which people live or to some attribute of people themselves. The first case includes concern with pollution of the air and water, overcrowding in the cities, poor housing, the inadequacy of recreation areas, and similar aspects of living. The second typically includes references to health, family stability, educational achievement, artistic and cultural concerns, and other such dimensions on which people differ (1972, p. 441).

The Environmental Protection Agency (U.S. Environmental Protection Agency 1973) has listed six main categories of quality of life factors including economic environment, political environment, physical environment, social environment, health environment, and natural environment (referring to pollution and toxic wastes). Included in these main categories are

thirty-one component parts ranging from work satisfaction to toxicity and noise. Pulver defines a high-quality living environment as

includ[ing] access to good schools, excellent health care, physical security, recreational and cultural opportunities, satisfactory housing and public amenities, clean air and an appropriately aesthetic setting (1989, p. 6).

Community Leadership

The availability of effective local leadership is a factor that greatly influences the ability of a community to meet the demands of a changing world (Fendley and Christenson 1989, O'Brien et al. 1991). Leadership is more than simply electing a mayor, however, and it is important to look at both the quantity and the quality of local leaders in determining how effective leadership is likely to be in a given situation.

There are several components to leadership which need to be kept in mind. Leadership does not come from a single source, elected officials for example, and different people often lead in different situations (Poplin 1979). Poplin states that the three types of leaders are institutional leaders, based on a formal leadership position within the community, grassroots leaders, who rise up to lead in some particular situation, and power elite, who lead based on their wealth and economic position (Poplin 1979). Lackey and associates assert that “healthy communities are characterized by broad based leadership in which many people have opportunities to perform leadership roles” (1987, p. 10). In short, the first major component of leadership is that it should be broad-based and include a number of different types of leaders.

The second major component of leadership deals with the quality of leadership. Ayres and Potter state that “the more residents felt that town leaders listened to them, the more confidence they felt regarding the ability of community decision makers to deal with change effectively”

(1989, p. 14). It is important for people to feel as if their leaders are paying attention to what they have to say. Walzer defines rural leaders as those who “attempt to influence or motivate others, to build problem-solving capabilities, in order to bring about social or economic change in a democratic environment” (1991, p. 113). Israel and Beaulieu also emphasize the community over the individual in their assertion that

communities which appear best able to act on matters of local concern are graced with a leadership that is skilled in involving a diverse set of actors in local decision making activities, who operate on the basis of democratic principles, and who place the welfare of the total community above the needs of any given special interest (1990, p. 182).

It has been stated that leaders who have successfully solved problems in the past are more likely to be able to do so in the future (O’Brien et al. 1991), indicating that the experience of local leaders is an important factor. The important point in this discussion is that leaders need to listen to the people and work toward meeting the needs of all community residents, rather than a powerful few.

Effectiveness of Community Government

Local community governments vary in the degree to which they are, or aren’t effective. To the extent that cities and towns “depend for their existence, for their growth and for their maintenance upon processes of government” (Penn 1993) the effectiveness of local government plays an important role in determining whether a community grows or declines.

As mentioned in the previous section, leaders play a part in determining whether or not communities are successful in their attempts at community action. In many cases, the leaders are

elected officials, and the effectiveness of these leaders becomes representative of the effectiveness of the local government. It has been stated that

delegated governmental authority...can become extremely insensitive to the wishes of the electorate, even to the extent of defeating or debilitating the efforts of newly elected officials who presumably have a mandate to change things” (Warren 1972, p. 231).

This statement suggests another important trait of an effective local government, specifically that the government is sensitive to the wishes of the citizens it governs.

Community Preparedness for the Future

Society is constantly changing, and this change has effects at the community level (Poplin 1979). This constant change necessarily results in a certain amount of uncertainty for communities trying to plan for their futures. By taking a proactive, rather than reactive, role in looking toward and shaping the future, communities will be more able to adequately deal with changes taking place locally, nationally, and internationally.

Most small, rural communities are fairly traditional socially and economically, and the small town way of life has been in place for many years. Change in this way of life is not always viewed favorably. It has been suggested, though, that the leaders in rural communities are, generally speaking, more change oriented than are community residents (Ayres and Potter 1989). This may be due to the nature of leaders themselves, or perhaps to the greater information that leaders have access to. It has further been suggested that “those rural areas that are prepared to evaluate the offering of nontraditional goods and services are the most likely to prosper” (Castle 1991, p. 53). While Castle further asserts that “this does not mean that the traditional [extractive] industries will be abandoned” (1991, p. 53), it does suggest that a willingness to take chances and

try new things is an important strategy for rural communities faced with change. Shaffer states that “a positive attitude toward experimentation” (1990, p. 76) is an essential characteristic of an economically viable community. He further asserts that “the greatest asset communities have in their struggle to maintain economic viability is not distance, natural resource base, or current economic structure but their own creativity and insight” (1990, p. 85). Again, the willingness of communities to experiment and possibly take some risks to solve problems is viewed as an important positive trait. Littrell and Littrell have stated that through a process of envisioning a future and asking what work needs to be performed or action taken people can learn to anticipate the future and deal effectively with it” (1991, pp. 199-200). Clearly reflected here is the idea that communities need to be proactive in attempting to create the future they desire, rather than being at the mercy of changes over which they have little or no control.

Assessment of Community Economies

The economics group for the ICRB Ecosystem Management Project’s social assessment team had decided early on in the assessment process that regional information on the area’s economy would be sufficient and adequate for its analysis. Although the value and significance of data on the economies of each of the communities were recognized early on, the collection of these data was only incorporated into the study later in the research process. This economic assessment provided profiles of the economic structure of each of the 472 communities (cities and towns) and CDP’s in the region, based on estimates of the proportion of a town’s total employment attributable to each industrial sector contributing to that town’s economy.

It should be stressed that the economic profiles produced with the research process used are just that: profiles based on an inventory of all firms, businesses and agencies located in or otherwise affiliated with each community. For the purposes of the profiles, all employment in these job-producing organizations were attributed to a community if the firm or agency had its address in the community. In the case of trade, service and professional businesses or government offices, these firms and agency offices typically are physically located in a given community, and their employees are likely to reside in that community. In the case of primary producers, secondary processors and other manufacturers; however, these businesses may have their address in one town but have a plant located between it and one or more other towns that employs residents of all of them. Likewise, farmers and ranchers may have farms and ranches located some distance from the town where they get their mail and socialize, and most of their economic activity (i.e., their purchasing of goods and services for both business and household, and their selling of their produce) takes place in trade centers or “central places” further up the trade hierarchy from these “home towns.”

The data in these profiles, therefore, are not based on economic base models, nor are they based on economic impact models. That is, they represent the economic base of a community only in a very rough way, in that a town’s economic base depends to varying degrees on primary producers and secondary processors located beyond city limits (one could theorize that the closer a mill or plant is to a town, the greater its likely contribution to that community’s economic base, although this has not been documented here). Further, given the interconnectedness of industrial linkages across communities, and the important role of central places in trade hierarchies that are especially relevant in rural regions like the study area, the

economic importance of primary producers and secondary processors for a given town cannot be surmised from the data here; nor, if a plant or mill closed, do the data indicate what the impact on the town would be. Different small towns located in the midst of farming country, for example, might be impacted to various degrees and in various ways if, say, the multitude of small family farms and ranches in the area were consolidated into one or two large ones (as, of course, has been the actual trend). Nonetheless, data do provide a starting point and a **rough indicator** of importance of industries and likely impacts.

“Significant Change” Communities

Another component of the research focused on assessing and analyzing the characteristics and experiences of 145 communities in the regions identified as *significant change communities*. These communities were indicated as undergoing major change by (1) state economic development officials, agricultural extension experts, U.S. Forest Service forest planners or economic development coordinators; or (2) U.S. Census Bureau population estimates indicating changes of +/- 20 percent since 1980 (U.S. Bureau of the Census 1995a, b). These data-collection efforts focused on identifying the kinds of changes occurring in these communities, the kinds of community responses that were made, and the effects or characteristics of all these factors in terms of community conditions, activities, and lifestyles.

In-depth Community Case Studies

In a component of the research related to the study of communities indicated to be undergoing major change, ten communities having already undergone major changes of the kinds

most prevalent in the study area since 1980 were identified, and in-depth case studies of these communities were conducted. The case studies focused on gaining an in-depth understanding of the major changes that residents perceived had influenced their communities, the communities' responses to these changes, and the impacts of both these changes and responses to them. The details of the case-study research and its results are presented in the accompanying volume (Part 2 of this report).

RESEARCH METHODS

Data Collection

Assessing the Current Characteristics and Recent Conditions of Small Rural Communities

A total of 476 places (towns, cities and CDP's) are listed by the U.S. Bureau of the Census (1995a, b) as being located in the region under study. Of these geographically-based communities, 29 are cities larger than 10,000 in population, the largest of which is Spokane with a 1990 population of 177,196. Another 49 are CDP's. The remainder, totaling 398, are the small rural communities examined in this study.

Three sets of data were collected for assessing the current characteristics and recent conditions of small rural communities in the Interior and Upper Columbia River Basins: First, empirical data available from the U.S. Census Bureau (1995a, b) were gathered on all of these communities in the region. In addition, a random sample of 198 communities was selected from the total for a complete assessment. The sample size initially targeted for the study was 194, or half of the 387 rural communities in the region; then four additional communities selected as cases for the in-depth case studies were added to the sample.) The key informants identified in these communities completed a "Community Self-Assessment Workbook;" they then participated in community self-assessment workshops that provided data on their perceptions of their community's current characteristics and conditions. Third, community officials in these towns were contacted to provide other documentable or recorded details about each community's character and conditions, (e.g., school and utility capacities, distance from major transportation routes or nodes, etc.). Details on these procedures are presented in the following discussion.

Citizen Perceptions of Community Characteristics and Current Conditions

The community assessment team developed a “community self-assessment workbook” and a workshop format that it used to assess perceived current conditions of all 198 communities in its sample. The “current assessment” workshop was to help community members themselves describe the characteristics of their communities and their aspirations for their towns. These community members were residents who were active and involved in their communities and thus the most likely to be knowledgeable about the reality of their towns’ characteristics and current conditions.

Each of the participants in the assessment was asked to, first, fill out the community self-assessment workbook (which took about an hour or so to complete). The purpose of the workbook was to gather in-depth information on 12 “critical variables” about their community, including:

- Attractiveness of the community itself
- Attractiveness of the region surrounding the community
- Community attachment (personal attachment to the community)
- Community cohesiveness (“sense of community”)
- Adequacy of community services
- Community autonomy
- Economic diversity
- Resource dependence

- The community's ability to attract business
- The community's quality of life
- The strength of the community's civic leadership
- The effectiveness of the community's government
- The community's preparedness for the future (regardless of whether residents wanted their community to change or to remain largely as it was).

The purpose of the "critical variable" ratings was to explore the full range of important dimensions of community characteristics and concerns and to assess first-hand the current status of small rural communities in the region. The logic developed for the workbook as an instrument to accomplish this exploration was to formulate a section of questions around each critical variable, with each section organized in the same general way. First, most sections began by asking an open-ended question related to the central dimension of a particular critical variable to help the respondent start thinking in broad terms about that dimension of their community; then, a series of more specific questions were asked using seven-point scales to elicit quantitative ratings of the community on specific aspects of that dimension. Then, a more general, multiple choice question with descriptions of alternative options was asked whose purpose was to help respondents think about how they would describe their community on that variable in general. Finally, a standard seven-point scale to measure the overall construct represented by the variable was presented to obtain an overall rating for it: In most cases, the question set began with "Keeping in mind all the answers in this section..., how do you feel about..." (An example of a section showing this flow is taken from the Community Self-Assessment Workbook to clarify this

process, Section 11, “Community Preparedness for the Future;” it is included in an appendix to this report.)

After completing the workbook, the key informants for the community attended a two-hour community workshop to discuss the answers they gave individually in their workbooks. After sharing their ideas and information, they were asked to rate the 12 critical variables once again.

The purpose of the workshops was to bring together a focus group representing the diversity of knowledge and perspective within each community and explore the depth and complexity of views of the community. Comparisons of the results across communities were used to better describe the communities in the region.

Of the 1350 individuals who completed the community assessment workbook, 1300 attended the facilitated workshop conducted in the 198 communities. The number of workshop participants ranged from a low to three to a high of nine individuals per community with seven participants being the most common number of citizens participating in the assessment. A total of 19 graduate students, graduates, and professors in the College of Forestry, Wildlife, and Range Sciences served as trained facilitators for the workshops.

Sampling Community Key Informants

The design of the community assessment was to purposively sample the population of residents who are “opinion leaders” or could serve as key informants for their community. The assumption here was that the residents who are most active and involved in their communities are

the most informed and knowledgeable about them.’ In sampling these knowledgeable citizens, a maximum of eight were selected from each community to represent a variety of backgrounds and viewpoints, and thereby approximate the range of community knowledge and understanding of the status of the community, its changing conditions, and its orientation to the future.

The number of workshop participants was kept reasonably small to facilitate discussion in the workshop setting while representing a diversity of perspectives, experiences, and kinds of local involvement. The following eight types of roles or perspectives were included, where possible, in each town:

¹ Some early reviews of this process indicated a misunderstanding of its nature and intent. One concern was that, because the process gathered input from key informants who were active, involved and knowledgeable “leaders,” it did not represent the “common people,” or all residents. The intent of the process was to gather as accurate and valid information from community residents as possible, and it was assumed that active and involved citizens would be the most knowledgeable and thus provide the most accurate description of their communities’ characteristics and conditions. (The alternative would be to collect information from less involved or uninvolved residents whose input would be based on ignorance or, worse, misinformation. An analogy would be wanting to obtain specific medical or legal information and trying to get it from “the man on the street” instead of a doctor or lawyer.)

Also, although these data were based on perceptions, the nature of the information the key informants provided was not the kind that ideological bias would affect. Exceptions to this might include responses on the “resource dependence” variables that might reflect a pro-industry or pro-environment bias -- so an empirically based surrogate for this variable was provided by the community economic profiles based on proportions of employment in different sectors; a correlation of 0.40 to 0.50 indicated a moderately high degree of validity in the resource dependence ratings (see the discussion on pp. 99 to 130).

In addition, reviewers raised concerns that people holding certain positions would have biased perceptions about community dimensions they were directly involved with, as in the case of elected **officials** rating their performance and thus the effectiveness of government in their community higher than would other citizens. This bias was tested (the results are reported on pp. 86 to 87), and it was not found to be a widespread problem.

A final concern raised was with the modified “snowball sampling” technique used to identify residents to participate in the workshops; concerns about the impartiality of the process and its full representation of all perspectives on and experiences of the community, were expressed. The technique developed was a response to early pilot tests of the selection process, in which full coverage of all “players” and groups in the community was not achieved; it was in response to this failure that the process was adjusted to ensure that all major “players” were identified. The technique finally adopted was validated to ensure that important groups or individuals were represented.

- an elected official (a mayor or city council member);
- a civic group leader active in a prominent service organization or club;
- an active business leader (e.g., president of the local chamber of commerce);
- a schools or health leader (a citizen active in promoting education or health services, a principal/teacher, a health care provider);
- an historic preservation or environmental group leader (someone active in local affairs);
- a newcomer (arrived in the last one to three years) to the community who is already highly involved in the community;
- a person who is perceived as an active conservative in the town (political party affiliation is not important);
- a person who is perceived as an active liberal in the town.

Although each of the nine residents were asked to participate in terms of a particular identified role, they answered the workbook questions and participated in the workshops as individuals. In other words, although they fit these categories and their answers may have reflected their role in their communities, the procedures used simply asked them to provide their perceptions of current characteristics or conditions. Most critical variables did not involve an expression of personal value, preference, attitude or opinion; nearly all focused on the ways respondents perceived their town: its infrastructure, people, economy, leadership, and orientation toward the future. The only set of questions asking for the individual's opinions or individualistic responses was the section of questions about place attachment and the special places of citizens living in the communities.

To identify key informants, a modified snowball technique was used to generate a list of the sub-population of active citizens and then a purposive sampling strategy was applied to the list. Five kinds of people in each community (where possible) were contacted to begin generating a list of potential workshop participants:

1. The city or town clerk.
2. An elected official, preferably the mayor.
3. The Chamber of Commerce executive or administrative secretary.
4. An officer in a major civic group.
5. The superintendent of schools or a principal of a school in town.

These five people in each community were asked to provide a list of people to fit the eight categories above (some would provide more than one name for each role, while others could provide us names for certain roles only). The people whose names were provided were also contacted and asked to provide a list of eight, until at least five names for each category were identified.

From these lists, the person mentioned most often for each role was asked to participate in the assessment. Although in some of the smallest communities it was not always possible to find someone for each category, as many as possible of them were included.² This factor of finding

² Some early reviews of this process reflected a misunderstanding of it; they raised the concern that (1) by basing the assessment on a small sample of a community's most informed residents, its results would be biased by those who believed participating would influence the results, and (2) the snowball sample would result in people "inviting" like-minded associates to participate.

These concerns are unfounded: (1) Particular participants were selected and asked to participate, and were not allowed to volunteer to participate; (2) The broad base of involved citizens who were initially contacted to provide names for the lists of key informants, and then the subsequent selection of most frequent mentioned persons, ensured that a diversity of persons widely recognized as active, informed citizens were selected; (3) The initial and later contacts did not present or elicit a concern for some political agenda; when contacted, most participants were

willing participants was an important one: it was not always easy to find active, involved citizens willing to participate in the workshop process, much less more apathetic or otherwise occupied people; and it might be assumed that already less involved residents would be even less likely to agree to attend a workshop on their community. Also, if people are indeed less knowledgeable about their town, they also would likely be less motivated to participate in the workshop. (Again, it would likely be more difficult to hold a meeting to obtain specific medical or legal information and obtain it from “the man on the street” than from a group of doctors or lawyers.)

Running the Community Workshops -- Procedures

The second request made of the workshop participants was that they attend a two-hour community workshop with the other community residents to share and discuss the answers they had given in their workbooks. After discussing their ideas and information, they were asked to rate the 12 critical variables a second time. The goal of our workshops was to bring together a focus group representing the diversity of perspectives and perceptions within each community. However, rather than simply aggregating the individual ratings of the key informants on the 12 critical variables for each town, the workshop was conducted so that community members themselves could form a group rating after sharing ideas and information. Some members of the workshop might have more information on a variable or know more about factors affecting it (for instance, an economic development official might have greater knowledge about the community’s

unaware of the Interior Columbia River Basin Ecosystem Management Project; (4) The questions asked in the workbook, as stated earlier, do not lend themselves to bias of a political or ideological nature; and (5) Perhaps most relevant to reviewers’ concerns, the differentiations found in results on the critical variables across the 198 communities, and the logical consistency of these differentiations and the sense they made, validated the entire sampling design: the comparative results across communities made sense (or, to use social science jargon, the results **affirm** the “face validity” of the measures and methods used).

economic diversity). In other cases, one participant might remind others of something they hadn't considered in rating a variable. The role of the workshop facilitator was to clarify the questions in the workbook and to ask participants to discuss his or her individual rating for each critical variable. After this discussion, the group voted again (still as individuals, but after hearing everyone else's perceptions and reasons). The intention there was *not* to compel the group to reach consensus, although this sometimes happened; rather, the goal was to facilitate the sharing of information and ideas that could change an individual's initial rating of a variable. If it didn't change, that was fine too.

All participants were given their own color of "stick-on dots" that were used to identify how each participant voted. The participants wrote their names on a name card on the table, placing one of their color dots on the name tag. A rating scale for each critical variable, ranging from one to seven, was displayed on a large sheet of paper at the front of the room. After the workshop participants reviewed the reasons for rating a given variable the way they had, the facilitator asked the participants to write their rating on their "stick-on dots." After collecting all the dots, the facilitator placed each on the appropriate place *above* the ruler/scale on the flysheet. The facilitator then asked everyone to give his or her reasons for their rating, writing short phrases directly on the flysheet representing these comments. (Negative comments about the variable were recorded in red on the left; the positive comments in green on the right; neutral or middle range comments on an issue in blue in the middle.) These comments later provided our research with insight into why participants answered as they did. Writing the comments also helped the facilitator to summarize, during the workshop, why people voted as they did. After the discussion, the facilitator asked everyone to rate the variable again, to see if the sharing of

knowledge and ideas would change ratings. This second rating was placed underneath the scale/ruler on the flysheet. Then the group went on to the next variable, until we had a group-based rating on all 12 critical variables. When these rating data were used in later analyses, the mean value for the eight or so individual ratings was used as the community rating.’

Throughout this process, the goal was to generate meaningful descriptive data in a non-technocratic way that could increase community ownership of the results. The intention also was to mirror a healthy, positive process for social learning, where disagreements or differences of opinion could be expressed honestly but non-confrontationally, in a way that people sharing a community could work toward better defining themselves and their future through open dialogue.

Collecting Secondary Data on Community Characteristics from Documentable or Recorded Community Data

In addition to the perception data gathered with the community assessment workbook and subsequent community workshop, the workshop facilitator for the community was also responsible for collecting quantitative data on the community that existed in town documents or records -- information that could be documented or recorded. Answers to these questions were based not on community beliefs or perceptions, but on recorded or verifiable fact; collected with questionnaires completed by community workshop facilitators, they focused on variables such as building permits issued, school and utility capacities, and distances from major transportation routes or nodes.

³ The effects of differences in participants’ ratings on the summary statistics for scalar measures were assessed using a program for analyzing inter-rater influences (developed by the USDA Forest Service’s Rocky Mountain Forest and Range Experiment Station); it was used to analyze individual and group responses on a number of critical variables as part of an in-depth analysis of community autonomy (Bales 1995). No major effects were found.

Other secondary data (i.e., information that has been collected or documented by official accounting or record-keeping) on the current characteristics and conditions of communities were collected from U.S. Census data (1995a), such as mid-decade population estimates, rate and direction of population changes, ethnic mix, and the like.

Estimating Employment Profiles of Communities

The profile of employment for each of the 472 communities (cities and towns) and CDP's in the region provided a representation of the economic structure of these communities. These data, which were estimates of the proportion of a town's total employment attributable to each industrial sector contributing to that town's economy, were developed in collaboration with regional economist Dr. Hank Robison of the University of Idaho. They provide a profile of each community's economy in terms of 22 categories of industrial sectors, including *Agriculture, Agricultural Services, Wood/Paper Products Manufacturing, Food Processing, Miscellaneous Manufacturing, Sand/Gravel Mining, Other Mining, Construction, Public Utilities, Finance/Insurance/Real Estate, Communication, Business & Personal Services, Transportation, wholesale Trade, Retail Trade, Eating/Drinking, Lodging, Amusement/Recreation, Medical/Social Services, Federal Government, and State & Local Government.*

These major categories represent an aggregation of all industrial activities included under the subcategories for each Standard Industrial Category (SIC); For example, the major category *Wood/Paper Products Manufacturing* includes lumber milling, paper milling and logging activities among the various subcategories of industrial activity that main category represents.

This data set represents an updating and disaggregation of 1992 employment and earnings data from the U.S. Bureau of Economic Analysis' REIS (Regional Economic Information System; 1994) and the U.S. Forest Service's IMPLAN data (REIS data updated and estimated at the county-level for all counties in the study area), which were resolved and allocated to all 480 communities in the study area: the 426 small rural communities and, in addition, the other 55 cities (greater than 10,000 in population) and bordering CDP's in the region. This disaggregation was completed using local sources such as phone listings for businesses (compiled by Business America on CD-ROM for the third-quarter of 1994) and recent directories of businesses for the relevant states. (For a discussion of the methods used and their theoretical basis, see Robison and Peterson 1995 .)

The only addition in the current research to the methodology described by Robison and Peterson was that the number of employees per industrial sector for each community estimated with this approach was ground-truthed with interviews conducted by telephone of city clerks, U.S. Post Office employees, county extension agents, and representatives of major businesses for each town. This ground-truthing was used to up-date the employment data to the extent possible to first-quarter 1995, so that it would be temporally consistent with the time period when the community assessments were conducted. This consistency ensures that valid comparisons between the results of the two databases can be made.

Surveying Significant-Change Communities

A random sample of 80 of the 145 communities indicated to be "significant change communities" were surveyed about the major changes affecting them and the impacts of these

changes and their response to them. Initial contacts were made with city clerks, who were asked to suggest the name of the person who would have the greatest knowledge of the changes the town had experienced and its response to them. The survey was conducted with a structured telephone interview of this representative of the town.

The efforts to collect information from the individual were focused on identifying the kinds of changes occurring in these communities, the kinds of community responses that were made, and the effects or characteristics of all these factors in terms of community conditions, activities, and lifestyles. The primary purpose of these initial data were to better identify communities to study as part of the in-depth case studies and to better understand those factors or variables to consider in those case studies

Surveying A Representative Sample of All Residents in a Growing County

A final set of data was collected with a survey of a random sample of the residents of one county in the study area. That county was Chelan County, which is located on the east side of the Cascade Mountain Range in Central Washington. A major objective of the survey, which gathered data on the characteristics and perceptions of a random sample of 222 county residents, was to assess the extent to which the perceptions of residents of the various communities in the county were similar to the perceptions of the representatives participating in the community self-assessment workshops for those towns (see Krull 1995, Krull and Harris In Process).

Analysis and Presentation

All statistical analyses were conducted using the Statistical Package for the Social Sciences, SPSS (SPSS, Inc. 1989). Univariate analyses were performed on the census data, survey results and economic profiles, and the mean values for relevant variables are presented in this report.

Where the data reported are from the community self-assessment, they are presented as a representation of the community's overall response -- that is, the community is the unit of analysis. In the case of continuous data collected with numerical scales, the data reported are the mean values of the workshop responses. To supplement these, in some cases the modal response on the categorical question preceding the scaled question for a dimension is presented for all towns,

Multivariate analyses were also performed with one-way analysis of variance (with appropriate post-hoc tests of difference), stepwise regression, and cross-tabulations (with appropriate tests of strength of relationship). In all cases, the level of statistical significance was $p < 0.05$, and is not reported if the results of the accompanying tests were not statistically significant. The initial results of the survey of significant change communities are presented in tabular form. The results of the case-study research are presented in narrative and figures.

MAJOR FINDINGS

Major findings of the research are presented in terms of major questions, issues, or conclusions about the communities in general and based on the self-assessments provided by key informants.

An Initial Overview

Small Rural Communities Are An Important Scale For Gathering And Analyzing Social Data On Human Populations.

The study presented in this report focused on the status of small rural communities in the Interior and Upper Columbia River Basins and their relation to the management of public lands in the region. Different levels of scale that might be assessed were evaluated, beginning with units of analysis based on levels of social organization and everyday human activities based on collectivities, geography, and political boundaries. The levels of social collectivities considered here included individuals and individuals in groups like service clubs, civic groups, and special interest groups (whose loci range from the local level to state, regional and national levels); commonly recognized levels of social organization based on geography and human activities also range from households to neighborhoods, communities (i.e., towns and cities), counties, multi-county regions, and states.

Communities were selected as the most appropriate level of analysis for several reasons. The primary one is that towns or cities are the center of daily life for most people living in rural America. They are the places where individuals and groups carry on much of their work, play,

and civic activities, and they are the places where people go for the services (school, shopping, health, sports and recreation, etc.) they depend on or make use of in their lives. It is because of this fact that the social sciences studying social groups (i.e., sociology and anthropology) most often focus on the community as their primary unit of analysis.

Analysis of the data on residents of Chelan County confirms that, although 38 percent of the county residents lived outside any community, most residents of the county (79%) reported that the city or town where they collect their mail was somewhat or very important in their lives. (Three percent reported that some community other than the one where they collect their mail was a central part of their lives.) There were not any respondents who said that no community was a central part of their life, and only 18 percent reported that their community was only slightly important in their lives. These results affirm that, although many residents of a county live outside the “city limits” of any town, a nearby community is important in the lives of all but a small segment.

A secondary reason for choosing the community level of scale is that higher levels of scale can always be examined by aggregation of community data, which themselves represent the aggregation of individual and household data. The primary locus for the relationship between residents of rural areas and place is the community -- rural towns are sufficiently small that neighborhoods are not the important kind of place they are in large cities. Thus, for example, county-level activities and responses can be examined by aggregating community-level data, but county-level aggregation cannot depict the differences in the characteristics of different communities within a given county and the impacts of federal, state and county policies on them. Similarly, communities are composed of both the individual residents and the social groups they

join or become a part of, and accurately understanding and describing communities requires data on these elements of community.

The results of the present research confirm that, in many places, social conditions and key changes in those conditions, when depicted at the broader level of counties, mask important differences in those conditions and changes across communities -- and thus differential impacts on residents experiencing those impacts at the local level. For instance, the population of a county and its growth may not represent the situation for towns within that county, as in the case for three towns in Wallowa County, OR, as displayed in table 1.

Table 1. Population Changes in Three Oregon Communities.

	1980 POP.	1990 POP.	1980-1990 PERCENT CHANGE	1994 POP.	1990-2000 PERCENT CHANGE*
Wallowa County OR		6911		7200	10%
Enterprise OR	2003	1905	-5%	1935	5%
Joseph OR	999	1073	7%	1165	21%
Wallowa OR	847	762	-10%	755	-2%

* Straight-line projections based on 1990 and 1994 population estimates obtained from Oregon's Center for Population Research and Center.

Also, while the importance of the economic links among communities that lie in different counties and even different states is obvious, an initial analysis of the social networks linking these communities confirmed that these networks 'were as important among communities in different

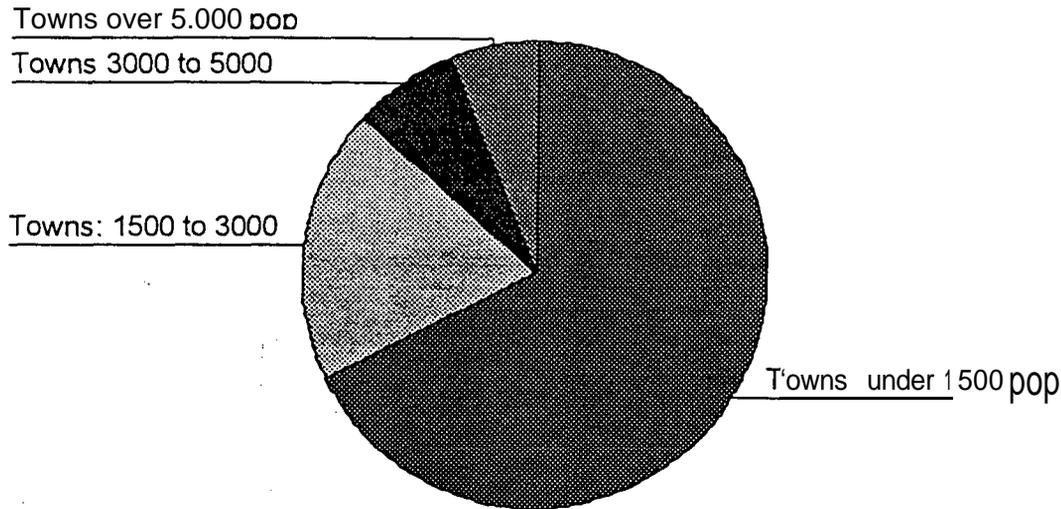
counties and states as were the political ties linking communities in the same county. Thus, the issue of scale reflects, for one thing, the reality of the county as a political entity that, for many residents, may not be a meaningful social grouping and thus not a relevant unit of analysis.

A final reason for the focus on small towns is related to policy application and its real world consequences: people really are concerned about the impacts of resource planning on their communities as well as on individuals, their families, and their customs and cultures. The focus in the 1980's, when the impacts of changes in federal resource management began to be felt in communities, reflected concerns with communities in transition and the concept of community stability. Although it is doubtful that many people want to return to the kinds of conditions that resulted in the boom-and-bust cycles that once characterized many communities in the American west in the past, the reality is that rural communities continue to evolve in a constant state of flux. Any description of their characteristics and conditions is like a snapshot that provides a static picture of a situation at one point in time, so looking at the past can provide a context for framing and better understanding where a community has been and where it appears to be heading.

The Vast Majority of Rural Communities In the Region Are Small (Less than 1,500 in Population).

The 398 communities under study in the region range in population from 22 to 9,646 people. The role of the communities' population sizes was analyzed for the 198 towns in our sample in greater detail, focusing on four population size classes (Figure 1).

Figure 1. Proportions of All Rural Towns in Size Categories Based on Population (Towns Under 1,500 in Population; 1,500 to 3,000 in Population; 3,000 to 5,000 in Population; and Towns Over 5,000 in Population).



As figure 1 shows, the vast majority of the towns are indeed small: 68 percent of all communities are in the smallest size class -- the category of “rural village,” as declared by Johansen and Fuguitt (1984), of 1,500 or less in population; in the study region, these villages range from 22 to 1,500 in population, with an average size of 520. In addition, 19 percent of all communities in the basin are 1,500 to 3,000 people in size, with an average size of 2,162; 7 percent of all communities are in the third class of 3,000 to 5,000 people, with an average size of 3,974; and 6 percent are in the largest class size of 5,000 to 10,000 people, with an average size of 7,087.

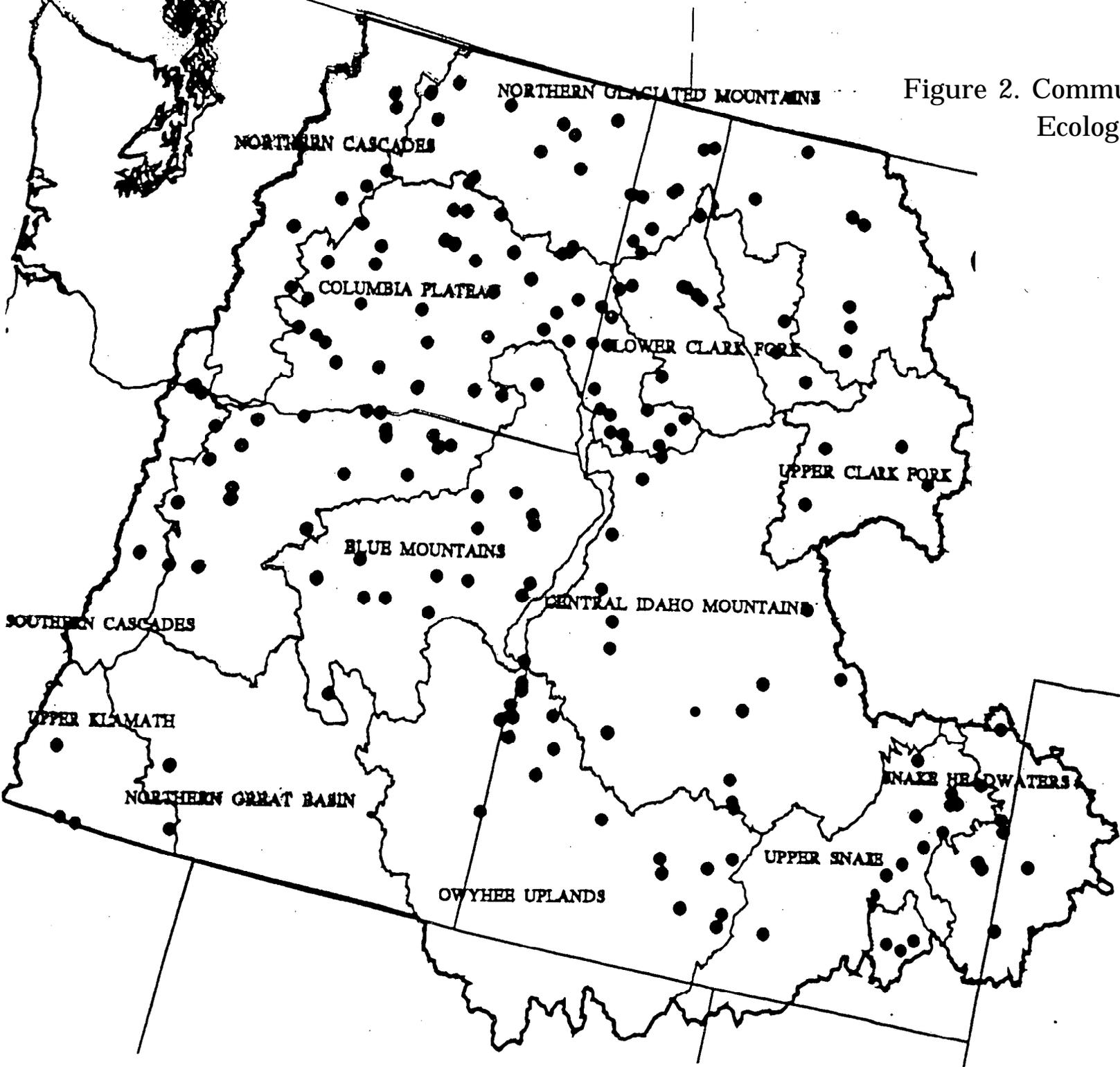
The Geography of the Communities Can Be Depicted In Terms of Ecological Response Units (ERUs).

Although location was not among our critical variables, the role of geographic location in characterizing communities and defining community resilience was also considered important in

the analysis of the community data. The selection and study of a large random sample of towns across the region ensured an assessment representative of its entire geography. When analyzed in terms of the political boundaries that are represented by states, the survey of 198 communities indicated that the largest proportion of small rural towns in the basins is in Idaho (41%, or 81 towns), with major proportions in eastern Washington and Oregon as well (28%, or 55 towns, and 23%, or 46 towns). A much smaller proportion of small towns was in western Montana (7%, or 14 towns) and only a couple (1%) in Wyoming.

Ecological Response Units (ERUs) is the term used by the U.S. Forest Service (USFS) to denote major geographical regions based on an ecology of the landscape: the aggregation of individual watersheds according to major categories of ecosystem types. A total of 13 of these units, some of which span two or more states, were identified for the study area (Figure 2). In terms of the largest number of rural communities they support, the most significant ERUs include the Columbia Plateau ERU (32% of all communities), with another 15 percent of all communities in the Northern Glaciated Mountains ERU; 9 percent of all communities were in the Owyhee Uplands ERU, 9 percent of all communities were in the Blue Mountains ERU, and 5 percent of all communities were in the Central Idaho Mountains ERU. The Upper Snake, Snake Headwaters, and Lower Clark Fork ERUs were the next most populated, with between 5.1 and 6.1 percent of all communities in the region. The Northern and Southern Cascades, Upper Clark Fork, and Upper Klamath ERUs had only 2.0 to 3.5 percent of all communities, while only a few communities (or 0.5%) were located in the Northern Great Basin ERU.

Figure 2. Communities Surveyed & Ecological Response Units



Prepared by
University of Idaho



North

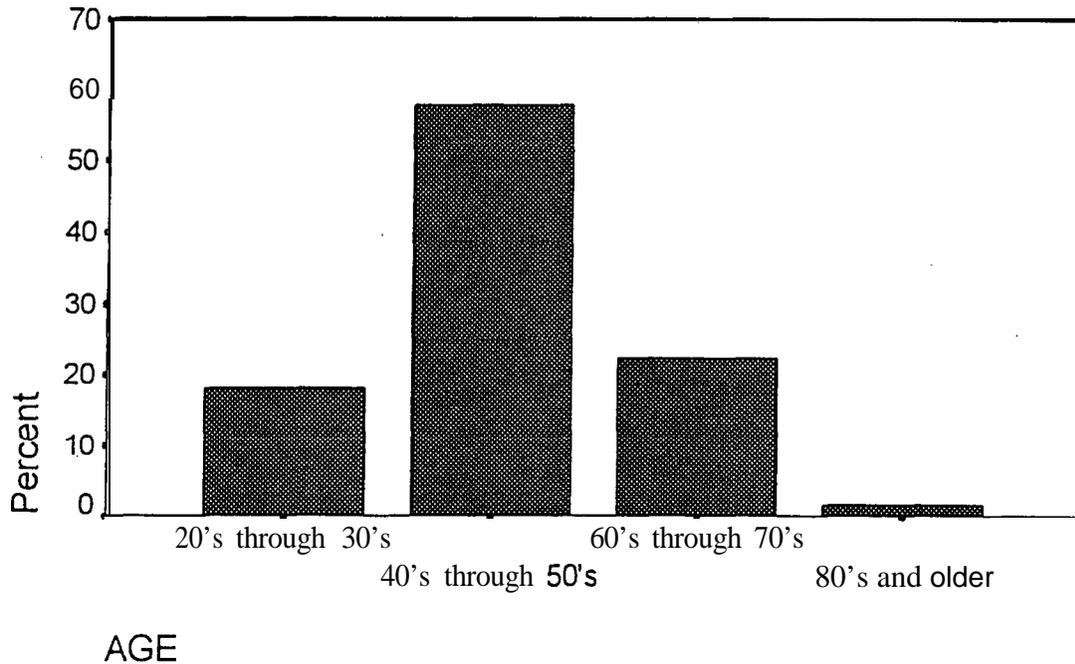
Results From the Community Self-Assessments

What Were the Characteristics of Participants in the Community Assessment Workshops?

The characteristics of the key informants representing communities as participants in the community assessment workshops were analyzed, and the results compared with those from the survey of all Chelan County residents. This comparison was based on the assumption that similarities between the characteristics of the general populace of a randomly selected county and those of the key informants should minimize concerns about the representativeness of “opinion leaders” of the perceptions of other citizens in their communities. As discussed previously, one concern of reviewers and commenters on the assessment methodology was that the participants selected might not be adequately representative of other residents of their towns or of residents living outside the incorporated towns (many county residents live outside of incorporated towns, and they can comprise the majority of people living in a county). A primary objective of the survey of the Chelan County residents was to address these concerns and assess their validity (see Krull 1995, Krull and Harris In Process).

Data collected with the assessment workbook on the workshop participants found that 43 percent of the participants were female and 57 percent were male. The average age of these key informants was 51 years old, with ages ranging from 23 years to 94 years old and a median age of 49 years. As figure 3 shows, individuals in their forties and fifties constituted the largest age classification participating in the study, with almost 60 percent of all participants falling within this age classification, and more older individuals (over 60 years of age) than younger (less than 30 years of age). Similarly, the mean age of respondents from Chelan County was 53 years old, and the proportions of females and males were 47 percent and 53 percent.

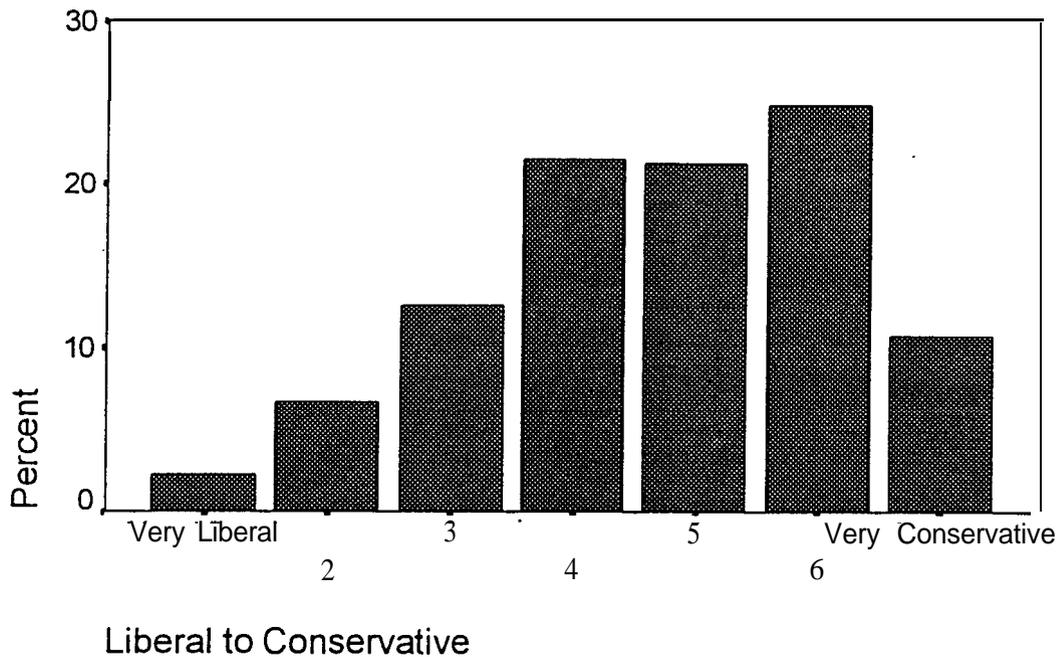
Figure 3. Age Categories of Key Informants.



Consistent with the age of the workshop participants, about 37 percent of the participants had lived in their small, rural community for 25 years or more. About 21 percent of the workshop participants had lived in their community 5 years or less, which reflects the effort made to elicit the perspectives of relative newcomers to their communities.

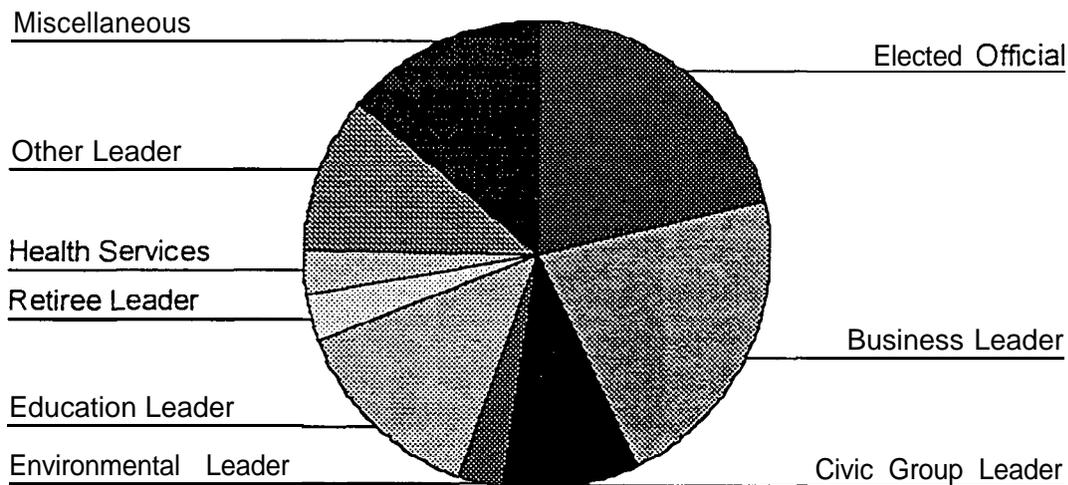
Workshop participants also represented a number of other practical and philosophical perspectives that varied with their occupation or civic activity in their community. These key informants were asked to rate themselves on a scale from 1 (Liberal) to 7 (Conservative), allowing respondents to define these concepts for themselves. The resulting distribution was skewed toward the conservative end of the scale with a median rating of 5 and a mode of 6 (see figure 4). Significantly, the same mean and median were obtained for the Chelan County residents, affirming the ideological representativeness of the key informants of other residents.

Figure 4. Degree of Liberalness to Conservativeness of Key Informants.



Workshop participants also were asked to select the one category that best reflected the role or position they had assumed in their community and that most influenced the perspective they brought to the workshop. As figure 5 shows, the two largest segments based on role were elected officials (272, or 20% of all participants) and business leaders (271, or 20%). Other roles represented by the participants included civic group leaders (117, or 9%), self-identified environmentalists (40, or 3%), educational leaders (171, or 13%), retired individuals (44, or 3%), and individuals involved in community health services (38, or 3%). Other kinds of active citizens, which were represented collectively by the remaining 29 percent of “other leaders” and miscellaneous participants, included farmers and ranchers, firemen, policemen, non-elected city officials, community volunteers, individuals active in church affairs, and other active community residents.

Figure 5. Kinds of Backgrounds and Perspectives of Key Informants, by Proportions of All Workshop Participants.



The gross household income of workshop participants ranged from categories of less than \$5,000 (0.4 percent) to greater than \$100,000 (6.7 percent). Most participants' household incomes fell within the three middle categories: the \$25,000 to \$34,999 range (21.5 percent), the \$35,000 to \$49,999 range (22.0 percent), and the \$50,000 to \$74,999 range (22.8 percent).

Perceived Characteristics and Current Conditions of Rural Communities Indicate They Are Variable and Unique.

The geography and ecology of the landscape in which the communities are located are important for describing them and understanding differences and similarities in their characteristics and experiences. The geography of these communities in large part predetermines their economic base and thus their economic structure, and this condition along with their location and inter-relationships with other communities underlies the communities' way-of-life and thus their other

social conditions. In many cases this geographic basis for community characteristics and conditions transcends political boundaries like the borders of counties, with multiple counties lying within the same ERU and, in some cases, a county spanning parts of several ERUs. On the basis of geography alone and the concomitant uniqueness of each community, the community is a critical scale for understanding the varied characteristics and conditions of small rural towns in the region.

The data provided on the community's current characteristics and conditions by the participants in the community assessment workshops included responses on a variety of measures of the community constructs described previously. The results for the following measures reflect the end-point of a series of questions about each critical variable that sought to focus the key informants' perceptions concerning each variable. Again, the following responses represent the result of a cumulative assessment for each dimension of community. Where mean values are reported here, they are those of the mean scale scores obtained through the workshop process, as explained previously, across the 198 communities; where frequencies for nominal-level data are reported in tabular form, they are the modes from the workbook results for each of the communities.

Community Attractiveness

A major dimension of *community character*, which was defined as a combination of attributes ranging from a town's visual appearance to special places in the region in which the town is located, was the town's *physical attractiveness* as perceived by its residents. As figure 6 shows, the distribution of ratings for the *community attractiveness* critical variable tended to be on

the high (attractive) end of the scale (above the mid-point of 4), with a mean rating of 4.8 on a seven-point scale from 1 (Extremely Unattractive) to 7 (Extremely Attractive); its distribution, which ranged, from values of 2.0 to 7.0, was bimodal with concentrations of towns just below and above the mean value. These results confirm that many communities in the region are perceived to be attractive as others by their residents, although some are more so than others.

Community Cohesion

A community’s *social cohesiveness* was defined as “the degree to which the residents of a community work together to get things done” and their “sense of community.” As figure 7 shows, the distribution of mean values for the region’s *social cohesion* scores also is relatively

Figure 6. Distribution of Mean Ratings of the Community Attractiveness of 198 Study Communities.

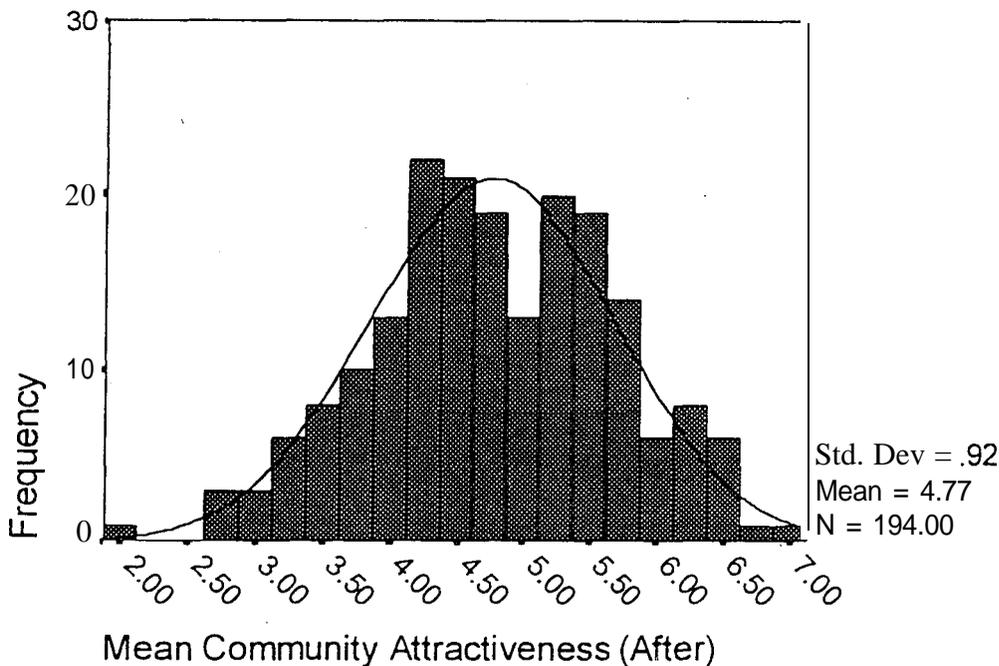
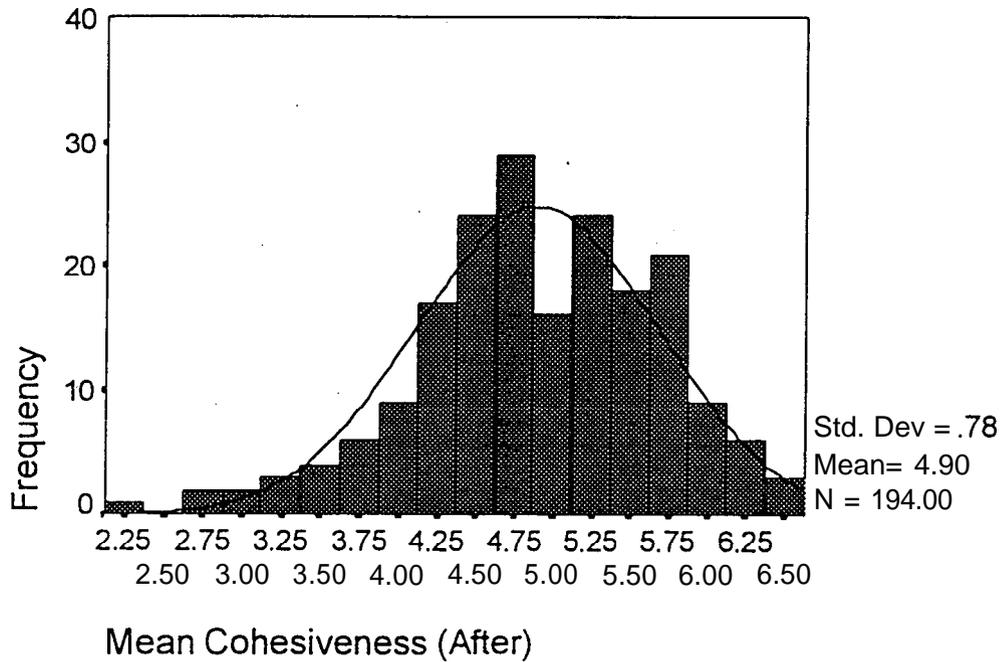


Figure 7. Distribution of Mean Ratings of the Social Cohesion of Study Communities.



small (standard deviation of 0.78), with the ratings ranging from 2.3 to 6.6 and a mean rating of 4.9 on a seven-point scale from 1 (Extremely Weak Sense of Community) to 7 (Extremely Strong Sense of Community).

Table 2 shows that; in response to a categorical question on the extent of a strong sense of community, only a very small segment of communities are so diverse with respect to the values of the communities' residents that there is no agreement among them. About half of the rest have residents who are not only in agreement but hold similar values.

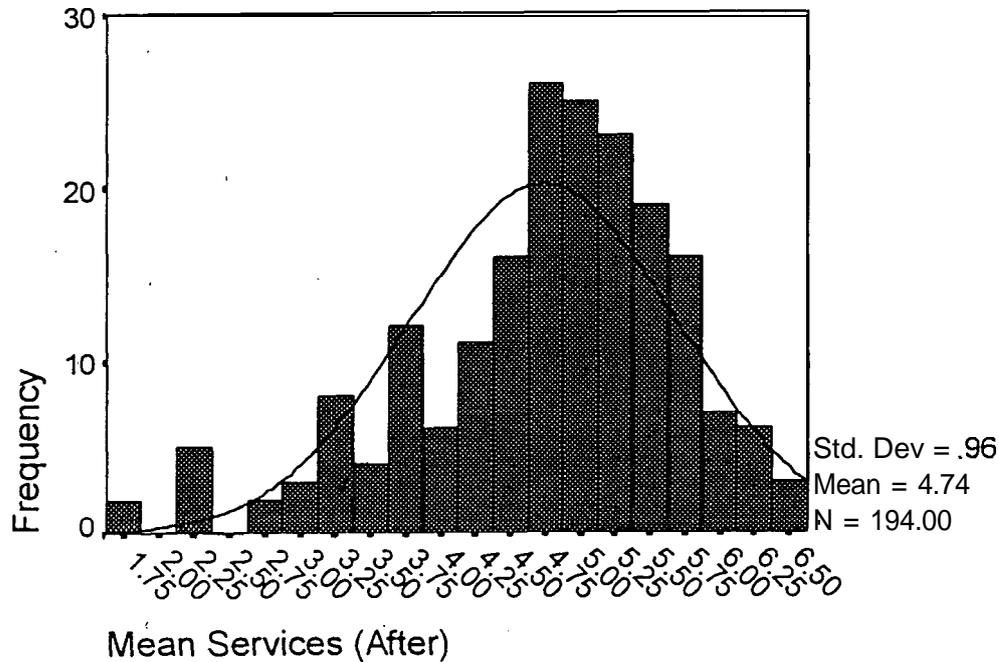
Table 2. Extent of Sense of Community in the 198 Study Communities.

<u>Sense of Community:</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
Most residents hold similar values and are in agreement.	90	45.5	45.5
The community has diverse values, but residents have learned to work together.	96	48.5	93.9
The community is very diverse, and there is no real agreement in the community.	12	6.1	100.0
	-----	-----	-----
Total	198	100.0	100.0

Community Services

Community services included ones provided both by government and the private sector. The mean rating for the variable concerning the adequacy of services in the sampled communities was 4.7 on a seven-point scale from 1 (Extremely Adequate Services and Facilities) to 7 (Extremely Inadequate Services and Facilities), with values ranging from 1.7 to 6.4. As figure 8 shows, this distribution was skewed, with the means a disproportionate share of towns between 4.7 and 5.8.

Figure 8. Distribution of Mean Ratings of the Social Cohesion of Study Communities.



Community Autonomy

The *autonomy* of a community was defined as “the degree to which a community is linked...-- economically, socially, and physically -- to neighboring communities and to the region as a whole.” As figure 9 shows, the comparatively low mean rating for the *community autonomy* variable, 3.4 on a seven point scale from 1 (Not at all autonomous: Very linked and dependent on surrounding communities) to 7 (Extremely autonomous: Community stands alone), underscored the relative dependence of communities on other towns. This low mean indicates that the towns in the region are relatively non-autonomous.

Nonetheless, the comparatively large standard deviation (1.14), rectangular distribution, and wide range of values from 1.1 to 6.3 for this variable indicates a wide spread of means across the scale for the study towns, suggesting that autonomy was not conceived strictly in terms of economics or the supply of goods and services, but in the broader social and lifestyle terms that the concept was meant to represent.

Figure 9. Distribution of Mean Ratings of the Autonomy of the Study Communities.

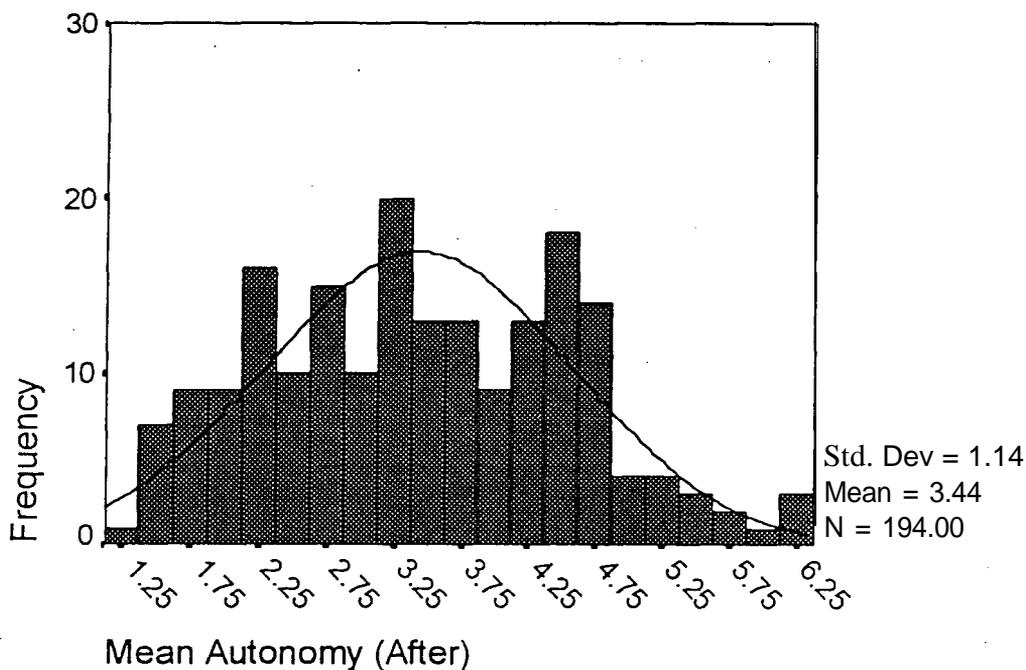


Table 3 confirms that the towns sampled are split between those that are very dependent on other towns and those that are dependent on other towns for some things but not for others.

Table 4 indicates that a community's autonomy was significantly related to a variety of other

characteristics and conditions, confirming that aspects of community life like social cohesion, community attractiveness, population size and general community resilience are as important as economic ones like economic diversity and attractiveness for business.

Table 3. Levels of Community Autonomy in the 198 Study Communities.

<u>Level of Community Autonomy:</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
The community is very dependent on other communities.	87	43.9	43.9
The community depends on others for some things; but it is independent on other things.	108	54.5	98.5
The community stands alone and functions pretty independently of other communities.	3	1.5	100.0
Total	198	100.0	100.0

Table 4. Correlations of Community Autonomy with Other Community Characteristics.

<u>Community Characteristics</u>	<u>Pearson Correlation Coefficient</u>
1990 population	0.37
Social cohesion	0.38
Attractiveness for business	0.42
Economic diversity	0.43
Community services	0.51
Community attractiveness	0.52

Quality of life (QOL)

The *quality of life* of a community refers to various different physical and social aspects of “how good” the “good life” is there, including the community’s air and water quality, the extent of traffic congestion there, levels of perceived safety and social problems in the communities, and its overall friendliness and abundance of stimulating social activities. The ratings of most communities on the *quality of life (or QOL)* critical variable were quite high, with a mean rating of 5.7 on a seven point scale ranging from 1 (Extremely poor quality of life) to 7 (Extremely high quality of life). The small standard deviation for this mean, 0.56 (half of that for the mean for the ratings on the autonomy construct), and the concentration of means between 4.0 and 6.5 confirmed the narrow distribution of mean ratings of this variable and the high quality of life perceived by residents of most towns in the region (see Figure 10). Also, as table 5 confirms, this relatively high mean value was indicated by the high degree of QOL reflected in responses to a question about QOL that asked respondents to select one of several categories. These results reflect the finding of a comparatively high value of 5.0 or more on the QOL rating scale for over 90 percent of all towns. Together, these results indicate that the vast majority of towns surveyed perceived their QOL to be quite high.

Figure 10. Distribution of Mean Ratings of the Quality of Life in Study Communities

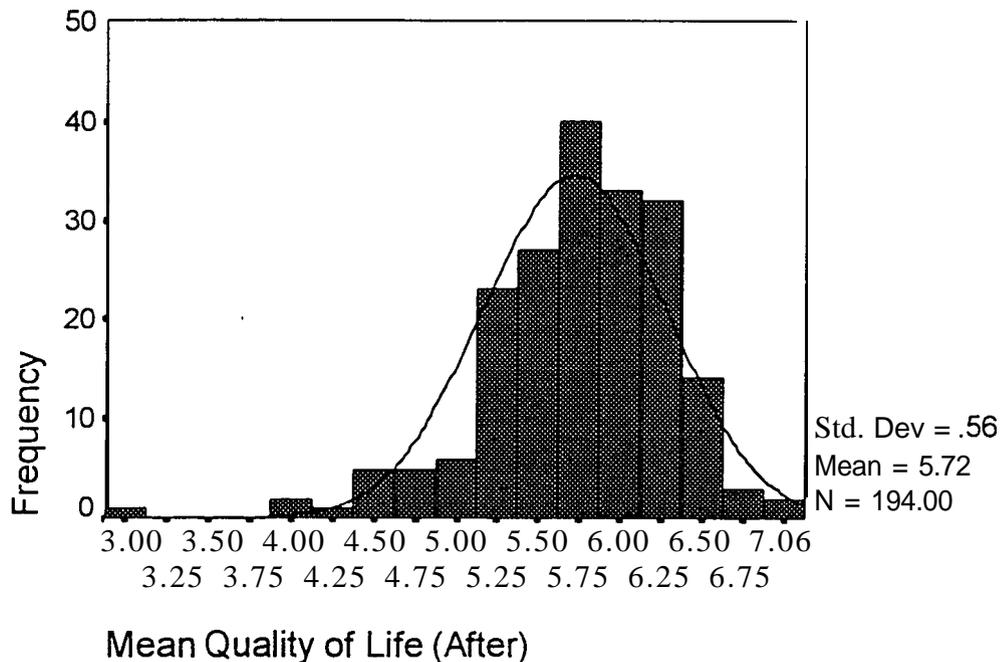


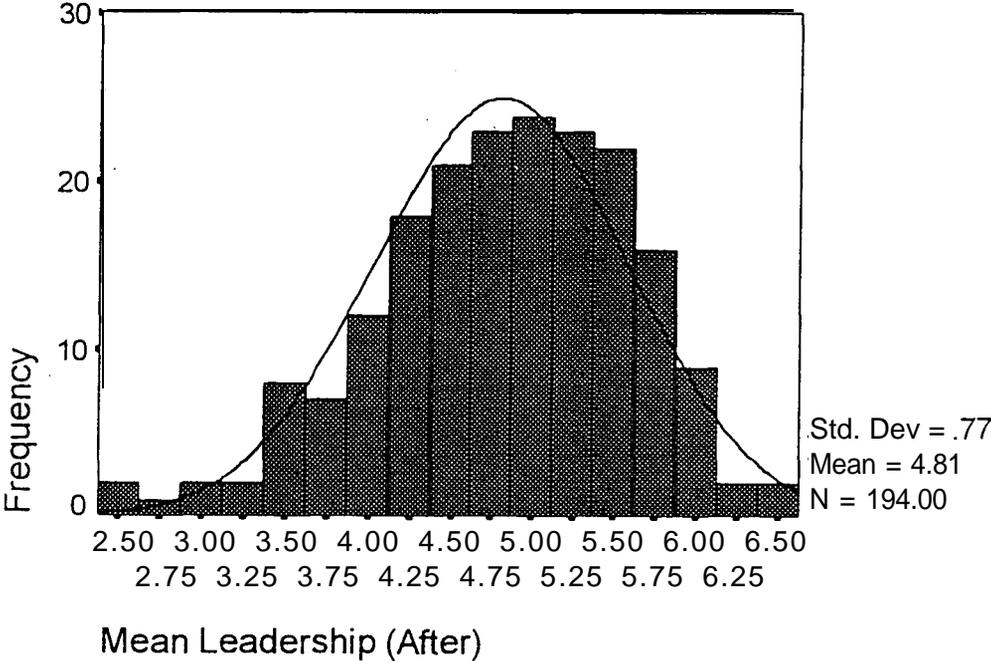
Table 5. Levels of Quality of Life in Study Communities.

<u>Levels of Quality of Life in the Community:</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
The community is safe, friendly and a good place to live; few rural communities can match its quality of life.	159	80.3	80.3
The community is not the best to live for health, safety, or social reasons, but it offers a reasonable quality of life.	38	19.2	99.5
The community has serious social problems; most other communities offer a better quality.	1	0.5	100.0
Total	198	100.0	100.0

Community Leadership

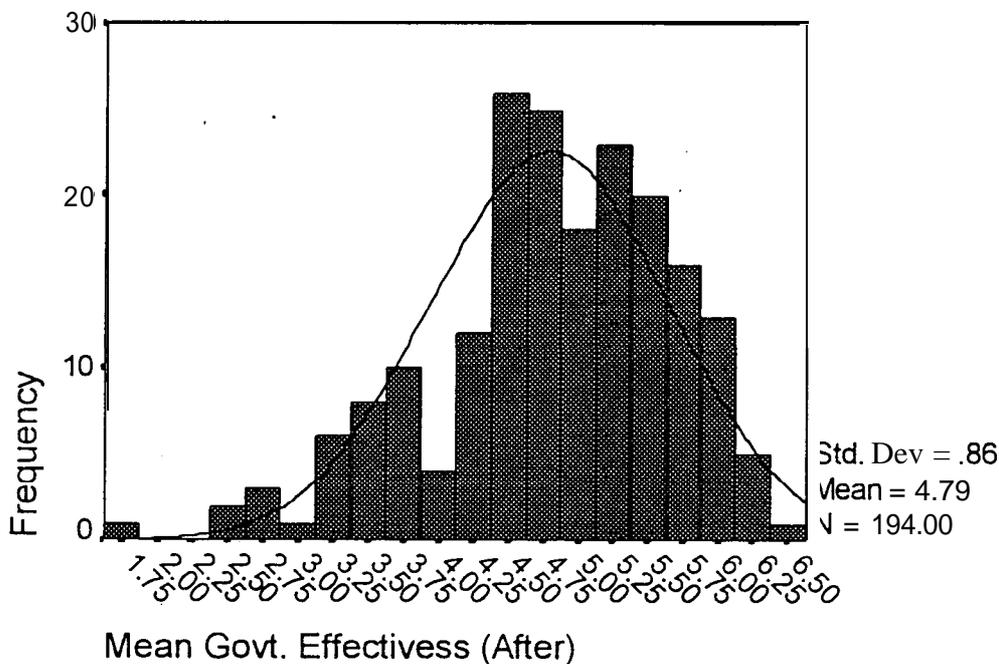
Community leadership referred to leadership from a variety of sources, including the business community, government agencies, and other organizations and active individuals. When asked to rate the *effectiveness of community leaders*, a fairly normal distribution of means was obtained from the mean ratings of the study communities, with a mean rating of 4.8 on a seven-point scale from 1 (Extremely ineffective) to 7 (Extremely effective) and a range from 1.8 to 6.4 (Figure 11).

Figure 11. Distribution of Mean Ratings of the Effectiveness of Community Leaders in the Study Communities.



Key informants also rated the *effectiveness of their community government*, which referred to the ability of that government to make and carry out plans and projects, as well as its performance in acting in accordance with the will of the citizens and the amount of trust they have in their government. The resulting distribution was characterized by a mean rating of 4.8, on a seven point scale from 1 (Extremely ineffective) to 7 (Extremely effective), and a range of ratings from 1.8 to 6.4 (Figure 12).

Figure 12. Distribution of Mean Ratings of the Effectiveness of the Government in the Study Communities.



This result was consistent with the findings shown in table 6, which indicated that less than ten percent of the towns thought their government did not know what to do or only did what influential people wanted it to do.

Table 6. Levels of the Effectiveness of Community Leaders in the Study Communities.

How the Community's Government Operates:	Frequency	Percent	Cumulative Percent
It does pretty much what citizens want.	63	31.8	31.8
It does what some influential people want.	15	7.6	39.4
It does what it thinks is best.	117	59.1	98.5
It doesn't know what to do.	3	1.5	100.0
	-----	-----	-----
Total	198	100.0	100.0

Significantly, but not surprisingly, ratings of the *effectiveness of the community's government* were highly correlated with ratings of the *effectiveness of the community's leadership*, as indicated by a very strong Pearson correlation coefficient of 0.72.

Also significant was the finding that the perceptions of elected officials of their performance and the *effectiveness of the community's government* differed from the perceptions of other key informants. Analyses comparing mean values for the two groups revealed a statistically significant difference ($p < .05$) of approximately 0.5 in the mean ratings for most of the scales concerned with the *effectiveness of the community government* and the *community's leadership*. Two different explanations for this difference are that either (1) the elected officials have a different, but valid, perspective on the effectiveness of their leadership than do other key informants, or (2) the systematic differences in ratings on scales concerned with government and leadership effectiveness represent a self-interested bias on the participation of the elected officials

in evaluating their performance and the extent to which they act representatively on behalf of their constituents.

Preparedness for the Future

Community preparedness for the future was defined in the self-assessment workbook in terms of “the degree to which a community is looking towards the future and preparing for its future.” The section devoted to this critical variable focused on questions about the ways that community members perceived their community was already changing, the extent of those changes, and how much residents were discussing whether they wanted their community to stay the same or change.

The mean rating of the extent to which the community was perceived to *bepreparedfor the future* was a relatively low mean of 4.1 on a seven point scale ranging from 1 (Totally unprepared) to 7 (Totally prepared); only the *autonomy* construct was rated with a lower mean. The distribution of the ratings for this construct across rural communities was fairly normally distributed.

Figure 13 shows that more communities fell on the upper end of the scale and perceived themselves as more prepared for the future than others. Table 7 presents the results for a fixed-response question about a community’s preparedness for the future. It indicates that about a third ($3.5\%+30.8\%=34.3\%$) of the communities are ones where citizens have plans and projects for

Figure 13. Distribution of Mean Ratings of the Communities' Preparedness for the Future.

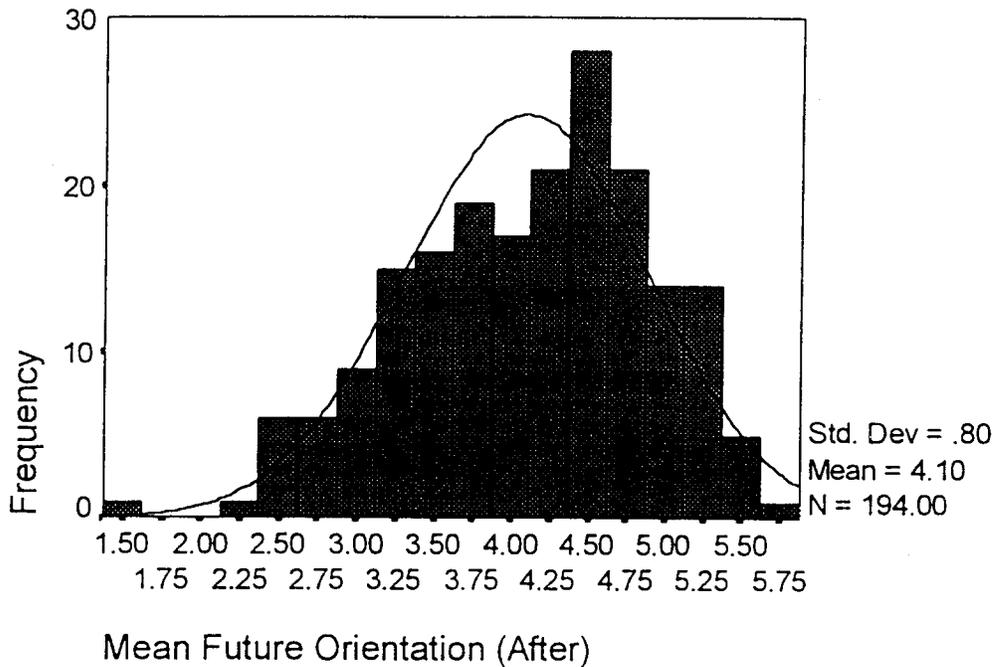


Table 7. Extent of Communities' Preparation for the Future.

<u>How Prepared for the Future Is Your Community?</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
Citizens have plans and projects identified that will allow them to stay the same.	7	3.5	3.5
Citizens have plans and projects identified that will allow them to change to achieve a desired future.	61	30.8	34.3
Citizens have discussed and identified future directions for the community, but no actions identified.	78	39.4	73.7
Citizens have not had much discussion about the town's future, but they want to stay the same.	36	18.2	91.9
Citizens have not had much discussion, they are willing to change to endure into the future.	16	8.1	100.0
Total	198	100.0	100.0

realizing some desired future identified; another 39.4 percent of the towns are ones where citizens have begun identifying future directions for the community, but they have yet to identify any actions, much less take any. Only a little over a quarter ($18.2\%+8.1\%=26.3\%$) of the towns are ones where citizens have had little or no discussion about its future. These data also reveal that, while nearly 22 percent of the communities in the region have decided they want to stay the same ($3.5\%+18.2\%=21.7\%$), a larger proportion -- almost 39 percent -- want to change ($30.8\%+8.1\%=38.9\%$). Of those communities that have already actively made plans and taken action (the 34.3% mentioned above), 90 percent have done so to allow them to change to achieve a desired future. Conversely, of the little more than a quarter (26.3%) of the towns whose citizens have not as yet made any plans or taken any action, only 31 percent are willing to change to achieve a desired future, while 69 percent want to stay the same.

A conclusion from these results is that the pro-active communities are the ones that realize change is coming and are readily moving forward in dealing with that change and trying to manage it. In contrast, communities that want to hold off change and remain the same tend to be ones that are ignoring the changes facing them -- or at least are not responding to and dealing with them.

Perceptions of Community Economies

The perceptions of key informants of their community's economy were assessed with a variety of questions. After they were asked to name the major businesses and industries in their economy, the informants then were asked to rate the extent to which their town was dependent on

various industries on a seven point scale that ranged from 1 (Extremely independent) to 7 (Extremely dependent). The results for the total sample are reported in table 8 by major industry.

Table 8. Mean Ratings of the Extent of Dependence of Rural Towns on Resource-Based Industries.

<u>Industries</u>	<u>Mean Ratings*</u>
Farming and agriculture	5.1
Grazing and ranching	4.4
Outdoor recreation and tourism	4.3
Forest products	3.6
Mining and minerals	1.7

* Ratings on a seven-point scale ranging from 1 (Extremely Independent) to 7 (Extremely Dependent).

Overall, residents of the rural communities of the region perceived farming and agriculture as most important in terms of the dependence of those communities on natural resources; grazing and ranching were also highly important. Also significant is the fact that, across the total sample of key informants, outdoor recreation and tourism were perceived as more important than forest products as a contributor to small rural economies across the region as a whole. (Validation of these perceptions is discussed in a comparison of them with the actual amounts of proportions of rural economies contributed by different industrial sectors, as discussed in a later section of this report.)

As figure 14 shows, the overall dependence of the communities in the region on industries dependent on natural resources was rated very highly by the workshop participants, with a comparatively high mean rating of 5.8 and values that ranged from 1 (Extremely independent) to 7 (Extremely dependent). The distribution was skewed, with a median value of 6.0 and only 25 percent indicating a rating of 5.4 or less.

Dominant Industry Classification and Economic Diversity

Many people have promoted the idea of classifying communities, most often on the basis of their economic structure (Branch et al. 1982, Gale and Cordray 1991). Here, just one application of the community typology idea is presented -- a simple one based on the *dominant industry* people **perceive** supports their community. First, communities in the region were resource-dependent were identified based on a mean rating on *resource-dependence* being high (at least a 5.0 on the seven-point scale). Then the resource-dependent towns in the region were then classified in terms of the single dominant industry in each town as perceived by the informants, based on the industry rated the highest in terms of their community's economic dependence on it. Table 9 shows the number of towns and the proportions of all towns that citizens indicated as having economies dominated by particular industries.

Figure 14. Distribution of Mean Ratings of Community Dependence of Study Communities on Natural Resource Industries.

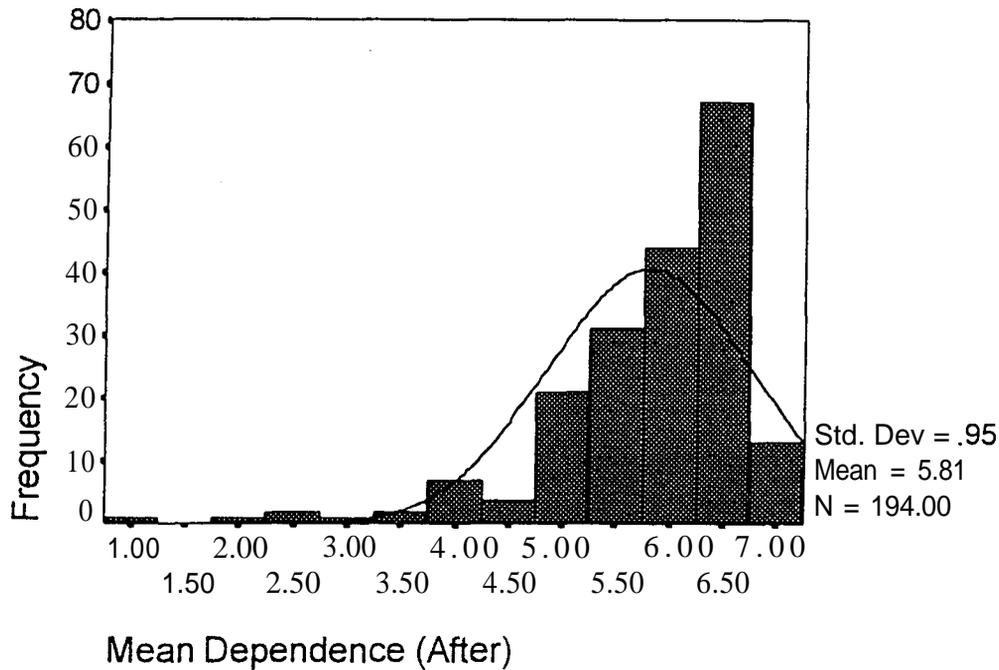


Table 9. Number of Rural Communities by Perceived Economic Dominance Classification, with Percentage of All Rural Communities

<u>Perceived Dominant Industry:</u>	<u>Number</u>	<u>Percent</u>	<u>Cumulative Percent</u>
Farming Dominant	90	45.5	45.5
Timber Dominant	47	23.7	69.2
Recreation Dominant	34	17.2	86.4
Ranching Dominant	16	8.1	94.5
Not Resource Dependent	11	5.5	100.0
Total	198	100.0	100.0

Only 11 towns, or 5.5 percent of all towns in the region, were perceived as not being significantly dependent on natural resources. Of the rest, residents perceive them to be most “dependent” on one of four types of natural-resource based industries: farming, ranching, timber and recreation/tourism. Only one community was found to be mining dominant, Challis, Idaho, which was included under the second-most dominant industry in its economy, ranching. About 46 percent of all the communities in the region could be labeled, based on how they perceived themselves, as primarily farming communities, although many of these were also dependent on forest products, tourism and recreation, and mining. Another 10 percent of the communities report being moderately highly to very highly dependent on agriculture. Another 8 percent of all communities were perceived to be primarily ranching communities. About 24 percent of the communities in the region were perceived by participants as being primarily timber communities (many of these, however, were also dependent on mining and recreation); however, fully two-thirds of all communities in the region perceived themselves as being somewhat to highly dependent on forest products. Communities perceiving themselves as primarily tourism and recreation communities totaled 17 percent of all towns in the region, with another 11 percent moderately highly to very highly dependent on tourism.

However, most of the towns in the region were perceived as having mixed economies consisting of a number of resource-based industries: only 9 percent of the communities examined are reported to be highly independent of farming and ranching, with only 13 percent independent of tourism and recreation. Only about a third (37%) are not dependent on forest products. Another 11 percent of the communities described their economy as primarily based on government jobs. Significantly, almost a quarter of all communities in the region (about 22

percent) are perceived by key informants as primarily having a mixed economy, with no particular industry dominant.

Although no statistically significant differences ($p < 0.05$) were found in citizens' ratings of perceived dependence on timber, mining or farming due to population size, an analysis of dominant economic classification in terms of size was quite suggestive. The majority (58%) of communities in the smallest size category (communities under 1,500 in population) were those in which Agriculture (farming, ranching, and food processing) was perceived to be the dominant industry; however, the dominant industry in the largest segment of towns in every size category was farming. Towns that were perceived as timber dominant were also well represented across every size category, with proportions ranging from 20 to 38 percent of the towns in each. In contrast, almost all of the ranching dominant communities (87%) were among the smallest in size (under 1,500 in population), while all of the other ranching dominant communities fell under the next smallest category (1,500 to 3,000 in population). Outdoor recreation/tourism was particularly dominant in the smallest (under 1,500 in population) and the mid-sized (3,000 to 5,000 in population) towns, with relatively large proportions of 19 and 29 percent.

Not unexpectedly, the largest communities in the region, which were among the most economically diverse, were the ones most likely to be perceived by their citizens to not be highly resource dependent.

A related focus of the community self-assessment was on the towns' economic diversity, with a question asking which of the following kinds of economic base best characterized a community: a community economy centered mainly around the growing, gathering, or harvesting

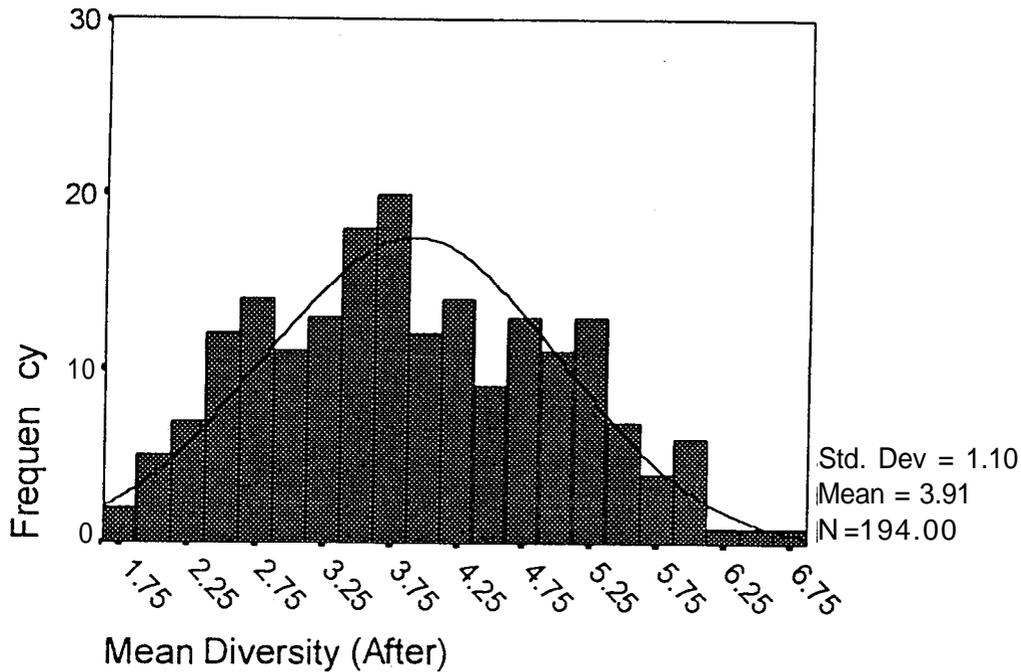
of raw materials; one mainly centered around adding value to or processing raw materials; one mainly centered around retail stores or tourism services; one mainly centered around government jobs; or one too diverse to be described by above. The results presented in table 10 indicate a classification as follows in terms of the number and proportion of communities represented by those characterizations of the community's economy.

Table 10. Type of Industry the Community's Economy Is Centered Around.

Your Community's Economy Is Centered Mainly Around:	Frequency	Percent	Cumulative Percent
Growing, gathering, or harvesting of raw materials	114	58.8	58.8
Adding value to or processing raw materials	15	7.7	66.5
Retail and/or tourism services	24	12.4	78.9
Government jobs	11	5.7	84.5
Too diverse to classify	30	15.5	100.0

Residents' perceptions of the overall economic diversity of their community also was rated on a seven-point scale, on a scale from 1 (Extremely undiversified) to 7 (Extremely diversified). As figure 15 shows, the responses were broadly distributed and comparatively low, with a mean of 3.9 1 and a range from 1.83 to 6.67 and a relatively large standard deviation of 1.1.

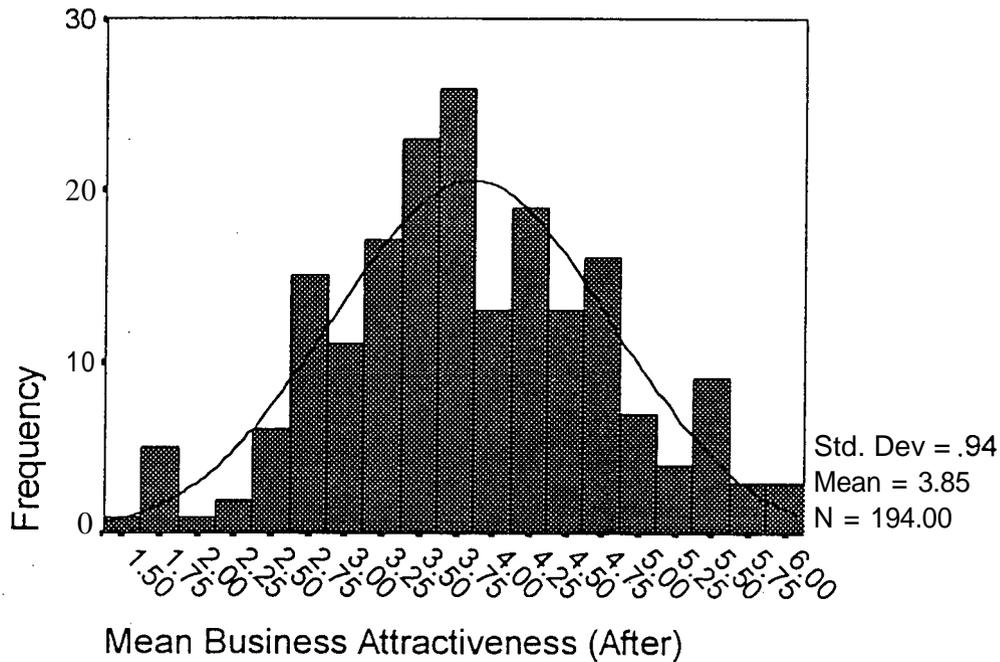
Figure 15. Distribution of Mean Ratings of the Diversity of the Economies of Study Communities.



Community’s Attractiveness for Business

Residents’ perceptions of the attractiveness of their community for business also was rated on a seven-point scale from 1 (Extremely unattractive) to 7 (Extremely attractive). The responses were skewed to the low end of the scale, with a comparatively low mean of 3.85 and a range from 1.57 to 6.0 (Figure 16), indicating that a majority of the communities assessed themselves as being more unattractive than attractive for business.

Figure 16. Distribution of Mean Ratings of the Community's Attractiveness for Business in the Study Communities.



Results of the Economic Profiles of the Region's Communities

The Economies of Communities Are Complex, And Citizen Perceptions Of Them Vary In Accuracy.

A profile of each community's economic structure was developed for this research, based on the estimated proportion of a town's total employment that is attributable to each industrial sector contributing to that town's economy.

Community Economic Profiles: Summary Statistics

Table 11 shows that the actual extent to which different industrial sectors contribute to rural economies (indicated by the size of the proportions of employment) across all the

communities in the study area provides some support for the importance of resource-based sectors.

Table 11. Percentage of Total Employment Across All Communities, by Industrial Sector.

<u>Industrial Sector</u>	<u>Percentage of Total Employment Across All Communities</u>
Agriculture	20.1
State/Local Government	15.9
Retail Trade	11.8
Manufacturing of Wood/Paper Products	6.4
Eating/Drinking	5.7
Federal Government	5.5
Medical/Social Services	5.4

All six industries reported above are those for which percentages of employment are greater than 5.0 percent: of these, the first and fourth highest are “basic,” resource based (agriculture and timber), while the third and fifth are retail trade and eating/drinking, which are

well-recognized as being key components of tourism economies; the second and sixth are government, and the remaining one is medical services. (The next highest proportion is that for another service industry, business and personal services, at 4.0%).

At the same time, the lion's share (62.1%) of jobs in the average rural communities are ones in the service sectors: not counting government, which provides 21.4 percent of all the jobs, they account for 40.7 percent of all employment in rural towns. A difference is found, however, between large and small towns in terms of the proportion of employment in traditional "economic base" industries: large towns (over 3,000 in population) have a total of 18.4 percent of jobs in those sectors, while in the small towns (under 3,000 in population), those sectors account for 34 percent of all jobs.

Economic Diversity Index

A rough-and-ready indicator of actual economic diversity was created to provide a measure of the economic diversity of each of the 472 communities in the region. The economic diversity index is a summative index of relative economic diversity based on normalized measures of three indicators of the extent to which a community is dependent on a wide variety of industries or only a few. The index includes, first, a measurement based on the average proportion of employment across all sectors: the higher the proportion in any particular sector and the fewer the number of sectors, the higher that average; and communities with a higher average had a lower level of economic diversity. To provide an indicator that, as it increased in value, indicated a

higher degree of diversity, that proportion was then subtracted from 1.0. These measurements were then normalized.

This measure was not sufficiently discriminating among communities, so two other indicators were included in the index. One focused on the extent to which a community's economy was comprised of only a few or, alternatively, many sectors: this measure was a normalized count of the number of industrial sectors in which any proportion of employment was recorded.

A third measure was of the preponderance of total employment in any one sector: this measure was set at zero and then increased by one for each sector for which the proportion of a community's total employment exceeded a third (33%). The highest number of these sectors was two; the higher this count, the less diverse the economy, so the sign was changed on the values to provide an indicator consistent with the above two measures. Again, the measure was a normalized.

All three measurements were summed for the final index of economic diversity. Table 12 provides a listing of all the cities and towns in the region, in order of their population size, along with their scores on the economic diversity index and their 1992/1994 population estimates.

Table 12. Population Size and Economic Diversity Index Score of Cities and Towns in the Region.

TOWN	1992/1994 Population Estimate	Economic Diversity Index
tendoy	.	-8.98
dingle	.	-6.95
montour	.	-6.95
spalding	.	-5.54
glifton	.	-5.30
letha	.	-5.30
ovid	.	-5.30
smiths ferry	.	-5.30
gibbonville	.	-4.76
holbrook	.	-4.76
geneva	.	-3.92
may	.	-3.92
lemhi	.	-3.11
lenore	.	-3.11
indian valley	.	-2.76
fishhaven	.	-2.52
ellis	.	-2.06
paris	.	-1.67
lakefork	.	-1.65
sweet	.	-1.53
northfork	.	-1.12
franklin	.	.21
garden valley	.	.31
clk city	.	.93
montpelier	.	2.51
preston	.	2.58
malad	.	2.79
ola	.	-3.11
carmen	.	-2.06
greenhorn	3	-8.98
granite	10	-8.98
lonerock	20	-5.57
clayton	20	-1.20
atomic city	26	-3.92
shaniko	30	-2.52
drummond, ID	33	-8.98
antelope	35	-8.98
minidoka	64	-1.65
butte city	65	-6.95
krupp	65	-5.57
stanley	70	.83
chatcolet	73	-3.92
huetter	85	-5.54

TOWN	1992/1994 Population Estimate	Economic Diversity Index
leadore	85	-1.77
hamer	86	-1.67
tensed	91	-1.29
lamont	93	-5.57
acequia	103	-5.57
white bird	109	-1.12
unity	110	1.60
waverly	111	-2.13
midvale	116	-.72
hope	116	1.20
irwin	116	-1.36
dietrich	129	-3.70
farmington	130	-1.20
rexford	134	-1.43
adrian	135	-1.66
swan valley	139	-1.53
ferdinand	141	
murtaugh	141	-.44
dayville	145	-.89
summerville	150	-3.70
hollister	151	-2.53
elk river	153	-1.29
tetonia	153	-.82
marcus	154	-2.06
helix	155	-2.30
spray	155	-.54
donnelly	155	1.12
grass valley	160	-1.30
island park	163	-.53
starbuck	165	-3.42
mittchell	165	-.97
sumpter	165	1.12
peck	166	1.59
oldtown	166	2.49
monument	170	-.96
castleford	176	-.20
conconully	180	-2.30
malta	180	-1.60
richland, OR	180	1.72
mud lake	182	-.24
bloomington	184	-3.92
hartline	185	-2.30
fernan lake	186	-5.30
seneca	190	-1.12
metaline	193	-2.06
worley	194	.27
moore	196	-2.61
bliss	196	1.44
kahlolus	200	.45

TOWN	1992/1994 Population Estimate	Economic Diversity Index
st. charles	205	-2.52
coulee dam	206	.60
onaway	208	.
latah	211	-1.67
malden	215	-5.30
alpine	222	-.41
wilson creek	224	-.82
nespelem	225	-1
metaline falls	227	-2.17
lostine	230	-.11
east hope	231	-6.95
harrison	232	-.44
creston	239	-2.84
long creek	240	-.35
adams	245	-1.65
spangle	245	-.44
wardner	247	-8.98
ione. OR	250	-1
riverside	250	1.07
cusick	256	-.58
ukiah	260	-1.89
washtucna	270	-.44
drummond, MT	270	1.51
winchester	272	.
melba	272	.34
mosier	275	1.07
lexington	285	-.86
kicking horse	288	.
thayne	288	2.58
culdesac	289	-1.04
declo	289	-2.65
rufus	290	-1.54
albion. ID	293	-2.30
moro	295	-.82
rockland	305	-2.13
prescott	305	-.64
uniontown	305	-.34
elmer city	310	-4.76
imbler	310	1.36
arimo	314	-1.36
parker	314	-5.57
almira	315	-1.77
mesa	315	-.44
kootenai	317	-.29
eden	329	-1
dover	335	-5.57
halfway	340	3.01
victor	341	-.20
northport	342	-.53

TOWN	1992/1994 Population Estimate	Economic Diversity Index
paisley	345	-.92
winthrop	345	2.29
colton	350	-1.77
grandview	355	-.58
bonanza	355	-.29
springdale	355	.18
alberton	358	1.44
endicott	360	-1
newdale	361	-2.94
george	365	-1.54
mansfield	365	-1.12
cambridge	367	2.22
idaho city	373	-.96
hayden lake	374	2.46
finley point	376	-.41
fairfield, ID	376	.60
richfield	380	-1.24
dayton, ID	382	-3.94
wasco	385	1
lacrosse	390	-.88
inchelium	392	-.48
jordan valley	400	.04
charlo	406	-1.37
athol	409	2.27
haines	410	-.14
notus	411	-1.60
hot spring	413	1.31
bancroft	417	-1.43
weston, ID	426	-2.53
hazelton	426	-.24
hauser	427	-6.95
oakesdale	433	-.34
moyie springs	435	-.53
basalt	450	-3.35
harrah	453	-2.30
smeltonville	453	.88
firth	456	-2.94
arlington	460	-.45
riggins	460	2.19
lava hot springs	464	1.77
sprague	465	-.48
lind	470	-.53
fossil	470	-.36
nez perce	471	-1.22
clark fork	471	-.24
dubois	480	.10
maupin	485	1.53
arlee	486	.31
ponderay	491	-.20

TOWN	1992/1994 Population Estimate	Economic Diversity Index
harrington	492	-1.36
reardan	497	1.31
ione, WA	501	.88
rockford	505	1.12
st. john	508	.10
juliaetta	514	-.17
north powder	515	-1.20
echo	515	-.82
weippe	523	-1.20
metolius	545	-5.30
entiat	545	-.36
deary	548	-2.37
lewisville	549	-3.54
rock island	555	.69
huntington	560	-1.36
teton	563	-3.11
banks	570	-2.30
cove	570	
craigmont	571	-1.22
walkerville	573	-1.65
dufur	580	-.48
pateros	585	1.77
mackey	592	2.19
garfield	594	-.53
fairfield, WA	599	.07
oakley	607	.36
coulee city	612	2.43
new meadow	620	-.68
rosalia	620	2.01
mt. vernon	625	-.53
arbon valley	628	-5.57
weston. OR	640	.04
roberts	647	.64
albion, WA	655	-2.30
georgetown	659	-2.30
canyon city	660	-.91
culver	660	1.27
bingen	660	2.05
piresdale	665	-2.52
ririe	665	-1.12
hagerman	669	2.25
downey	672	1.74
darby	679	2.02
greenleaf	681	-2.06
naches	689	2.25
chiloquin	700	.84
kooskia	708	1.68
condon	725	.14
horseshoe bend	726	.36

TOWN	1992/1994 Population Estimate	Economic Diversity Index
malin	740	-.44
potlatch	743	2.25
inkom	753	.10
pierce	755	-.44
wallowa	755	.31
plummer	763	1.44
mccammon	763	-1.36
sisters	765	2.79
menan	768	-1.36
troy, ID	782	.07
genesee	783	-.44
marsing	809	-.72
mullan	815	-2.37
island city	825	-8.98
merrill	835	3.04
st. ignatius	849	.14
cottonwood	852	2.01
tekoa	870	-.20
wilbur	875	1.77
superior	879	2.29
spirit lake	883	1.08
roslyn	885	2.22
irrigon	890	-.25
tieton	891	1.44
philipsburg	902	2.79
twisp	910	2.31
moxee	925	1.96
ucon	932	-2.06
electric city	945	-.34
hansen	946	-.20
council	951	2.05
odessa	957	1.29
palouse	960	-.68
driggs	980	2.53
wallace	994	.38
challis	995	2.57
sun valley	997	1.96
paul	1000	1.88
cascade	1001	2.25
lapwai	1006	-.05
plains	1014	2.53
tonasket	1020	-.68
arco	1029	-.30
eureka	1039	2.31
grand coulee	1045	1.96
athena	1050	-.24
troy, MT	1054	2.49
kittitas	1060	-.53
waterville	1065	.27

<u>TOWN</u>	<u>1992/1994 Population Estimate</u>	<u>Economic Diversity Index</u>
republic	1080	2.31
terrebonne	1083	1.51
ashton	1104	1.98
iona, ID	1107	-.92
asotin	1108	-2.48
waitsburg	1130	.31
prairie city	1160	1.74
joseph	1165	.64
kamiah	1190	1.44
royal city	1200	1.96
three river	1230	-3.92
pablo	1264	1.68
shoshone	1273	2.31
soap lake	1300	1.96
thompson falls	1313	2.31
stevensville	1340	2.53
glenns ferry	1359	-.36
sugar city	1410	-1.12
wilder	1426	1.68
bellevue	1433	2.51
kettle falls	1435	2.73
hines	1445	1.77
fort hall	1453	-.53
pomeroy	1460	1.33
new plymouth	1465	-.41
heppner	1465	1.54
vale	1495	1.77
osburn	1507	2.01
oroville	1520	.38
afton	1534	3.28
mattawa	1535	-.41
pilot rock	1540	.10
aberdeen	1548	1.72
davenport	1550	1.81
mabton	1615	.27
stanfield	1620	-1.99
ronan	1630	2.29
brewster	1645	1.77
bonner-w. riverside	1654	-.20
elgin	1655	.84
priest river	1679	2.97
burbank	1695	-1.12
parma	1702	.38
bridgeport	1705	.66
filer	1716	2.82
ritzville	1750	.58
warden	1765	-.20
newport	1780	2.31
pinehurst	1785	1.77

TOWN	1992/1994 Population Estimate	Economic Diversity Index
cle elum	1785	2.53
john day	1900	2.33
union	1915	1.53
white salmon	1915	2.29
enterprise	1935	2.23
leavenwort	2020	2.53
liberty lake	2036	.60
middleton	2081	1.72
granger	2085	2.25
benton city	2090	1.92
homedale	2097	3.28
boardman	2145	2.01
dalton gardens	2170	.
wendell	2179	.12
zillah	2190	.42
kuna	2238	1.79
chewelah	2243	2.53
bonners ferry	2244	2.57
warm springs	2287	.62
mccall	2329	3.54
rathdrum	2382	2.51
okanogan	2400	-.38
kellogg	2495	2.58
dayton, WA	2505	2.80
airway heights	2520	1.98
libby	2541	2.80
deer park	2570	2.53
lakeview	2575	2.55
connell	2640	2.51
kimberly	2656	1.80
cashmere	2660	3.06
fruitland	2668	2.03
st. maries	2669	.44
nyssa	2675	1.80
ketchum	2685	2.33
lolo	2746	2.51
white swan	2755	-.05
colfax	2810	.40
heyburn	2836	-1
south broadway	2843	-5.30
burns	2870	2.29
rigby	2950	2.55
orofino	3010	2.03
hamilton	3023	2.80
columbia falls	3044	2.80
gooding	3066	1.86
salmon	3093	3.28
umatilla	3155	2.22
soda springs	3182	2.57

TOWN	1992/1994 Population Estimate	Economic Diversity Index
chelan	3200	2.29
grangeville	3208	2.75
union gap	3220	2.79
st. anthony	3393	2.01
goldendale	3425	2.34
deer lodge	3494	.64
polson	3621	2.80
medical lake	3660	1.98
eagle	3694	1.79
buhl	3743	1.17
shelley	3744	2.51
wapato	3790	2.31
quincy	3860	2.05
american falls	4008	.68
east wenatchee	4010	2.31
omak	4220	2.33
terrace heights	4223	-3.92
hailey	4252	2.33
madras	4290	2.53
colville	4440	2.53
whitefish	4551	3.03
greenacres	4626	1.74
prosser	4630	2.29
hayden	4693	-.96
othello	4780	2.07
fairchild	4854	-1.96
hood river	4875	.
emmett	4888	2.33
weiser	4891	2.33
country homes	5126	.69
selah	5170	2.01
ammon	5469	-3.66
ephrata	5585	2.29
jackson	5605	2.57
rupert	5636	2.53
sandpoint	5725	3.54
otis orchards	5790	2.05
milton-freewater	5865	2.03
prineville	5945	2.34
payette	6170	2.57
college place	6710	-.14
clarkston	6750	2.83
garden city	7034	-5.30
jerome	7077	2.29
grandview	7690	.14
toppenish	7734	2.05
veradale	7836	2.27
mountain home	8107	.44
cheney	8220	2.29

TOWN	1992/1994 Population Estimate	Economic Diversity Index
chubbuck	8354	1.07
post falls	8494	2.53
burley	8918	2.33
baker	9585	3.30
redmond	9650	3.27
ontario	9760	2.02
anaconda	10037	.93
orchard homes	10317	-3.11
hermiston	10330	2.31
blackfoot	10628	2.34
meridian	11181	2.31
the dalles	11325	2.80
sunnyside	11660	1.83
moses lake	12190	2.49
la grande	12195	2.57
kalispell	12456	2.84
ellensburg	12860	3.30
rexburg	14497	2.55
pendleton	15715	2.57
klamath falls	18405	2.58
altamont	18591	-5.30
moscow	19122	.68
caldwell	20800	2.55
pasco	22170	2.34
opportunity	22326	-.64
wenatchee	23460	2.31
pullman	23770	.45
coeur d'alene	26611	3.06
walla walla	28730	2.58
lewiston	29119	2.82
bend	29425	2.82
twin falls	29684	2.58
nampa	31416	2.58
butte-silver bow	33555	2.58
richland	35430	.16
missoula	44522	2.57
kennewick	46960	2.09
pocatello	47914	1.86
idaho falls	48226	2.58
yakima	59740	3.27
boise	135506.0	2.34
spokane	185600.0	1.78

The results show that, although larger towns and cities tended to have a high degree of economic diversity, so too did many of the region's smaller towns. This conclusion also is supported by the finding of a moderately strong, positive relationship between the size of a community based on its 1990 population and economic diversity index based on actual employment figures, as indicated by a Pearson correlation coefficient of 0.43; much the same degree of relationship was found with the estimated size of communities based on their 1992/1994 population estimates.

In summary, the empirical data suggest that, significantly, key informants in at least a number of towns perceive their community to be dependent on traditional resource industries when they actually are not (based on the ten-percent benchmark that provides a low, conservative indicator of community dependence on that industry sector). Fully 37 percent of all towns in the case of timber and 58 percent in terms of agriculture were rated as perceived to be moderately to highly dependent on those industries but had less than ten percent of total employees employed in them. This preliminary analysis of the perceptions and realities of these towns suggests their economies may actually be more diversified than their citizen representatives perceive them to be.

However, despite these results, a strong positive relationship was found overall between the economic structure scale and the economic diversity index based on actual employment figures, as indicated by a Pearson correlation coefficient for all communities of 0.62 (statistically significant; $p < 0.05$). This finding indicates that, overall, knowledgeable citizens of many communities are fairly accurate in their assessment of the relative extent to which their town's economy is diversified. The lack of an even stronger relationship between the mean scores on the economic structure scale and the scores on the economic diversity index could be due to the

inaccuracies of residents of towns perceived to be dependent on resource resources like timber and farming. The past prominence of these industries or their high visibility in a community may be the basis for residents' assumption that the industries are more important than they actually are.

A test of this hypothesis confirms it. When the 48 communities whose key informants overestimate or underestimate the importance of agriculture are omitted from the analysis, the correlation coefficient increases to 0.65; and when the additional 46 communities that overestimate or underestimate the importance of timber are omitted, the correlation coefficient for the remaining 100 communities (just over 50% of all of them) increases even more, to a highly positive coefficient of 0.70.

An alternative explanation for the finding of these misperceptions is that the measures of perceived dependence on these industries focused the key informants' attention on their perceptions of the absolute (i.e., noncomparative) importance of the towns' resource-based industries, while the proportional employment and economic diversity data reflected the relative importance of these industries *vis a vis* all the other manufacturing, service and other industrial sectors. This explanation was tested by conducting a correlational analysis for only those towns actually found to be dominated by timber or agriculture: Pearson correlation coefficients of only 0.32 and 0.44 (statistically significant; $p < 0.05$) were found between perceived diversity and actual diversity measured with the index, providing support for this hypothesis.

Economic Profiles of Communities Based on Size Class

Table 13 presents the results of the economic profiles of the region's towns based on an analysis of employment in different industrial sectors in terms of towns grouped by population

size. (The results presented in the table are only for the 198 communities for which complete community assessment data exist, for the sake of comparability, but the large sample size ensures the representativeness of these results for all towns in the region.) Mean proportions of employment in **each** industry sector are reported for each of the four classes of towns grouped by 1990 population size described previously, from the smallest in population (less than 1,500 people) to the largest (5,000 to 10,000 people).

These data show that, surprisingly, larger rural communities in the region are not any more economically diversified than smaller ones, as one might expect. Many of the industrial sectors in the large rural towns are represented by a proportion of total economic activity that is comparable to that proportion found for small towns. Exceptions include *miscellaneous manufacturing, communications, medical services, amusements/recreation, and business **and** personal services*: the larger the town's population, the less its dependence on *agriculture* (farming and ranching), and the more these other sectors (*communications, medical services, **amusement/recreation, business and personal services***) are important components of the local economy.

Interestingly, proportions for the ***forest products manufacturing*** sector indicate that the significance of the timber industry in terms of size of share is the same across towns of all sizes. Like forest products, in fact, most sectors account for small (single-digit) percentages of the overall economy. Exceptions include *agriculture*, which is clearly more important in smaller communities, and *retail trade* and *government*.

Table 13. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Size of Town (In Classes of Population Size).

<u>Population Size of Community</u>	<u>Employment by Industrial Sector (Percentage)</u>						
	<u>Agriculture*</u>	<u>Agricultural Services*</u>	<u>Manufacturing: Wood / Paper Products</u>	<u>Manufacturing: Food Processing</u>	<u>Manufacturing Miscellaneous</u>	<u>Sand /Gravel Mining</u>	<u>Construction</u>
Small (less than 1,500)	26.0	3.0	6.6	1.9	1.0	0.1	3.4
Medium small (1,500 to 3,000)	12.9	2.6	6.4	1.9	3.0	0.3	4.7
Medium large (3,000 to 5,000)	6.9	3.5	4.4	2.7	4.2	0.3	5.7
Large (5,000 to 10,000)	6.6	1.9	5.4	2.6	3.4	0.01	4.7

* Industrial sectors for which statistically significant differences (p<0.05) were found.

Table 13. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Size of Town (In Classes of Population Size) (Cont.'d).

<u>Population Size of Community</u>	<u>Employment by Industrial Sector (Percentage)</u>						
	<u>Finance/ Insurance/ Real Estate</u>	<u>Business/ Personal Services*</u>	<u>Transportation</u>	<u>Wholesale Trade</u>	<u>Retail Trade</u>	<u>Eating/ drinking</u>	<u>Lodging</u>
Small (less than 1,500)	3.1	2.9	2.2	3.5	11.4	5.8	2.5
Medium small (1,500 to 3,000)	4.2	4.3	2.2	2.9	12.8	4.9	2.0
Medium large (3,000 to 5,000)	5.4	7.4	3.0	2.7	12.6	5.1	3.0
Large (5,000 to 10,000)	4.9	10.9	2.7	4.2	13.1	7.3	0.9

* Industrial sectors for which statistically significant differences (p<0.05) were found.

Table 13. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Size of Town (In Classes of Population Size) (Cont.'d).

<u>Population Size of Community</u>	<u>Employment by Industrial Sector (Percentage)</u>					
	<u>Amusement/ Recreation*</u>	<u>Medical/social Services*</u>	<u>Federal Government</u>	<u>State & Local Government</u>	<u>Public Utilities</u>	<u>Communication*</u>
Small (less than 1,500)	1.2	3.3	5.7	16.1	0.6	0.2
Medium small (1,500 to 3,000)	1.8	9.6	4.9	17.3	0.8	0.6
Medium large (3,000 to 5,000)	2.4	-11.2	4.0	13.9	0.5	0.6
Large (5,000 to 10,000)	2.7	8.9	6.3	12.3	0.6	0.5

* Industrial sectors for which statistically significant differences ($p < 0.05$) were found.

A Comparison Of Perceived & Actual Dependence of Communities on Industries

The economic-profile data also were analyzed in terms of the mean proportions of employment in various industry sectors for towns grouped by the industry residents perceived to be most important in their town's economy, or "dominant industry."

Table 14 provides a comparison of the larger, more important sectors of local economies based on the dominant industry in each community. It suggests that, as we might expect for communities that are perceived to be farming/ranching dominant, higher percentages of employment are in *agriculture, agricultural services, and food processing*; particularly unimportant are *lodging and miscellaneous manufacturing*. Likewise, *miscellaneous manufacturing* is a particularly unimportant sector of economies in ranching dominant communities, while a high proportion indicated that *agriculture* was important; however, *agricultural services* were comparatively low in importance in these towns. In addition, these ranching towns had the second-highest proportion of *forest products manufacturing* next to timber dominant towns

Aside from the timber dominant communities having, by far, the largest percentage of the manufacturing of wood and paper products, they also had the most diverse economies in terms of no significant low proportions in any particular sectors and, conversely, comparatively large proportions of employment across most industrial sectors; interestingly, these included the highest proportions of any communities in *miscellaneous manufacturing*.

Table 14. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Groups of Towns Based on Their Perceived Dominant Industry (Cont.'d).

Perceived Dominant Industry of Towns	Employment by Industrial Sector (Percentage)						
	Agriculture*	Agricultural Services*	Manufacturing: Wood / Paper Products	Manufacturing: Food Processing	Manufacturing: Miscellaneous*	Sand/Grave Mining	Construction
Farming	28.6	3.4	2.1	4.3	1.0	0.2	2.7
Ranching	21.7	2.6	6.6	0.1	0.5	0.04	3.9
Timber	12.5	2.4	16.6	0.1	2.8	0.1	4.0
Tourism/ Outdoor Recreation	12.4	2.9	3.7	0.3	2.4	0.3	6.4
Non-resource Based	22.3	1.9	2.5	1.2	1.0	0.05	5.1
All Communities	20.1	2.9	6.4	2.0	1.8	0.02	3.9

* Industrial sectors for which statistically significant differences ($p < 0.05$) were found.

Table 14. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Groups of Towns Based on Their Perceived Dominant Industry (Cont.'d).

<u>Perceived Dominant Industry of Towns</u>	Employment by Industrial Sector (Percentage)							
	<u>Finance/ Insurance/ Real Estate</u>	<u>Communication</u>	<u>Business and Personal Services*</u>	<u>Transportation</u>	<u>Wholesale Trade*</u>	<u>Retail Trade*</u>	<u>Eating/ drinking*</u>	<u>Lodging*</u>
Farming	3.1	0.3	3.5	2.5	5.1	9.9	4.5	0.7
Ranching	1.9	0.4	2.3	2.5	2.7	14.2	4.8	2.2
Timber	3.4	0.2	3.8	2.1	1.8	12.5	4.6	2.0
Tourism/ Outdoor Recreation	5.4	0.2	4.7	2.1	1.8	15.4	9.3	6.9
Non-resource Based	4.6	0.2	8.6	2.5	2.6	9.9	8.9	2.3
All communities	3.6	1.9	4.0	2.3	3.4	11.8	5.7	2.3

* Industrial sectors for which statistically significant differences ($p < 0.05$) were found.

Table 14. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Groups of Towns Based on Their Perceived Dominant Industry (Cont.'d).

<u>Perceived Dominant Industry of Towns</u>	Employment by Industrial Sector (Percentage)				
	<u>Amusement/ Recreation*</u>	<u>Medical/Social Services</u>	<u>Federal Government*</u>	<u>State and Local Government</u>	<u>Public Utilities</u>
Farming	0.6	6.3	10.1	16.0	3.1
Ranching	2.0	7.0	8.4	15.4	1.9
Timber	2.9	5.0	3.4	12.4	3.4
Tourism/ Outdoor Recreation	0.08	6.7	2.0	13.2	5.4
Non-resource Based	1.5	5.4	5.5	15.9	4.6
All communities	3.6	1.9	4 . 0	2.3	3.6

* Industrial sectors for which statistically significant differences (p<0.05) were found.

The type of communities in which the *eating/drinking, lodging, construction, and business and personal service* sectors were especially important were communities in which the outdoor recreation/tourism industry was dominant, as well as towns that can be characterized as being nonresource dependent. The highest proportion of employment in the *amusement and recreation* industrial sector was in outdoor recreation/tourism towns, but this sector is also important in timber dominant towns, reflecting the significant role that the recreation amenities in many timber dominant towns are increasingly playing.

An important contributor to the economies of diverse economies typed here as nonresource are basic industries like agriculture and timber -- the manufacturing of forest products represents one of highest proportions in this community type next to that for timber dominant towns. Other relatively important sectors are service ones that include *construction, finance, and the medical, business and personal service* sectors. Comparatively low in size and importance are *agricultural services* and the *federal government*, probably due to the diversity of service as well as basic industries in nonresource communities with more diverse economies.

The preceding discussion, it should again be emphasized, focuses on the key informants' perceptions of the economic make-up of their communities in terms of industry "dominance." But how well, how accurately, do these perceptions reflect the reality of any given community's actual employment base? Analyses to answer this question focused in particular on data on two key resource-based industrial sectors, *forest products* and *agriculture*, as well as the relation of perceptions to reality for all sectors of the community's economy.

One difficulty with assessing the accuracy of resident perceptions of their community's economy and its diversity is that of determining an acceptable standard for declaring a community "resource-dependent" (U.S. Forest Service 1977). As that policy statement noted: "The

definition of dependency has long been debated...[with] no clear-cut definition of dependency.”

The criterion in the USFS’s 1977 report on dependent communities establishes that, “if mills and/or communities utilize at least 50 percent of the annual capacity from National Forest timber sales and have at least 10 percent of their total employment in this industry, then the mills and/or communities are dependent upon National Forest timber sales.” Another approach is represented by the analysis of Bender and associates (1985), who in a study of mining-dependent counties classified all counties with 20 percent or more of total county income attributable to the mining industry as mining-dependent. The present analysis used the broader, more inclusive criterion used by the USFS of 10 percent.

The economic profile data were analyzed using this benchmark of ten percent or more of employment in an industry as an indicator that the industry was a major one in a town’s economy. The analysis indicated that a much higher percentage -- approximately 70 percent -- of the towns were ones in which farming and ranching were major industries than were perceived by community residents to be “agriculture-dominant.” (In the economic profile data, ranching is combined with farming as part of the agricultural sector.) When the average proportion of employment in agriculture (20%) was applied as the benchmark across all communities, the percentage of the towns in which agriculture was the major industry (58%) was much closer to the proportion based on perceptions. In contrast, a lower percentage of the towns (17%) were found to be ones in which timber was a major industry than were perceived by workshop participants to be “timber-dominant”. Communities in which timber plays a significant role, as indicated in terms of having more than 10 percent in forest products manufacturing, include 71 communities (representing 15 percent of all 472 communities) (see Table 15).

Table 15. Rural Communities with High Percentages of Total Employment in Forest Products, with Economic Diversity Index, by Ecological Response Unit.

TOWN	ECOLOGICAL RESPONSE UNIT	PERCENT OF EMPLOYMENT IN FOREST PRODUCTS	ECONOMIC DIVERSITY INDEX
merrill	UPPER KLAMATH	0.16	3.04
malin	UPPER KLAMATH	0.66	-0.44
lakeview	UPPER KLAMATH	0.11	2.55
warm springs	COLUMBIA PLATEAU	0.51	0.62
pilot rock	COLUMBIA PLATEAU	0.33	0.1
pierce	COLUMBIA PLATEAU	0.64	-0.44
orofino	COLUMBIA PLATEAU	0.12	2.03
weippe	COLUMBIA PLATEAU	0.42	-1.2
prineville	COLUMBIA PLATEAU	0.27	2.34
kamiah	COLUMBIA PLATEAU	0.22	1.44
long creek	BLUE MOUNTAINS	0.12	-0.35
imbler	BLUE MOUNTAINS	0.12	1.36
prairie city	BLUE MOUNTAINS	0.16	1.74
burns	BLUE MOUNTAINS	0.1	2.29
john day	BLUE MOUNTAINS	0.2	2.33
joseph	BLUE MOUNTAINS	0.34	0.64
wallowa	BLUE MOUNTAINS	0.19	0.31
athol	NORTHERN GLACIATED MOUNTAINS	0.12	2.27
kettle falls	NORTHERN GLACIATED MOUNTAINS	0.22	2.73
inchelium	NORTHERN GLACIATED MOUNTAINS	0.12	-0.48
moyie springs	NORTHERN GLACIATED MOUNTAINS	0.64	-0.53
ione, WA	NORTHERN GLACIATED MOUNTAINS	0.27	0.88
republic	NORTHERN GLACIATED MOUNTAINS	0.12	2.31
columbia falls	NORTHERN GLACIATED MOUNTAINS	0.11	2.8
eureka	NORTHERN GLACIATED MOUNTAINS	0.22	2.31
oldtown	NORTHERN GLACIATED MOUNTAINS	0.16	2.49
priest river	NORTHERN GLACIATED MOUNTAINS	0.29	2.97
bonners ferry	NORTHERN GLACIATED MOUNTAINS	0.1	2.57
superior	LOWER CLARK FORK	0.21	2.29
drummond, MT	UPPER CLARK FORK	0.26	1.51
darby	UPPER CLARK FORK	0.3	2.02
payette	OWYHEE UPLANDS	0.11	2.57
fruitland	OWYHEE UPLANDS	0.18	2.03
emmett	OWYHEE UPLANDS	0.14	2.33
ashton	SNAKE HEADWATERS	0.2	1.98
new meadows	CENTRAL IDAHO MOUNTAINS	0.37	-0.68
kooskia	CENTRAL IDAHO MOUNTAINS	0.3	1.68

Table 15. Rural Communities with High Percentages of Total Employment in Forest Products, with Economic Diversity Index, by Ecological Response Unit (Cont.'d).

<u>TOWN</u>	<u>ECOLOGICAL RESPONSE UNIT</u>	<u>PERCENT OF EMPLOYMENT IN FOREST PRODUCTS</u>	<u>ECONOMIC DIVERSITY INDEX</u>
elk city		0.27	0.93
montour		0.63	-6.95
ovid		0.86	-5.3
pablo		0.22	1.68
white bird		0.1	-1.12
philipsburg		0.11	2.79
pinehurst		0.12	1.77
cambridge		0.17	2.22
hines		0.2	1.77
thompson falls		0.21	2.31
mittchell		0.1	-0.97
potlatch		0.25	2.25
lostine		0.31	-0.11
northport		0.31	-0.53
bonner-w. riversid		0.47	-0.2
st. maries		0.3	0.44
elgin		0.31	0.84
juliaetta		0.33	-0.17
deary		0.3	-2.37
bingen		0.17	2.05
renford		0.55	-1.43
horshoe bend		0.32	0.36
lewiston		0.11	2.82
fernan lake		0.89	-5.3
pateros		0.21	1.77
naches		0.11	2.25
hope		0.21	1.2
mt. vernon		0.38	-0.53
summerville		0.33	-3.7
north powder		0.44	-1.2
plummer		0.2	1.44
huetter		1	-5.54
hayden		0.21	-0.96
madras		0.11	2.53

Of the total of 198 communities that were sampled and for which data on resident perceptions of resource dependence were collected, 37 (18.7%) have high employment in manufacturing of forest products (10% or more of all jobs). As table 16 shows, of these 37 communities actually having high dependence on forest products for employment (> 10%), workshop participants of 3 of them, or 8 percent, perceived them to have fairly low dependence on this sector.

In contrast, as table 17 shows, 162 communities were found to have less than 10 percent of their total employment in the forest products manufacturing sector and could not be deemed “timber dependent” by this measure. Of these communities, 58, or 36.6 percent, were perceived by key informants to have fairly high dependence on timber and forest products.

Table 18 shows the names and statistics of towns perceived to be independent of timber but that actually do have a significant proportion of employment in wood products, while table 19 shows the names and statistics of towns perceived to be dependent of timber, but that have no significant proportion of employment in wood products.

Table 16. Number and Percentage of Communities with a High Actual Degree of Dependence on Timber (Based on 10 percent Or More Employment in Timber), by Perception of Dependence.

		<u>High Actual Dependence</u>	
		<u>No. Cases</u>	<u>Percentage</u>
<u>Perceived Dependence</u>	High	34	92%
	Low	<u>3</u>	<u>8%</u>
	TOTAL	37	100%

Table 17. Number and Percentage of Communities with a Low Actual Degree of Dependence on Timber (Based on 10 percent Or More Employment in Timber), by Perception of Dependence.

		<u>Low Actual Dependence</u>	
		<u>No. Cases</u>	<u>Percentage</u>
<u>Perceived Dependence</u>	High	59	37%
	Low	<u>103</u>	63%
	TOTAL	1 6 2	100%

Table 18. Towns Perceived to be Independent of Timber but with a Significant Proportion of Employment in Wood Products.

<u>TOWN</u>	<u>PERCEIVED TIMBER DEPENDENCE</u>	<u>PERCENTAGE EMPLOYMENT IN WOOD PRODUCTS</u>
malin	3.29	0.66
merrill	3.38	0.16
payette	0.83	0.11

Table 19. Towns Perceived to be Dependent on Timber with No Significant Proportion of Employment in Wood Products.

TOWN	PERCEIVED TIMBER DEPENDENCE	PERCENTAGE EMPLOYMENT IN WOOD PRODUCTS
alberton	4.75	0.09
baker	6.2	0.07
burbank	6.17	0
cascade	6.43	0.09
chewelah	6	0.08
chiloquin	6.33	0.02
clark fork	5.57	0.1
clayton	5.8	0
cle elum	4.57	0.03
colville	6	0.08
craigmont	5.13	0.03
dayton, WA	4.71	0.01
dayville	4.29	0.06
deer lodge	5.63	0.07
donnelly	5.25	0
driggs	4.2	0.03
elk river	5	0.04
enterprise	6.38	0.02
entiat	4.17	0
grangeville	5.14	0.08
harrison	5.43	0.02
heppner	6.63	0.07
idaho city	5.33	0
island park	4.43	0
kellogg	5.67	0.02
kootenai	5	0
lapwai	5	0
libby	6.5	0.09
newport	5.17	0.02
okanogan	6.4	0
osburn	5.67	0.0s
paisley	7	0.06
plains	5.4	0
polson	5.33	0.04
pomeroy	4.63	0
rathdrum	5	0.07
redmond	5	0.08
richland, OR	4.5	0.02
riggins	5.63	0.03
ronan	5.14	0.02
salmon	6	0.07
sandpoint	6	0.08
selah	4.29	0

Table 19. Towns Perceived to be Dependent on Timber with No Significant Proportion of Employment in Wood Products (Cont.'d).

TOWN	PERCEIVED TIMBER DEPENDENCE	PERCENTAGE EMPLOYMENT IN WOOD PRODUCTS
smelterville	5.17	0
spray	5.86	0.06
st. ignatius	4.38	0
stanley	5.29	0
stevensville	4.57	0.04
sumpter	4.67	0.08
tonasket	5	0
twisp	4	0.03
union	5.71	0.02
unity	6.57	0.06
wallace	5.63	0
weiser	4.17	0
white salmon	6.29	0.07
whitefish	4.86	0.05
winthrop	4.43	0.07
worley	4.33	0

The correlation between perception of community dependence on timber and empirical data on actual amount of employment in manufacturing of forest products as opposed to other industrial sectors (i.e., relative proportion) was measured with a Pearson correlation coefficient, which produced a moderately strong correlation of 0.50. Although this result suggests some degree of consistency between resident perceptions of the forest products industry's importance and its actual significance, over a third of the region's communities continue to perceive that they are dependent on the timber industry to an extent that they really are not.

In the case of agriculture, the 321 communities in the region with high employment in agriculture (10% or more of all jobs) represent 68.0 percent of the total of 472 communities. Of the total of 198 communities that were sampled and for which data includes resident perceptions of resource dependence, 60 communities (25%) were characterized by a moderately small proportion (less than 10%) of employment in agriculture. Of the 60, the citizens of 35 of them, or 58.3 percent, indicated that they perceived that their towns had a fairly high dependence on agriculture (Table 20).

Table 20. Number and Percentage of Communities with a Low Actual Degree of Dependence on Agriculture (Based on 10 percent Or More Employment in Agriculture), by Perception of Dependence.

		<u>Low Actual Dependence</u>	
		<u>No. Cases</u>	<u>Percentage</u>
<u>Perceived Dependence</u>	High	35	58%
	Low	<u>25</u>	<u>42%</u>
TOTAL		60	100%

Table 2 1 shows that, of the 138 of the sample of communities characterized by a high proportion (more than 10%) of employment in agriculture, only 12, or 8.6 percent, had residents who perceived them to have a low rating of dependence on agriculture.

Table 21. Number and Percentage of Communities with a High Actual Degree of Dependence on Agriculture (Based on 10 percent Or More Employment in Agriculture), by Perception of Dependence.

		<u>High Actual Dependence</u>	
		<u>No. Cases</u>	<u>Percentage</u>
<u>Perceived Dependence</u>	High	126	9 1%
	Low	<u>12</u>	<u>9 %</u>
	TOTAL	138	100%

The Pearson correlation coefficients calculated to indicate the strength of the relation of citizen perceptions of community dependence on farming and ranching to actual results of empirical data on employment in agricultural sector as opposed to other industrial sectors (i.e., relative proportion) were 0.36 for farming and 0.24 for ranching.

These results could be interpreted as suggesting that residents in some of the region's communities misperceive the extent to which they that they are dependent on farming and ranching -- however, an alternative explanation is that the questions focused the workshop participants' attention on dependence on these particular industries.

Other Research Findings

Other findings of the research discussed here focus on the concept of community resilience, the situation with timber dominant towns, and the role of geography, population size, and change and development in these communities.

A Community Resilience Index Suggests The Relative Ability Of Small Rural Towns To Manage Change.

The concept of *community resilience* refers to a town's ability to manage change and adapt to it in positive, constructive ways, relative to other communities.⁴ A measure of this construct, termed the *community resilience index* (or CRI), was developed as an indicator of a town's likely response to change; the higher the index, the greater the town's relative resilience, and the more vital, attractive, and healthy the community in comparison with other communities in the region. The index was based on community characteristics that were critical to a town's capacity to adapt, including strong civic leadership, a highly cohesive social organization, local amenities and attractiveness, and a diversified or stable economy, all of which can reflect or contribute to civic pride, excitement, and typically pro-active responses to changes facing the community.

⁴ The concept of community "resilience" has raised concerns among some reviewers. It is treated as a "given" here that was measured based on the evidence and measures available. However, it should be noted that the results of the community assessment were impressive in the extent to which they **reaffirmed** the internal validity of the CRI as a construct measure.

How was the Community Resilience Index Developed and Validated?

The community resiliency index (CRI), the indicator of a community's relative resilience developed in the course of the study, was suggested by patterns that emerged from the responses of residents. This index indicates how a community might be expected to respond to changes in comparison to other communities in study area; it represents a continuum of degrees of different communities' resilience, so it is relative.

Community resilience emerged as a function of 5 major dimensions of the attributes and characteristics of communities; that is, a **high** degree of resilience reflects:

- **Strong civic leadership** -- a high commitment of individual leaders and groups to community and active involvement in creating and/or responding to change; a strong sense of local control regardless of external events or influences;
- **Positive, pro-active attitude toward change** -- residents either promote change and thus vitality in community development, or if change is occurring on its own, residents respond positively and create a desirable alternative future;
- **Strong social cohesion** -- a high degree of consensus in values and goals for desired future; working together to achieve goals;
- **Strong economic structure** -- a high continuity or endurance in a few major industries, or a high degree of diversity in economic base, or some combination that provides a stable economy in the community;
- **High degree of physical amenities** -- an historic character of a community's downtown; the attractiveness of its downtown, surrounding scenery, and region;
- **Larger population** -- the larger the population in rural towns (all other things being equal), the more developed their infrastructure is and the greater their resilience.

The CRI was developed in the research as an additive function of scales developed for the first five social and economic constructs above. The relative importance placed on the various constructs, which was applied to the index as weights, was based on the results of an empirical

analysis -- factor analysis -- as detailed in the next section. The most important construct was *civic leadership*, which was weighted by a factor of 4, relative to the least important factor, *physical amenities and attractiveness*; also important were *social organization* (weighted by a factor of 3.3 over *physical amenities*), and then *economic structure* (weighted by a factor of 2.7).

Significantly, these weightings of the four constructs was mirrored by their overall importance for a community's response to change, as rated by participants in the "retrospective" workshops for the ten significant-change communities examined with the case studies. These were workshops in which key informants involved in their community when it underwent major changes in the recent past assessed the importance of various community characteristics for managing change (for details, see the "Methods" section in Part 2). In comparison to the *attractiveness* construct, which represented a total of 104 percent of all "votes" as most important across all ten communities, the *economic diversify* construct was more important by a magnitude of 2+ (267% of all votes), the *cohesiveness* construct was more important by a magnitude of 3+ (337%), and the *readership* construct was more important by a magnitude of about 4 (407%). This consistency lent important additional support for the validity of the CRI.⁵

⁵ One reviewer of this methodology misunderstood the basis of the weighting process that was used. The factor analysis described in this section included all the individual scale items in the workbook; the resulting four most important factors were ones that independently mirrored the four identified by the retrospective workshop participants for the ten case-study communities as being the most important for the communities effectively responding to the changes they had experienced.

Also, it should be noted that these weightings are aggregate ones developed from and applied to the entire sample of all 198 communities. The more that unique conditions and circumstances characterize any particular community and affect its resilience, the less valid the above weightings may be; however, a sensitivity analysis was conducted with and without these specific weights, and while resilience scores and classes changed for some communities, these changes were not sufficiently large that possible inaccuracies due to the weights were judged insignificant.

Operationalizing the Concept of Resilience

To operationalize and measure the factors that comprise and reflect community resilience, the following steps were followed:

1) An initial analysis was conducted to assess the validity of the particular dimensions theorized to contribute to resilience: all component variables for the various workshop constructs were factor analyzed (Principal components, varimax rotation). The first four factors did reflect the findings of earlier research; they were as follows:

<u>Factor</u>	<u>Name</u>	<u>Percent Variance</u>
1	Civic Leadership	32.7%
2	Economic Structure	12.3%
3	Social Organization	7.4%
4	Amenities	5.5%

These factors became the basis for constructing the 4 scales that roughly corresponded to key general constructs --amenities, economic structure, social organization, and civic leadership -- measured in the community workshops (see Table 22).

Scale	Starting Construct from Workshop
-----	-----
Amenities	Regional Attractiveness
Economic structure	Economic Diversity
Social organization	Community Cohesiveness
Civic leadership	Community Leadership

2) Using scale reliability analysis, Cronbach's alpha was maximized for each of the 4 scales. Items that did not contribute to the greatest alpha value were dropped from the scales.

Table 22. Results of the Factor Analysis of Workshop Ratings.

FACTOR	FACTOR ITEMS	FACTOR LOADINGS
Government Effectiveness		
q10 2	extent of competence of community government	0.86
q10 3	level of trust in community government	0.82
q10 4	extent to which government's positions reflect those of community	0.85
q9 2a	contribution of elected officials to leadership	0.82
q9 3	how visionary are community leaders	0.76
q9 4	how flexible and creative community leaders are	0.78
q9 5	consistency of opinions and values of community leaders with your own	0.81
Eigenvalue = 13.75		Percent of Variance = 26.4
Economic Structure		
q4 3	extent that people shop inside the community	0.79
q4 4	extent that people work inside the community	0.72
q5 2	extent that the community's economy is comprised of different types of businesses	0.78
q8 8	abundance of social activities in community	0.63
q1A 2	attractiveness of community's downtown area	0.53
q9 2b	contribution of business community to leadership in the community	0.70
q9 2c	contribution of government agency to commun- ity leadership	0.57
q9 2d	contribution of non-government organizations to community leadership	0.66
q9 2e	contribution of other active individuals to community leadership	0.52
Economic diversity index		0.66
Eigenvalue = 6.44		Percent of Variance = 12.4

Table 22. Results of the Factor Analysis of Workshop Ratings (Cont.'d).

<u>FACTOR</u>	<u>FACTOR ITEMS</u>	<u>FACTOR LOADINGS</u>
Social Organization		
q2 2	extent to which people work together to get things done	0.70
q2 3	extent to which people are supportive of one another	0.74
q2 4	extent to which people are committed to the community	0.74
q2 5	extent that peoples' beliefs & values are similar	0.69
q2 6	extent to which people identify with community	0.64
q8 10	social problems	0.51
q1A3	attractiveness of community's residential neighborhoods	0.53
Eigenvalue = 3.49		Percent of Variance = 6.7
Regional Amenities		
q1B 2	importance of scenery outside the community	0.43
q1B 4	importance of nearby recreation areas to community's character	0.46
q1B 5	importance of wilderness, parks, etc. to community's character	0.69
q1B 6	importance of history, customs, & culture to community's character	0.58
q1B 7	uniqueness of region in special qualities and travel attractions	0.80
q6 1e	community's dependence on recreation & tourism	0.49
Eigenvalue = 2.8 1		Percent of Variance = 5.4

3) As a final check, factor analysis (PC, varimax rotation) was run against the complete set of workbook and workshop variables. Once again, the 4 scales emerged as the first four factors, although the order of factor emergence changed along with the percent of variance explained by each scale:

Factor	Name	Percent Variance
1	Civic Leadership	26.9%
2	Social Organization	11.4%
3	Economic Structure	7.1%
4	Amenities	5.2%
Total Variance Explained by the 4 factors		50.7%

4) Using the results of the full factor analysis, loadings were examined to see if any variables should be included that did not show up in the previous steps. One final adjustment was made to the Economic Structure scale by adding 2 items (Business Attractiveness and Economic Diversity). Scale reliability analysis was run again, and indeed, the 2 additional items adjusted Cronbach's alpha upward slightly for the Economic Structure scale.

Table 23 shows the final scales and the items comprising them.

In summary, the most important characteristics for community resilience were also measured with the two most reliable scales: the social capital of a community. Civic leadership, and also a high degree of social cohesion and community organization, were found to be three to four times greater than the least important factor, physical amenities and attractiveness, which were nonetheless an important determinant of community resilience. This finding mirrors much of the conventional wisdom in recent literature, including the conclusions of the social scientists for the FEMAT analysis (1994) and those of scholars like Robert Putnam (1994) who have discussed the concept of "human capital" as a critically important factor in their theories of community development.

Table 23. Scales Comprising the Community Resilience Index and the Scale Items Comprising the Scales, with Scale Alphas and Item-Total Scale Correlations.

CIVIC LEADERSHIP SCALE Alpha = 0.95

<u>Scale Item Numbers & Names</u>		<u>Item-total Correlation</u>
q9 4	how flexible and creative community leaders are	0.84
q9 5	consistency of opinions and values of community leaders with your own	0.83
q10 2	extent of competence of community government	0.80
q10 3	level of trust in community government	0.79
q10 4	extent to which government's positions reflect those of community	0.79
q9 3	how visionary are community leaders	0.79
Main construct	government effectiveness	0.73
Main construct	community leadership	0.68
q9 2a	contribution of elected officials to leadership	0.62

SOCIAL ORGANIZATION SCALE Alpha = 0.92

<u>Scale Item Numbers & Names</u>		<u>Item-total Correlation</u>
Main-construct	community cohesion	0 . 8 0
q2 3	extent to which people are supportive of one another'	0.74
q2 4	extent to which people are committed to the community	0.74
q2 2	extent to which people work together to get things done	0.70
q2 6	extent to which people identify with community	0.64

Table 23. Scales Comprising the Community Resilience Index and the Scale Items Comprising the Scales, with Scale Alphas and Item-Total Scale Correlations.

ECONOMIC STRUCTURE SCALE Alpha = 0.90

Scale Item Numbers & Names		Item-total Correlation
q5 2	extent that the community's economy is comprised of different types of businesses	0.82
q4 3	extent that people shop inside the community	0.77
Main construct	community autonomy	0.76
q9 2b	contribution of business community to leadership in the community	0.68
q4 4	extent that people work inside the community	0.66
q9 2d	contribution of non-government organizations to community leadership	0.63
q9 2c	contribution of government agency to community leadership	0.57
Main construct	economic diversity	0.57
Main construct	attractiveness for business	0.57

REGIONAL AMENITIES SCALE Alpha = 0.82

Scale Item Numbers & Names		Item-total Correlation
q1B 7	uniqueness of region in special qualities and travel attractions	0.80
q1B 4	importance of nearby recreation areas	0.73
q1B 2	importance of scenery outside the community	0.67
Main construct	attractiveness of region	0.59
q1B 3	abundance of special places	0.51
q1B 5	importance of wilderness, parks, etc. to community's character	0.50

The CRI scores for all 198 communities, along with the component scale ratings and their resilience class, are displayed in table 24.

Resilience Classes

For the ease of analyzing and displaying results on community resilience, particular communities were categorized in terms of where they fall on the CRI continuum in terms of four classes of resilience: LOW, MODERATELY LOW, MODERATELY HIGH, and HIGH. These classes represent an equal proportion of the communities under study (25% each); the classes merely help clarify a community's comparative resilience and its implications.

Significantly, statistical analyses using the CRI showed that population size is related to resilience: as might be expected, the smaller a community is, the less resilient it tends to be. This finding suggests that, as others have argued, there may be some critical mass in terms of a population threshold that is related to community growth and development.

On the other hand, the CRI's indication that some small communities are highly resilient suggests that "it all depends:" the index suggests that a number of large towns are less healthy and resilient than some smaller ones that have greater social organization and civic leadership. For example, an analysis of community resilience by ecoregion suggests that different communities in the same basic type of ecosystem can vary in their CRI: for example, in the ecosystems of the Blue Mountains of northeast Oregon, several "timber communities" are rated as highly resilient (John Day, Joseph, Enterprise), while others are judged to be less resilient (Long Creek, Prairie

Table 24. The Community Resilience Index: Component Scales Ratings, Index Scores and Resilience Class (1 -- High, 2 --Moderately High, 3 -- Moderately Low, 4 -- Low) for a Sample of 198 Towns, Listed from Low to High Resilience.

TOWN	Amenity Scale	Civic Leadership Scale	Economic Structure Scale	Preparedness for Future Scale	Social Cohesion Scale	Resilience Class	Resilience Score
burbank	4.66	2.48	2.38	1.93	3.83	4	240.1
tensed	4.55	2.81	2.95	2.8	3.71	4	263.31
kittitas	5.9	3.35	2.21	3.04	3.54	4	269.79
antelope	5.18	3.74	1.96	2.47	3.88	4	279.32
stanfield	5.73	3.5	2.43	3.1	3.79	4	283.92
athol	6.1	3.57	2.34	3.24	4.26	4	294.37
tetonia	5.57	4.07	2.31	2.92	4.03	4	304.73
irrigon	4.95	4.09	2.41	3.52	3.58	4	296.2
worley	5.72	4.48	2.25	3.37	3.66	4	312.42
chiloquin	6.39	3.2	3.33	3.7	3.84	4	299.68
filer	6.04	3.44	2.75	3.65	4.1	4	296.77
conconully	5.48	3.92	2.52	3.58	4.14	4	305.66
airway hei	6.33	4.19	3.09	4.07	3.07	4	315.95
adams	5.28	4.51	2.16	3.39	4.1	4	316.26
roberts	5.56	4.09	2.74	3.22	4.3	4	320.37
kettle fal	5.44	4.24	3.62	3	3.91	4	339.62
cle elum	5.79	3.87	3.83	3.4	3.65	4	329.08
elk river	5.45	3.84	2.86	3.84	3.94	4	307.47
spray	4.47	3.89	2.5	3.63	4.84	4	310.1
fort hall	5.83	3.78	3.55	3.66	3.88	4	323.2
shoshone	5.01	3.83	3.38	3.63	4.29	4	323.08
umatilla	5.23	4.65	3.52	3.66	3.5	4	344
mosier	5.45	4.21	2.57	3.62	4.83	4	328.64
sprague	5.09	4.75	2.93	3.87	3.9	4	339.09
wasco	5.4	3.99	3.02	3.99	4.38	4	323.7
white salm	6.39	4.22	3.19	3.52	4.26	4	340.05
lapwai	5.64	4.21	3.45	3.47	4.85	3	351.66
drummond m	5.93	3.13	3.88	4.2	4.8	4	324.37
rock islan	5.74	4.88	2.74	3.94	4.06	4	345.55
dayville	5.21	3.9	2.6	4.08	4.97	4	319.38
onaway	5.43	4.69	2.71	3.57	4.74	4	347.7
long creek	5.02	4.84	2.97	3.93	3.98	4	344.06
lava hot s	5.38	4.13	2.96	4.2	3.93	4	319.6
adrian	5.33	4.02	3.28	3.43	5.11	4	343.43
clark fork	5.69	4.47	3.33	3.93	4.14	4	346.52
inchelium	5.47	4.34	3.22	3.71	4.61	4	345.68
creston	5.42	4.52	2.63	3.87	4.97	4	343.5

TOWN	Amenity Scale	Civic Leadership Scale	Economic Structure Scale	Preparedness for Future Scale	Social Cohesion Scale	Resilience Class	Resilience Score
parma	5.26	4.67	2.7	3.96	4.49	4	341.48
warm sprin	5.53	3.98	3.54	4.37	4.13	4	332.91
homedale	5.19	4.38	3.51	3.6	4.91	3	357.62
hazelton	4.86	4.7	2.66	3.66	5.03	3	348.69
parker	5.89	4.86	2.16	3.49	4.94	4	346.59
krupp	5.14	5.22	1.71	3.83	4.97	4	345.03
okanogan	5.18	3.78	4	3.8	4.97	3	348.81
swan valle	6.31	3.92	3.22	4.09	4.43	4	332.55
moyie spri	5.95	4.85	2.81	3.85	4.42	3	353.66
elmer city	5.72	4.86	2.76	3.36	4.93	3	360.23
tieton	5.48	5.13	3.02	3.76	4.14	3	361.29
new meadow	5.81	4.13	3.83	3.58	4.93	3	360.25
mccammon	5.4	5.25	2.19	3.6	4.93	3	358.58
driggs	5.97	3.87	4.01	3.66	4.6	3	350.67
harrington	4.8	4.33	3.11	4.16	4.8	4	342
dalton gar	5.67	4.48	2.48	3.91	5.04	4	341.29
benton cit	4.83	4.89	2.72	4.23	4.57	3	348.8
ione wa	5.9	4.01	3.46	4.07	4.77	4	345.1
tekoa	5.79	4.04	3.72	4.05	4.58	4	348.61
mesa	4.81	4.88	3.16	4.24	4.43	3	356.67
george	4.33	4.8	2.47	4.2	5.44	3	351.22
bliss	4.63	5.21	2.94	4.18	4.2	3	358.14
idaho city	6.36	4	3.13	4.37	4.47	4	334.15
st. ignati	6.19	4.53	3.36	3.73	4.68	3	361.43
arlington	4.2	4.56	3.56	4	4.4	3	350.4
echo	5.34	4.85	2.9	4.11	4.24	3	349.22
hagerman	6.33	3.67	3.78	4.6	4.47	4	337.73
payette	5.78	4.15	3.78	4	4.47	3	351.73
polson	6.35	4.62	4.45	3.77	3.93	2	379.32
jordan val	5.12	4.58	3.06	3.86	5.42	3	362.2
merrill	5.75	3.87	4.03	3.88	5.05	3	357.37
ferdinand	5.75	5.12	2.76	3.83	4.95	3	369.88
pilot rock	5.4	4.78	3.34	4	4.83	3	367.58
almira	4.98	4.87	3.33	4.31	4.72	3	366.32
alberton	6.06	4.56	2.99	4.35	4.72	3	353.41
island par	6.69	4.07	3.61	4	4.58	3	352.48
irwin	6.13	4.94	2.81	4.3	4.53	3	359.85
imbler	5.48	4.67	3.22	3.63	5.4	3	371.05
thayne	5.88	4.87	3.29	3.9	4.93	3	374.54
bellevue	5.92	4.83	3.29	3.96	4.5	3	365.99
piece	5.95	4.19	3.76	4.69	4.51	3	354.73

TOWN	Amenity Scale	Civic Leadership Scale	Economic Structure Scale	Preparedness for Future Scale	Social Cohesion Scale	Resilience Class	Resilience Score
othello	5.45	4.29	4.26	4.31	4.47	3	366.55
challis	5.77	3.96	4.36	3.93	5.27	3	372.62
whitefish	6.17	4.13	3.74	4.57	4.6	3	354.46
sandpoint	6.03	4.11	4.44	3.75	4.55	3	369.52
entiat	5.36	4.63	3.44	4.77	4.73	3	363
orofino	5.81	4.51	4.71	3.69	4.65	2	390.84
rathdrum	6.45	4.79	3.54	4.24	4.49	3	373.28
palouse	5.81	4.87	3.11	4.2	4.85	3	368.12
genesee	5.39	4.7	2.7	4.17	5.27	3	356.9
paisley	5.75	4.43	3.93	2.98	5.92	2	390.01
melba	5.54	4.67	3.43	4.5	5.03	3	370.22
republic	5.7	3.78	4.53	3.92	5	3	365.36
teton	5.89	5.47	2.45	3.31	5.83	2	390.79
sumpter	6.56	4.88	2.67	4.03	5.01	3	365.22
donnelly	5.65	4.8	3.17	4.54	5.13	3	370.82
union	5.23	4.87	3.37	4.69	4.4	3	363.36
harrison	5.9	4.19	3.59	4.29	5.18	3	361.45
prairie ci	5.86	4.24	3.94	4.17	5	3	368.68
maupin	5.9	4.86	3.65	4.15	4.75	2	379.89
nyssa	5.67	4.94	3.51	4.51	4.63	2	375.64
blackfoot	5.71	4.76	4.37	4.33	4.51	2	388.43
unity	5.57	4.47	3.49	5.05	5.09	3	365.38
dubois	5.31	4.75	4.38	4.05	4.93	2	393.06
wilson cre	5.31	5.11	3.14	4.25	5.37	2	383.3
richfield	5.28	5.17	3.37	3.93	5.37	2	390.71
culdesac	5.17	5.13	2.86	4.76	5.23	3	373.89
firth	5.74	5.35	3.37	4.13	4.89	2	391.92
columbia f	6.4	4.3	4.44	4.15	5.2	2	389.69
irie	5.9	4.46	3.14	5.15	5.2	3	360.67
helix	5.26	5.24	2.45	4.26	5.83	2	378.77
newport	6.06	4.37	4.43	4.2	4.8	2	382.82
enterprise	5.82	4.73	4.41	3.85	4.96	2	396.7
ammon	5.5	5.44	3	4.1	5.5	2	395.4
smeltil	5.72	5	3.9	4.62	4.6	2	387.39
endicott	4.83	5.48	3.32	4.71	4.74	2	387.38
plains	5.93	4.69	4.47	3.8	5.15	2	400.49
tonasket	5.5	5	3.96	4.1	5.2	2	397.67
eureka	6.52	4.4	4.22	4.34	5.43	2	392.32
murtaugh	5.96	4.54	3.06	4.37	6.15	2	377.88
burns	5.43	4.94	4.21	4.35	4.89	2	396.04

TOWN	Amenity Scale	Civic Leadership Scale	Economic Structure Scale	Preparedness for Future Scale	Social Cohesion Scale	Resilience Class	Resilience Score
craigmont	5.06	4.94	3.97	4.54	4.95	2	388.99
pomeroy	4.88	4.75	4.12	3.95	5.8	2	398.94
ritzville	5.67	4.51	4.57	3.98	4.99	2	392.19
grangevill	6.49	4.3	5.01	3.86	5.11	2	402.51
dufur	5.48	4.83	4.57	4.03	5.04	1	403.63
weiser	5.94	4.67	4.28	4.35	5.23	2	396.58
chelan	6.08	4.63	4.31	4.53	4.73	2	388.48
grass vall	5.6	4.85	3.25	4.37	5.9	2	387.33
oldtown	5.88	5.81	3.4	4.8	3.83	2	391.97
grand coul	6.3	4.9	4.24	4.42	5.18	1	405.51
fruitland	4.89	5.2	3.75	4.55	5.23	2	396.58
hood river	6.14	4.51	4.67	4.34	4.89	2	395.57
quincy	5.83	4.78	4.68	4.69	4.91	1	404.33
chubuck	5.61	5.13	4.04	4.69	5.03	2	401.99
stevensvil	6.26	4.56	4.24	4.06	5.77	1	402.8
john day	6.08	5.01	4.19	4.2	5.18	1	406.86
mattawa	4.64	5.04	4.32	4.8	5.27	1	403.73
sisters	6.48	4.42	4.08	4.57	5.15	2	384.65
superior	5.98	4.65	3.92	4.78	5.29	2	388.41
medical la	5.48	5.45	3.58	4.79	4.92	2	399.85
kootenai	6.11	5.83	3.17	5.03	4.57	2	401.25
weippe	6.14	5.74	3.46	4.67	4.73	1	408.12
washtucna	5.39	4.91	3.98	4.8	5.25	2	395.03
darby	6.21	4.37	4.02	4.77	5.46	2	385.06
bancroft	5.63	5.12	3.27	5.28	5.29	2	387.59
ashton	6.37	5.14	4.05	4.42	5.21	1	410.09
sugar city	5.86	5.38	2.86	4.65	5.66	2	394.7
parma	5.74	4.64	4.02	4.95	5.36	2	390.13
richland o	5.77	4.82	3.65	4.45	5.84	2	396.34
malin	4.83	4.97	3.73	4.71	5.54	2	392.73
winchester	6.11	5.6	3.19	4.85	5.16	1	403.56
prineville	6.1	4.22	4.59	4.94	5.34	2	390.78
colville	5.67	4.56	4.91	4.8	4.91	2	400.93
priest riv	6.11	5.28	4.54	4.47	4.97	1	421.44
halfway	6.02	5.27	4.01	4.46	5.43	1	415.38
weston or	5.69	5.61	3.62	4.54	5.37	1	415.43
ronan	6.5	4.7	4.95	4.89	5.34	1	419.31
mt home	5.42	5.5	4.3	5.17	4.9	1	418.2
rosalia	5.83	5.41	3.07	5.16	5.76	2	402.37
kooskia	5.95	5.29	4.08	5.03	5.11	1	412.17
selah	5.31	5.57	3.75	5.35	5.18	1	411.64

TOWN	Amenity Scale	Civic Leadership Scale	Economic Structure Scale	Preparedness for Future Scale	Social Cohesion Scale	Resilience Class	Resilience Score
salmon	6.14	4.91	5.32	4.28	5.6	1	437.94
jackson	6.94	4.44	4.41	5.3	5.17	2	396.6
kamiah	6.33	4.9	4.6	4.57	5.43	1	418.71
joseph	6.47	5.08	4.98	4.39	5.28	1	432.66
winthrop	5.87	4.74	4.12	5.17	5.55	2	400.4
kellogg	6.12	5.21	4.47	4.98	5.44	1	425.3
libby	6.17	5.12	4.25	4.92	5.71	1	421.8
toppenish	5.59	5.37	4.3	5.13	4.88	1	414.35
cashmere	6.38	5.03	4.33	4.77	5.5	1	418.17
chewelah	5.69	4.99	4.53	4.85	5.7	1	420.84
ketchum	6.61	4.85	4.39	4.77	5.57	1	415.62
colfax	5.7	5.24	4.36	5.32	5.2	1	417.24
osburn	6.47	5.56	3.81	4.98	5.4	1	423.47
hartline	5.98	5.79	3.17	4.95	6.1	1	425.07
deer lodge	5.85	5.47	4.76	4.85	5.1	1	434.59
emmett	5.98	5.38	4.75	5	5.16	1	432.53
riggins	6.52	5.35	4.17	4.92	5.63	1	428.6
stanley	6.23	5.09	4.64	4.9	5.57	1	427.92
twisp	5.86	4.96	4.66	5.23	5.62	1	422.69
declo	6.14	5.72	3.04	5.19	6.19	1	422.06
wallowa	6.22	5.17	4	4.85	6.1	1	424.23
odessa	5.49	4.94	4.29	4.84	6.42	1	424.38
lakeview	5.06	5.25	5.15	4.63	5.97	1	446.02
meridian	6.21	5.28	4.54	5.22	5.42	1	429.93
clayton	5.5	5.04	4.47	4.67	6.59	1	435.35
redmond	6.58	5.3	4.58	5	5.6	1	436.79
dayton wa	6.1	5.03	4.65	5.2	5.69	1	427.32
bonners fe	5.29	5.65	4.75	4.88	5.98	1	452.25
heppner	5.13	5.41	4.46	5.33	5.9	1	434.14
st. john	5.07	5.46	5.35	4.69	6	1	458.99
shaniko	6.33	6.09	3.65	5.63	5.61	1	441.4
cascade	6.58	5.6	4.91	5.3	5.28	1	450.01
baker	6.3	5.29	5.53	5.36	5.56	1	457.18
wallace	6.13	5.96	4.66	5.48	6	1	466.51
hailey	6.13	5.77	5.18	5.72	5.68	1	466.98

City, Unity); see figure 17. However, the spatial mapping of the community’s resilience also suggests that communities in particular kinds of broad areas tend to be lower in resilience. In particular, patterns of a greater prevalence of lower resiliency are apparent in the communities in the agricultural and ranching regions of the Snake River Plain in southern Idaho and the Columbia Plateau in north central Idaho and eastern Washington and Oregon (these results are discussed in great detail in a later section).

Of the ten communities examined with in-depth case studies (see table 25), half were among those rated as being currently most resilient, while another three were classified as moderately high in resilience; the other two were rated as moderately low in resilience.

Table 25. Resilience Score, Rank, Resilience Class, and Net Change in Construct Ratings for Case-Study Communities.

<u>TOWN</u>	<u>Resilience Score</u>	<u>Resilience Rank</u>	<u>Resilience Class</u>	<u>Net Change in Construct Ratings</u>
driggs	350.67	53	Mod. Low	-2
whitefish	354.46	60	Mod. Low	1
burns	396.04	130	Mod. High	-6
pomeroy	398.91	137	Mod. High	1
mattawa	403.73	149	Mod. High	6
kellogg	425.30	175	High	8
riggins	428.60	178	High	-2
joseph	432.66	181	High	4
salmon	437.94	186	High	0
baker	457.18	191	High	6

Interestingly, one inference from these results is that, apparently, experiencing major change in the past can help prepare a community to better adapt to change in the future. (The results of an analysis of change in their communities since 1990 also affirm this conclusion, as do the results of the in-depth case studies; see the following volume of this report for more details.) Table 25 summarizes these results for the case-study communities, in order of their resilience ranking.

An Analysis of a Sample of Communities by Perceived Economic Dominance Classification and Degree of Resilience

The index of community resilience (i.e., its ability to manage the above kinds of changes and mitigate their impacts on the community as a whole) was used to assess rural communities, their likely responses to change and thus the extent and nature of its impacts. Tables 26 and 27 provide a series of examples of communities that differ in their population size, the dominant industry characterizing them, and their resilience rating and class. The examples include a comparative listing by a ranking of the sampled communities by resilience rating, from lowest to highest, and a listing of these same communities by dominant industry that includes all four resilience classes.

Table 28, which is based on an analysis of all 198 communities, suggests that a community's economy is related to its resilience, with larger proportions of communities in which timber and outdoor recreation/tourism are perceived dominant are rated as moderately high and high in resilience, while ranching communities are rated as lower in resilience.

Table 26. A Sample of Communities of Different Perceived Dominant Industries, by Extent of Resilience and Population Size.

<u>Community</u>	<u>Perceived Dominant Industry</u>	<u>Resilience Rating</u>	<u>Resilience Class</u>	<u>Population</u>
Stanfield, OR	Farming	284	Low	1567
Chiloquin, OR	Timber	300	Low	697
Spray, OR	Ranching	3 1 0	Low	137
Lava Hot Springs, ID	Tourism	320	Low	347
Whitefish, MT	Tourism	354	Medium Low	4368
Republic, WA	Timber	365	Medium Low	940
Challis, ID	Ranching	373	Medium Low	1094
Almira, WA	Farming	366	Medium Low	304
Sisters, OR	Tourism	385	Medium High	660
Paisley, OR	Timber	390	Medium High	316
Burns, OR	Ranching	396	Medium High	2913
Pomeroy, WA	Farming	399	Medium High	1409
Halfway, OR	Ranching	415	High	292
Banker City, OR	Timber	457	High	9140
St. John, WA	Farming	459	High	500
Wallace ID	Tourism	466	High	1010

Table 27. A Sample of Communities of Different Perceived Dominant Industries, by Resilience Class and Ratings for Four Self-Assessment Critical Variables.

RANCHING DOMINANT COMMUNITIES

<u>Community</u>	<u>Resilience Class</u>	<u>Economic Diversity</u>	<u>Social Cohesion</u>	<u>Leadership</u>	<u>Preparation For Future</u>
Spray,	Low	3-	3-	3+	2+
Challis, ID	Medium Low	3+	6-	4-	2+
Bums, OR	Medium High	4-	5-	5+	3+
Halfway, OR	High	4-	5+	5+	4+

FARMING DOMINANT COMMUNITIES

<u>Community</u>	<u>Resilience Class</u>	<u>Economic Diversity</u>	<u>Social Cohesion</u>	<u>Leadership</u>	<u>Preparation For Future</u>
Stanfield,	Low	4-	4-	3+	3-
Almira, WA	Medium Low	2+	5-	4+	4+
Pomeroy, WA	Medium High	3+	6-	3-	4-
St. John, WA	High	5+	6+	6-	5-

Table 27. A Sample of Communities of Different Perceived Dominant Industries, by Resilience Class and Ratings for Four Self-Assessment Critical Variables (Cont.'d).

TOURISM DOMINANT COMMUNITIES

<u>Community</u>	<u>Resilience Class</u>	<u>Economic Diversity</u>	<u>Social Cohesion</u>	<u>Leadership</u>	<u>Preparation For Future</u>
Lava Hot Springs, JD	Low	3+	4-	4+	4-
Whitefish, MT	Medium Low	4+	4+	4+	4+
Sisters, OR	Medium High	5-	5-	4+	4-
Wallace, ID	High	4+	6-	6-	5+

TIMBER DOMINANT COMMUNITIES

<u>Community</u>	<u>Resilience Class</u>	<u>Economic Diversity</u>	<u>Social Cohesion</u>	<u>Leadership</u>	<u>Preparation For Future</u>
Chiloquin.	Low	3-	6-	3+	4-
Republic, WA	Medium Low	6-	6+	4-	4-
Paisley, OR	Medium High	3-	7-	3+	2+
Baker, OR	High	6-	6-	6+	5+

Other Findings on Community Resilience

As table 28 shows, the least resilient of the resource-dependent communities were those in which farming and ranching were perceived to be dominant, while a greater proportion of towns perceived to be timber dominant were more resilient. When communities are classified according to their actual dependence on an industry based on employment proportions (table 29), the economically diverse communities have both changed the most and had the highest resilience scores, while farming and ranching have changed the least and had the lowest resilience scores. Interestingly, timber towns also have been changing and are resilient, while the rapid population growth of tourism/recreation towns has caused them to change but resulted in lower resilience. An important complementary finding of the research has been that communities that have changed the most in the last five years tend to be more resilient, which was likely due to their greater experience with coping with change: analysis of variance of communities' ratings of the amount they had changed since 1990 indicated that the most resilient towns were rated with a mean of 4.7 while the least resilient towns were rated with a mean of 3.5 (statistically significant, $p < 0.05$).

Table 28. Percentage of Rural Communities by Perceived Economic Dominance Classification and Degree of Resilience.

Perceived Industry Dominance Classification	MORE RESILIENT	LESS RESILIENT
Timber Dominant (n=47)	62%	38%
Tourism Dominant (n=34)	53%	47%
Farming Dominant (n=90)	48%	52%
Ranching Dominant (n=16)	37%	63%
Not Resource Dependent (n=11)	27%	73%

Table 29. Average Community Resilience Scores of Rural Communities and Ratings of Perceived Change Since 1990 by Actual Economic Dominance Classification.

Actual Economic Dominance Classification	RESILIENCE SCORE	PERCEIVED CHANGE RATING
Farming/ Ranching Dominant (n=107)	365.32*	3.8**
Tourism/Recreation Dominant (n=36)	376.26*	4.6
Timber Dominant (n=36)	385.05	4.3
Economically Diverse (n=42)	394.73	4.6

* Statistically significant difference from the scores for the timber & diverse communities.

** Statistically significant difference from the ratings for the other three types of communities.

A variety of other statistically significant ($p < 0.05$) findings about the relation of communities' resilience ratings to other factors were that:

The higher a community's resilience rating is,

the more autonomous the town is.

the more likely that town is to be a USFS timber dependent town.

the larger its population is.

the higher its QOL is

the more likely that the town's economy is perceived to be based on
(in decreasing order of likelihood):

- a mix of industries
- tourism
- harvesting/processing
- government/tribe

the more likely it is that the town government is to be rated as doing what public wants; then, (in decreasing order of likelihood), the more likely it is that the town is doing what it thinks best; doing what influential people want; and last (not surprisingly) government doesn't know what to do.

the more likely it is that the town has plans involving change; then, (in declining order of likelihood) the more likely it has had discussions but taken no actions or planned; it has not had much discussion, but it desires to stay the same; it has plans to stay the same; it has not had much discussion, but it desires to change.

Significantly, the best predictor of a community's resilience is its degree of perceived autonomy, which was strongly correlated with resilience, as indicated by a Pearson correlation coefficient of 0.63 ($p < 0.05$). Not surprisingly, since it can be assumed that larger towns are more autonomous than small ones, the larger communities in the region generally tend to be more resilient, as indicated with an analysis of variance of 1992/1992 population estimates based on CRI class; a statistically significant difference ($p < .05$) was found between the average sizes of communities in the two low CRI classes (764 and 1131 people) and the average populations of towns in the two high resilience classes (2028 and 2420 people).

The largest towns in the region also tend to have more diversified economies, as did the more resilient communities, which had a mean economic diversity rating of 1.4 in comparison with a mean of -0.30 for the least resilient towns (statistically significant difference, $p < 0.05$). In its 1993 analysis, the Westside FEMAT's community assessment suggested that communities with high "capacity to adapt" tended to be larger communities; as indicated above, those with larger populations tend to have a more developed, extensive infrastructure and manpower base to build upon. Communities less able to adapt "tend to have limited infrastructure, lower levels of economic diversity, less active leadership, more dependence on nearby communities, with weaker linkages to centers of political and economic influence;" unlike these latter findings, the present research documented autonomous communities were more resilient, with spatial factors (e.g., transportation corridors, isolation, etc.) found to be insignificant in their adaptive capacity -- in

fact, a statistically significant, positive, though weak relationship (0.19, $p < 0.05$) between distance from an interstate highway and community resilience was found. These findings were consistent with the relationship between resilience and industry dominance indicated by the above table. Interestingly, towns perceived as timber dominant tend to be further from an interstate highway and relatively isolated, and they also tend to be relatively resilient compared to towns in which other industries were perceived to be dominant.

No statistically significant relationship ($p < 0.05$) was found between the CRI score and community growth in the 1980s (.09), while the strength of the relationship between the CRI score and perceived degree of change in community in the 1990s was a moderate 0.37 (as indicated by a Pearson correlation coefficient). The former result clarifies that resilience is not simply a matter of a community's growth in population, while the latter suggests it may be coupled with change, but of a more varied kind than simply population increases.

Also supporting these results are the finding on population changes in towns smaller than 10,000 where mills manufacturing wood or paper products have closed since 1980: 52 percent of these towns have suffered population declines, although the populations of 48 percent have increased. In total, the change in population of small towns in which mills have closed has been a net increase of 5 percent since 1980.

Table 30 shows that, overall, there are few significant differences in the importance of various sectors in town's economies in relation to the towns' degree of resilience. Some general trends are that towns rated higher in resilience tend to be less dependent on local services like *medical and social services, business services, retail trade, government (both state/local and federal), and miscellaneous manufacturing*. Conversely, towns that are lower in resilience tend

Table 30. Percentages of Total Employment in Rural Communities in Industrial Sectors, by CRI Class.

<u>Resilience Class of Towns</u>	Employment by Industrial Sector (Percentage)						
	<u>Agriculture*</u>	<u>Agricultural Services*</u>	<u>Manufacturing: Wood / Paper Products</u>	<u>Manufacturing: Food Processing</u>	<u>Manufacturing: Miscellaneous*</u>	<u>Sand/Gravel Mining</u>	<u>Construction</u>
Low	14.9	3.6	7.4	2.6	2.2	0.2	4.1
Moderately Low	23.0	2.9	5.8	2.2	2.4	0.2	4.1
Moderately High	18.7	2.6	7.5	2.3	1.5	0.2	4.3
H i g h	27.2	2.7	4.7	0.9	0 . 8	0.08	3.2

* industrial sectors for which statistically significant differences ($p < 0.05$) were found.

Table 30. Percentages of Total Employment in Rural Communities in Industrial Sectors, by CRI Class.

Resilience Class of Towns	Employment by Industrial Sector (Percentage)							
	Finance/In- surance/Real Estate	Communication	Business and Personal Services	Transportation	Wholesale Trade	Retail Trade*	Eating/ drinking	Lodging
Low	4.1	0.5	4.5	2.0	3.1	13.8	5.1	2.1
Moderately Low	3.3	0.3	4.7	2.6	3.7	12.6	4.8	1.7
Moderately High	3.8	0.2	3.7	2.3	2.9	10.2	7.1	2.6
High	3.0	0.3	2.7	2.3	3.7	10.6	5.8	2.9

* Industrial sectors for which statistically significant differences ($p < 0.05$) were found.

Table 30. Percentages of Total Employment in Rural Communities in Industrial Sectors, by CRI Class.

Resilience Class of Towns	Employment by Industrial Sector (Percentage)				
	<u>Amusement/ Recreation</u>	<u>Medical/social Services*</u>	<u>Federal Government</u>	<u>State and Local Government</u>	<u>Public Utilities</u>
Low	1.7	8.2	5.5	15.0	0.7
Moderately Low	1.9	5.4	4.3	13.6	0.7
Moderately High	1.0	4.4	5.3	17.2	0.5
High	1.4	3.2	6.9	18.1	0.8

Underlined industrial sectors are those for which statistically significant differences ($p < 0.05$) were found.

to be more dependent on service sectors like *retail trade, financial services, agricultural services, and medical/social services* and manufacturing sectors including *manufacturing of forest products, food processing, and miscellaneous manufacturing*. Trends are not clear for some sectors like *agriculture and wholesale trade*.

The picture provided by these findings is not as clear and definitive as that provided by people's perceptions, which suggest that the more resilient towns are the ones perceived to be timber dominant while less resilient ones are those in which farming, and especially ranching, are dominant. Perhaps it is the case that, regardless of the actual employment structure of the communities, those towns perceiving themselves as timber towns have been undergoing change and increasing in resilience, while the towns perceived as agriculture dominant have not. The situation for "timber-dependent" communities is examined in greater depth in the next section.

U.S. Forest Service "Timber Dependent Communities"

A total of 34 communities listed by the USFS as "timber-dependent" were surveyed as part of the sample of 198. They included 20 perceived as timber dominant, 3 as diverse/extractive, 7 as nonresource-dependent, 3 as recreation and tourism dominant, 1 agricultural dominant, and 1 government dominant. In terms of actual timber dominance, the economic analysis indicates that only 40 percent of the USFS-designated towns are actually dependent on forest products for employment to a significant extent (that is, they have at least 10 percent of their total employment in the industry); equally significant, 40 percent of the towns that are timber dominant were not included on the USFS list. One important use of our data is to clarify the situation for these towns, as previously displayed in tables 15 through 19.

In general, USFS “timber dependent” communities were rated higher in resilience, although the difference from other communities was not statistically significant on the economic structure scale discussed as part of the CRI. The higher proportions of timber dependent communities were found to be moderately small in size (1,500 to 3,000 people), or in the third size class of 3,000 to 5,000 people. These communities did not differ from other communities in their economic structure except in the case of a few sectors, such as the greater role of *forest products manufacturing, federal government and medical services* and the lesser importance of *agriculture and wholesale trade*, as shown in table 3 1.

The Geography of Communities in the Region Is Significant In Terms of Differences Associated with Ecological Response Units (ERUs).

As table 32 shows, the geography of the communities in the study area was found to be significant in terms of differences associated with their location in certain Ecological Response Units (ERUs).

Table 31. Percentages of Total Employment in Rural Communities in Industrial Sectors, by Timber Dominant Versus Other Towns.

Timber Dominant Versus Other Towns	Employment by Industrial Sector (Percentage)				
	<u>Agriculture</u>	<u>Medical/Social Services</u>	<u>Manufacturing Wood / Paper Products</u>	<u>Wholesale Trade</u>	<u>Federal Government</u>
Forest Service "Timber Dependent"	14.0	6.5	16.6	1.3	
Perceived Timber Dominant	13.5	7.5	20.0	1.7	8.0
All Towns	21.0	5.4	6.4	3.4	5.5

Underlined industrial sectors are those for which statistically significant differences ($p < 0.05$) were found.

Table 32. Percentage of Communities in Ecological Response Units, with Majority Proportions in High or Low Resilience Classes.

<u>Ecological Response Unit</u>	<u>Percentage of Communities</u>	<u>Majority of Communities in High/Low Resilience Class</u>
Columbia Plateau ERU	31.5	60% Low
Northern Glaciated Mountains ERU	15.2	-----
Owyhee Uplands ERU	9 . 1	56% Low
Blue Mountains ERU	8.6	60 % High
Central Idaho Mountains ERU	7.6	60% High
Upper Snake ERU	6.1	58% High
Snake Headwaters ERU	5.6	63% Low
Lower Clark Fork ERU	5.1	60% High
Northern Cascades ERU	3.5	-----
Southern Cascades ERU	3.0	67% High
Upper Clark Fork ERU	2.0	75% High
Upper Klamath ERU	2.0	-----
Northern Great Basin ERU	0.5	-----

When the communities in each of the 13 ERU's were examined in terms of proportions of communities in the 4 resilience classes, the following characteristics (listed on the left) were found for the ERUs listed on the right:

No particular trend in resilience (high or low) or a very small sample of communities,

Northern Glaciated Mountains ERU
 Upper Klamath ERU
 Northern Great Basin ERU
 Northern Cascades ERU

Highest proportion in **HIGH** resilience class,

Southern Cascades ERU
Upper Clark Fork ERU
Central Idaho Mountains ERU

These last three ERUs are ones with communities in mountainous regions that are high in amenities due to high-quality natural and social environments, and that are responding constructively and pro-actively to a changing economic structure and (in some cases) growing populations.

Greater proportion in **HIGH** resilience class,

Blue Mountains ERU
Lower Clark Fork ERU
Upper Snake ERU

These ERUs are also ones endowed with amenity resources and increasingly diversified economies. In contrast, the following are ERUs in which farming and ranching have been dominant and whose high plains deserts and “scablands” are perceived as comparatively lacking in amenities.

Highest proportion in **LOW** resilience class,

Columbia Plateau ERU
Snake Headwaters ERU

Greater proportion in **LOW** resilience class,

Owyhee Uplands ERU

While the communities in the 13 ERUs also show consistent patterns in characteristics and conditions for perceived and empirical data, these are more easily displayed by presenting

the results of analyses based on a combination of the 13 units into four major ERU's: a Coastal Mountains ERU (comprised of the Northern Cascades ERU and Southern Cascades ERU), a High Plains Desert/Prairie ERU (Columbia Plateau and Owyhee Uplands ERU), a Northern Rocky Mountains ERU (comprised of the Northern Glaciated Mountains ERU, the Blue Mountains ERU, the Central Idaho Mountains ERU, the Lower Clark Fork ERU, and the Snake Headwaters ERU), and the Upper Snake ERU; the 2.5 percent of all communities in the Upper Klamath and Northern Great Basin ERU's were not included in this analysis.

An analysis of the trends in responses on perceived community characteristics found the following differences in absolute scale ratings or numbers in the communities across different ERUs:

- Statistically significant increases in community attractiveness from towns of the High Plains Desert/Prairie ERUs and the Upper Snake ERU to the Northern Rocky Mountain and Coastal Mountain ERUs;
- Statistically significant increases in community autonomy and the number of industry groups from Upper Snake and High Plains Desert/Prairie to Coastal Mountain and Northern Rocky Mountain ERUs;
- Increases in regional attractiveness, sameness of community, and community resilience from High Plains Desert/Prairie and Upper Snake to Coastal Mountain and Northern Rocky Mountain ERUs;
- Increases from Upper Snake and High Plains Desert/Prairie to Northern Rocky Mountain and Coastal Mountain ERUs in perceived levels of economic diversity, dependence on recreation/tourism and timber; degree of perceived change in community between 1990 and 1995, and migration patterns as indicated by the percent of households living in different house but same state (perhaps indicating a migration within the region's states, most likely to more residentially attractive areas);
- Increases from Upper Snake and High Plains Desert/Prairie to Coastal Mountain and Northern Rocky Mountain ERUs in miles to interstate highway;
- Increases from Coastal Mountain and Northern Rocky Mountain ERUs to High Plains Desert/Prairie and Upper Snake ERU's in percent of households with farm income and dependence on ranching;

- Increases from Coastal Mountain and Northern Rocky Mountain ERUs to Upper Snake and High Plains Desert/Prairie ERU's in **traffic** congestion;
- Increases from Northern Rocky Mountain and Coastal Mountain ERUs to Upper Snake and High Plains Desert/Prairie ERU's in percent employed in agriculture, forestry, fisheries and percent of persons that are Hispanic; and
- No difference in perceived characteristics such as social cohesiveness, services, business attractiveness, dependence on natural resources, government and civic leadership, preparedness for future, quality of life (in particular, social problems) -- or empirical data on change in population from 1980 to 1990, the percent of households with retirement income or those collecting social security.

The results of the survey of the significant change communities indicate that the resilience of communities is more related to how they respond to change than to its economic type (the more resilient a community is, the more likely it is to take pro-active actions to respond to change rather than to remain inactive). Also, although there is a slight tendency for less resilient communities to be experiencing population decline and for more resilient communities to be experiencing population growth, communities of all degrees of resilience may be experiencing growth or decline.

Small Rural Communities -- Is Bigger Better?

Analysis of both the recorded, documented data obtained from town officials and the perception data from the community self-assessment workshops indicates that population size is the best predictive variable for a community's current condition and likely response to change.

This conclusion is supported by a variety of findings, as follows:

DOCUMENTED DATA

The smaller the town,

The lower the average price of an acre of land is found to be, although the average price in mid-size (3,000 to 5,000) communities is higher than it is in large ones (>5,000) ($p < .05$).

The lower the cost of a house is, although that cost is highest in mid-size (1,500 to 3,000) communities ($p < .05$).

The farther it is to the nearest local/regional airport ($p < .02$) (no significant difference was found in distance to national/international airport).

The more grant funding a town receives (apparently, smaller communities are more active and successful at obtaining help through this form of funding) -- the major difference found is between small communities (<1,500) and mid-size (1,500 to 3,000; by factor of 3) ($p < .05$); BUT

The larger the town,

The greater is its surplus high-school capacity ($p < .04$)

The greater is the town's number of churches, recreation/sports groups, civic groups, industry groups ($p < .05$)

The greater is the number of buildings vacant or for sale and buildings permits issued in the town ($p < .05$)

AND the more the town grew in the 1980's (range for small to large from -.05 to .10) ($p < .04$)

PERCEPTION DATA

The smaller the town,

The less autonomous it is perceived to be, although mid-size (3,000 to 5,000) towns are more autonomous than large (>5,000) ones ($p < .05$)

The lower the rating of the adequacy of its services is, although that rating mid-size (3,000 to 5,000) is higher than it is for large towns (>5,000) ($p < .05$)

The lower is its rating of the community's friendliness, although the rating for mid-size (3,000 to 5,000) towns is higher than it is for large (>5,000) towns ($p < .05$).

The larger the town,

The higher is its rating on community attractiveness ($p < .02$)
The greater the town's traffic congestion is ($p < .05$)
The more it is perceived to be interesting as a social community and the greater its abundance of social activities ($p < .01$)
The more attractive it is for business ($p < .05$)
The less dependent the town is on natural resources ($p < .01$)
The more economically diverse the town is ($p < .05$)
The more it was perceived to have changed since 1990 ($p < .05$)
And the greater its preparation for the future is ($p < .01$)

Characteristics for which population size made no statistical significant difference included:

Social cohesion
Leadership
Quality of life or regional attractiveness
Safeness of community
Public assistance
Retirement and social security income

Differences in size of the communities under study here are not particularly significant economically, except in the case of the agricultural sectors. Farm and ranching towns clearly tend to be smaller, and government jobs (many of which are associated with natural resources) are a particularly important component of small rural economies, along with agriculture and retail trade.

The listing of towns and their economic diversity index already suggested that larger towns tend to be more diverse economically. The mean score on the economic diversity index for

towns less than 1,500 in population was 0.03, while the mean index score for towns greater than 1,500 was statistically significantly higher ($p < 0.05$), averaging around 2.0.

Overall, the communities perceived to be more vital, attractive, and healthy generally were the larger ones -- that is, those having a larger population and more developed infrastructure. A rural town's population size is the common thread for understanding its current conditions and likely response to change: statistical analysis indicates that larger towns tend to be more economically diverse; autonomous and attractive for business (statistical significance, $p < 0.05$), while the smaller a town is, the less vital, attractive, friendly, and attractive for business it is likely to be perceived to be by knowledgeable residents. The conclusion here is consistent with the basic premise of the plethora of community development handbooks and workshops provided in the 1970's and 1980's: if members of a small rural community want to "develop" their town, they should work to attract new industries and expand its economic base (which will indirectly lead to an increase in population).

Significantly, the findings of both the self-assessment study and the community economic profiles suggest that the impacts of this improvement extend beyond the economic aspects of community development, whose significance has long been recognized and is reaffirmed here, to its social elements as well. Large rural communities typically represent a more advanced stage of social and civic development than small ones. The importance for community vitality of active social groups and civic organizations, increased educational infrastructure, availability of services, success in obtaining development grants, and greater preparedness for the future -- all of which increase with a town's size -- reflects the benefits that towns with a critical mass of social capital and infrastructure are more likely to realize. An interesting question for future research, however,

is at what size and level of community development the net benefits of growth are maximized, beyond which the social costs of further growth begin to exceed its benefits.

Quality of Life in Small Communities Is High, But This Community Characteristic Is A Complex One.

Significantly, most communities in the region, whether large or small, rated themselves as having a high quality of life: as previously shown, fully 80 percent rated the quality of life of their community as very high, while another 19 percent indicated it was moderately high; only one of the 198 indicated that their quality of life was low (see Table 5). Part of a community's QOL is due to the presence of scenic and recreational amenities in the surrounding area that are related to its natural resources. As table 33 shows, regression analysis confirms that a town's QOL is partially dependent on the attractiveness of the region in which that town is located. Even more important, however, are social factors such as how interesting a community is, the extent a community is plagued with social problems, how safe its residents feel, and the town's social cohesiveness.

Also significant is our finding that a town's size is unrelated to its QOL, which begs the question of the goal or desired future for towns seeking to become more viable, healthy, vital and thus resilient in the face of change. But it also suggests that, just because a town grows, this change does not mean that a community's QOL is necessarily compromised."

⁶ A reviewer questioned if long-time residents might have a different (declining) perception of QOL in comparison with that of newcomers, who might be drawn to a town by their perception of its higher QOL. This hypothesis was tested with data from the Chelan County survey and was not supported. Both groups of residents reported perceiving the same level of QOL: a mean value of 5.5 on the seven-point scale described on p. 72 (this mean rating, incidentally, was close to the 5.7 mean value for QOL for all communities in the region).

Table 33. Results of a Regression Analysis of Community Quality of Life.

Multiple R	.77267	Analysis of Variance			
R Square	.59702		DF	Sum of Squares	Mean Square
Adjusted R Square	.58631	Regression	5	35.96243	7.19249
Standard Error	.35933	Residual	188	24.27372	.12912

F = 55.70581 Signif F = .00

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
Percent Population Increase, 1980-1992/4	.093046	.141010	.586804	1.948	.0529

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
How interesting community is	.281454	.041688	.365129	6.751	.0000
Social problems	.205765	.035666	.333906	5.769	.0000
Community safety	.221632	.061948	.213117	3.578	.0004
Social cohesion	.100414	.039645	.139968	2.533	.0121
Regional attractiveness	.142014	.055062	.127925	2.579	.0107
(Constant)	.767889	.405683		1.893	.0599

Small Rural Communities Across The Region Are Changing.

A large majority (70%) of the communities across the region reported experiencing a moderate to high degree of change since 1990, according to responses to a question about this change. Similarly, the study conducted to assess the perceptions and opinions of all Chelan County residents found that a similarly large 68 percent of those residents reported that their community had experienced a moderate to high degree of change in the 1980's. When asked about the kinds of change that had occurred, the largest proportion reported growth and population increases, by a 2 to 1 margin (68%). Other important changes included the conversion of agricultural lands to residential and commercial development (32%), an increase in retail stores (26%), increased traffic (23%) and increased crime (22%). A majority, over 55 percent, were somewhat to extremely concerned about the overall changes in their community.

Community change is the result of both population growth in the region's towns and also changes in their economy:

Many Small Rural Communities Are Growing in Population, Although Their Rates Of Growth Vary Across The Region.

Census data for the communities in the study area indicate that, on average, the populations of these towns increased by seven percent between 1980 and the early 1990's. (The most recent population estimates available from the states at the time this analysis was conducted were from 1992 or 1994, depending on the state; see the citations below.) Population-change proportions range from a minimum of a decline of 60 percent to a maximum of an increase of 4 13 percent, but the distribution of these proportions is skewed toward population growth: 60

percent of all towns in the region increased in population between 1980 and 1992/1994, with the bottom 20 percent of all towns in the region decreasing in population by -9.6 percent and the top 20 percent increasing by over two times as much, or 19.9 percent.

In the 1990's, this trend accelerated. The average populations of rural communities in all five states in the Columbia River Basin are estimated to have increased since 1990, although in varying amounts: these increases ranged from an average of approximately 3 percent in communities in Montana (Montana Department of Commerce 1995) and 4 percent in Idaho communities (Idaho Division of Financial Management 1995), to a high of an average 12 percent in communities in Wyoming (Wyoming Department of Administration and Information 1995). Likewise, as table 34 shows, the vast majority (86%) of all towns in the region have been growing since 1990 -- a significant change from the in growth in the 1980's.

Table 34. Percentage of Small Towns in the Region Increasing in Population, by State.

<u>States</u>	<u>Percentage of Small Towns Increasing in Population</u>
Idaho	85
Montana	73
Washington	86
Wyoming	100
All communities	86

Source: State departments of administration, finance & information listed below.

Recent estimates also indicate that, statewide, the population growth between 1988 and 1994 has been 12 percent in Idaho, 7 percent in Montana, 8 percent in Oregon, and 9 percent in Washington. (Idaho Division of Financial Management 1995, Montana Department of Commerce 1995, Oregon Center for Population and Census 1995, Washington Department of Financial Management 1994, Wyoming Department of Administration and Information 1995). In contrast, the U.S. population grew only 4 percent during this period. Significantly, even for as short a period as 1990 to 1994, the present study indicates that residents of larger towns are more likely to report that their town has changed (Pearson correlation coefficient=0.44).

A multiplicity of changes and influences in addition to population growth are affecting the character of the communities in the study area. They include not only changing natural resource supplies and resource-management policies, but also social changes due to aging populations in some (mainly farming) towns, and the in-migration of commuters, welfare recipients, retirees and new and different ethnic groups. These new types of residents are changing the social make-up and character of many towns, and thus their traditions, customs, and culture. The results of the survey of significant-change communities suggest that the impacts of population growth and the social and land-use changes that growth is bringing to the region are as critical or more so than any recent changes in resource management; and our ten case studies also help confirm this conclusion (see Part 2). Importantly, growth in the communities' populations is unrelated to the perceived quality of life in a community, as indicated by a statistically insignificant Pearson correlation coefficient measuring the relationship between these variables.

The influence of local amenities (e.g., scenery, recreation opportunities) in community growth is clarified, in part, by looking at the relationship between the amenities scale scores and

estimates of population growth in the 1980's; that analysis produced a statistically insignificant correlation coefficient, confirming that communities with amenities are not necessarily the ones growing in population. In contrast, the strength of the relationship between amenities scale scores and ratings of the perceived degree of change in a community in the 1990's was statistically significant ($p < 0.05$), but moderate, as indicated by a Pearson correlation coefficient of 0.38. This finding suggests that amenities may be a significant factor in some communities but not in all: some communities in attractive forest settings, for example, that have scenery and recreation opportunities nearby may be experiencing more changes than others, but these amenities and the kinds of new residents they attract are just one component of the town's changing character.

The Results of the Analysis of "Significant-Change" Communities in the Region Corroborate Other Findings.

One last component of the research focused on assessing and analyzing the characteristics and experiences of 145 communities identified as *significant change communities* in the region. These communities were indicated as undergoing major economic and /or social change by (1) state economic development officials, agricultural extension experts, U.S. Forest Service forest planners or economic development coordinators; or (2) U.S. Census population estimates indicating changes of +/- 20 percent since 1980 (1995a, b). These data-collection efforts focused on identifying the kinds of changes occurring in these communities, the kinds of community responses that were made, and the effects or characteristics of all these factors in terms of community conditions, activities, and lifestyles. Of the total of 145 communities that have experienced significant changes since 1980, 80 were surveyed for the present study. Of those 80,

3% were perceived as nonresource-dependent;
13% were perceived as having predominantly ranching economies;
20% were perceived as predominantly farming based;
29% as predominantly tourism based; and
35% as predominantly timber based.

4% had fluctuating populations now tending towards decline;
22% had fluctuating populations now tending towards growth;
35% had growing populations; and
39% had decreasing populations.

36% were inactive in responding to change; and
64% were pro-active in responding to change.

These communities were examined in terms of the proportions of the total rated as having high, moderately high, moderately low and low resilience (based on quartiles): Of the 80 “significant change communities,” 34% were among the one-quarter having the highest resilience ratings, 26% were among those having a moderately high resilience rating, 21% were among those having a moderately low resilience rating, and 19% were among the one-quarter having the lowest resilience ratings.

Of those having a HIGH resilience rating (27, or 34%),

44% were perceived as predominantly timber based;
30% as predominantly tourism based;
11% as predominantly farming based economies;
11% as predominantly ranching based; and
4% as nonresource-dependent.

54% had fluctuating populations now tending towards growth or growing populations;
46% had declining populations.

74% were pro-active in responding to change;
26% were inactive in responding to change.

Of those having **MODERATELY HIGH** resilience ratings (21, or 26%),

43% were perceived as predominantly timber based;
28% as predominantly tourism based;
20% as predominantly farming based economies; and
9% as predominantly ranching based.

38% had growing populations;
19% had fluctuating populations now tending towards growth; and
43% had decreasing populations.

72% were pro-active in responding to change;
28% were inactive in responding to change.

Of those having **MODERATELY LOW** resilience ratings (17, or 21%),

28% were perceived as predominantly tourism based;
24% as predominantly ranching based;
24% predominantly timber based;
12% as predominantly farming based economies; and
12% as nonresource-dependent.

53% had growing populations;
18% had fluctuating populations now tending towards growth;
18% had decreasing populations; and
11% had fluctuating populations now tending towards decrease.

53% were pro-active in responding to change;
47% were inactive in responding to change.

Of those having **LOW** resilience ratings (15, or 19%),

47% were perceived as predominantly farming based;
27% as predominantly tourism based;
20% as predominantly timber based;
6% as predominantly ranching based.

47% had decreasing populations;
6% had fluctuating populations now tending towards decrease.
27% had growing populations; and
20% had fluctuating populations now tending towards growth;

33% were pro-active in responding to change;
67% were inactive in responding to change.

These results confirm that, among communities that have undergone significant change, higher proportions of communities in the higher resilience classes are perceived as timber-based and report activities suggesting they are pro-active in responding to change. The proportions of towns perceiving tourism as their dominant industry are spread evenly across the four resilience classes, as are population changes, reaffirming that population growth and amenities are not more characteristic of resilience or a lack of it. In contrast, higher proportions of communities in the lower resilience classes are perceived as agriculture-based, and they report a lack of activities suggesting they are not responding to change.

Economies Of Small Rural Communities and Changes in Them Vary Across The Region.

It is clear that the economics of small rural communities in the region are more complex than some analyses would suggest. The extent to which communities are dependent on different industries varies, and generalizing about any one community or industry must be done carefully.

As our assessments of significant change communities affirm, the economies of small communities in the region have changed throughout their history and continue to change. Significantly, our assessments of community resilience and significant change communities have made clear that change and resilience to it are found all across the various economic types of communities. Government policies on public lands clearly have affected the economies of some rural communities in significant ways. Other influences, including the decisions and actions of

small business owners and large corporations, and the methods with which the public sector has subsidized these industries (e.g., crop payment programs, logging road construction, bidding-preference systems for small sawmills, etc.), also have long affected the development of small rural communities in the region.

For towns with forest products mills, concerns of residents and agency resource managers have traditionally focused on the towns' "community stability" in terms of *economic* stability that is based on a steady, dependable flow of resources from public lands. Some Congressional acts (e.g., the Organic Administration Act of 1897, the Multiple Use-Sustained Yield Act of 1960, the Forest and Rangeland Renewable Resources Planning Act of 1974, and the National Forest Management Act of 1976) reflect this concern and, as a seminal Forest Service policy document notes, they "direct the US Forest Service to provide a continuous supply of outputs for the American people" (USDA Forest Service 1977). Although the document notes that "none of the language [in these acts] specifically addresses 'community stability'," it also recognizes that "the basic charge [of the agency] to provide the goods and services is well ingrained" (USDA Forest Service 1977, p. 1).

Yet recent changes in communities also have resulted from a variety of broader economic influences such as global economic forces, economic diversification, plant modernization, and industrial downsizing (such as laying off company loggers and hiring independent gyppos to reduce the costs of benefits payments). Significantly, growth in employment in the Pacific Northwest has far exceeded the national rate: while employment increased nationwide 7.7 percent between 1988 and 1994, it increased 27.7 percent in Idaho in that same period, and around 17 percent in the other states in the region (Idaho Division of Financial Management 1995, Montana

Department of Commerce 1995, Oregon Center for Population and Census 1995, Washington Department of Financial Management 1994, Wyoming Department of Administration and Information 1995).

As discussed in the introduction to this report, key characteristics of communities include economic ones like the levels of economic development of a town, its economic diversity (Belzer and Kroll 1986, Freudenburg 1992, Gramling and Freudenburg 1992, Johnson 1993), and its resource dependence (Castle 1991, Machlis and Force 1988, Power 1994). These conditions are central, given all the concerns and issues that shifting demographics, an evolving economic base, clashing values and shifting priorities have raised in the rural West. Although the literature has often asserted that resource extraction industries are essential industries for rural economic survival, some researchers (e.g., Power 1994, Rasker 1993, 1995) note that traditional extractive industries are decreasing and service industries increasing in importance across the Pacific Northwest. Most recently, The Wilderness Society's report, "A New Home on the Range: Economic Realities in the Columbia River Basin," examines U.S. Census Bureau statistics on income and employment in the Columbia River Basin since the late 1960's. These statistics clearly document that, across the region as a whole, traditional, extractive "economic base" industries like agriculture, forestry, and mining have remained at a fixed level over the last two decades, while the major increases in the region's economy have occurred in service sectors.

Their analysis reflects only part of the current situation in the region, however. By focusing on the region as a whole, it overlooks the significant differences between the "economic base" of small rural communities as opposed to that of large cities. When the importance of industrial sectors in rural communities in 1995 were assessed in terms of proportions of their total

employment, a different picture of the region's economy emerges: harvesting and processing (agriculture, timber) are the major employer in small rural towns across the region, with retail trade and eating/drinking (mainstays of tourism as well as important for meeting local needs) and government also among the largest employers. Also, in some cases the total dependence of a town on a particular industry may be less important than the proportion of that industry that is controlled by one entity, such as a government agency's control of timber supply or a company's control of processing plants. Finally, industry sectors are often complementary rather than substitutable or competitors for one another; consequently, economic diversification has been occurring long before public policy started restricting commodity supplies on public lands and companies in extractive industries began plant improvements and employee lay-offs to increase company competitiveness. The key point here is that the economies of these communities are more complex and unique than simplistic, policy-driven analyses would suggest.

In tandem with these local conditions, a budget-deficit conscious U.S. Congress and Clinton Administration currently are acting to incrementally cut spending programs that include all varieties of subsidies -- not only welfare reform in urban areas, but also direct subsidies in rural areas in the form of farm subsidies, mining fees and other forms of so-called natural-resource "corporate welfare." Trends like these also are all likely to ensure that small communities in the region and their economies will continue to change in dramatic ways.

CONCLUSIONS

To develop constructive strategies for managing change, it is important to assess the current characteristics and conditions of communities in the region, changes in them, and the major factors influencing those changes and communities' responses to them. Residents must deal with the realities and potentialities of their particular community (its advantages and disadvantages, attractions and drawbacks, etc.). Importantly, while a community's resources, especially its amenities and attractiveness, can be a factor influencing a community's development, a decisive, major determinant of a community's resilience clearly is its residents: in particular, the willingness of its people to take the lead, organize and realize their community's leadership potential. People can be central in creating the future of their communities.

Some of the major conclusions of this research are that:

- Small 'rural communities in the Columbia River Basin have always been changing and will continue to change; the idea of community *stability* is a myth that belies a variety of influences such as: the volatility of markets for timber, mining and other traditional extractive industries; the actions of private companies in modernizing and closing plants and periodically laying off or terminating workers; the decreased supply of timber from national forests, sometimes due to past inaccuracies in estimates of existing timber supply, current regeneration and future sustainability; decreasing employment in the industries as a result of all these changes; and the rapidly increasing in-migration of new kinds of workers and residents (retirees, new ethnic groups, etc.) into many of these communities.
- Although closures of mills, mines, and other resource-processing plants can have significant impacts in the case of some communities, past closures have had little effects on the overall community in the case of others. Many mills, for example, have closed, been sold, been opened again, and been closed again in a series of changes over past decades that have not always been related to public land management. Community growth, as indicated by population increases, has occurred in many communities that have lost mills, but not in others.
- Rural communities tend to be more *resilient* (i.e., adaptive to change) than was commonly assumed. Small towns in the Columbia River Basin are unique and complex, and generalizing about the kinds of towns that are resilient to changes is always contingent; many "timber communities" are fairly highly resilient and healthy, especially in comparison to small ranching

and farming communities. With their amenities, diversifying economies, and population growth, the face of these towns is already changing. New policy initiatives are needed to help small communities cope with the changes facing them, and public policy analysts could view the role of resilience in one of two alternative ways.

One is that, if government resources are to be expended on rural communities, those lowest in resilience -- ranching and farming communities, in particular -- are the ones that most need to be supported.

An alternative view is that, in the name of economic efficiency and equity, America should "cut its losses" in terms of communities that are "on the skids" and losing their human capital. Expending any more societal resources on these communities would not be worth the benefits derived; rather, government resources would be most effectively used on communities that are "at-risk" but have the potential to benefit most from those resources.

- The history of Forest Service commitments and impacts on rural communities has been a continually evolving process; the nature of this process, changing societal values and the changing agency work force reflecting those values, and the learning that is occurring within the agency, all underscore the importance of sound forest planning (see, for example, Blattner et al., Brown 1994, Clark and Stankey 1994, FEMAT 1993, Gale and Corday 1991, Grumbine 1994, Krannich et al. 1994, Lee et al. 1990, Machlis and Force 1988, Rasker 1995, Waggener 1977). Information like that being provided with this research can be important for revising forest plans and planning individual projects. It can also be useful for the planning and management efforts of the towns themselves and those of the counties and states in which they are located.

A variety of approaches could help rural communities adapt to their changing environments and conditions. The CRI suggests that different communities require different mixes of solutions or responses, depending on the nature of the changes affecting the communities and their strengths and weaknesses as indicated by the resilience index. Using the index, solutions and responses could be tailored to the situations of individual communities. They could include: programs for rebuilding social networks and increasing a community's social cohesion; leadership training programs; growth management strategies; investments in improving physical infrastructure; and financial and infrastructure support for traditional industries if they are to

maintain their role in local economies. Mitigation programs could include a process for in-depth community self-assessment that further clarify and detail community needs. This process could help communities and their leaders assess their current conditions, evaluate the challenges and opportunities facing their community, and develop short and long-range strategies to respond to change that make the most effective, efficient use of outside funding.

As Part 2 of this report documents, distrust of government, issues of self-reliance versus dependence on public resources, concerns with private property rights, and conflicts over resource uses of federal lands are as common in this region as elsewhere in the American West. Accordingly, any actions taken should reflect a positive, pro-active approach that advances consensus-building and collaborative problem-solving across the region, rather than fan the flames of conflict, confrontation, and divisiveness among the various publics in the Inland Northwest. Recent social changes are already altering the region's rural towns as much as changing supplies of natural resources, and the residents of these towns need to focus their attention and actions on dealing with all the coming changes constructively and resolving the resulting problems as expediently as possible.

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APPENDIX A:
SELF-ASSESSMENT WORKBOOK

Assessing Your Community



A Workbook for
Examining the Characteristics of
Your Community

Dear Community Leader,

We are a group of independent scientists who are exploring the character and conditions of small rural communities like yours in the Inland Northwest and Northern Rocky Mountain West. We have designed this workbook so that community leaders like you can help us gain an accurate picture of the complexity of your community, its recent history, **and** its ability to meet the future.

This information will be used by federal and state land managers who are designing an ambitious, region-wide project called the "Eastside Ecosystem Management Project." The **Eastside** Project is attempting to coordinate and balance the use of our region's varied natural resources, from timber, grazing, and farming land to wildlife, recreation, and tourism (please see the enclosed map of the geographic range of the project).

*Your ideas that you share with us in this workbook will help land managers to better understand the possible impact of their work on the people, economies, and communities in your region. Your answers are critical because your **community** is one **of a select few** chosen to **represent** the **approximately 450 small** rural communities in this **broad** region.*

The workbook should only take an hour or so to complete. Each of the 12 sections focuses on information about particular aspects of your community, including:

- the character and quality of life in your community;
- the cohesiveness of your community and its ties to other communities;
- the economic diversity and resource-dependence of your community, and its ability **to** am-act new business;
- the effectiveness and vision of your local government; and .
- your community's ability to chart a course for the future.

Please answer our questions as carefully and thoroughly as you can. When reflecting upon your community's characteristics, it may help you to compare your community to other rural communities in the region. We will meet with you and five to seven other community leaders to share information and explore the diversity of opinions about your community. Please be sure to complete this workbook **before** you come to the group meeting.

Thank you for completing the workbook for us! You can be assured that your answers will not be associated with your name, and they will be kept strictly confidential. If you have any questions at all, please feel free to contact us at the numbers listed below.

Please write the name of your community here: _____
(t o w n) (state)

Questions?	Please call one of the following individuals:	
	<i>Work</i>	<i>Home</i>
Chuck Harris	(208). 885-7911	(208) 882-9194
Bill McLaughlin	(208) 885-79 11	(208) 882-7895
Greg Brown	(208) 885-2126	(208) 8834565

Section 1. COMMUNITY CHARACTER

In this section, we would like you to express your feelings and perceptions about your community’s attractiveness or character. Community attractiveness is a combination of many things that are often highly subjective (ranging **from** your community’s visual appearance to the places outside your **commu-** nity that contribute to its attractiveness). In the **first** part of this section, we would like to reflect upon the **attractiveness** of your community itself- that is, those things found **inside** your community that make it **attractive** or unattractive. In the second part, we would like you to reflect upon those things **outside** your community that contribute to or detract from your community’s attractiveness.

A. The Attractiveness of Your Community Itself

1. “Special places” is a term we are using to describe settings, areas or locations in your community that have special meanings for people. The meanings of areas may derive **from** their history, or the times you have spent there with family or **friends**, or because of a connection to work, or because they are particularly unique or scenic, or they arouse special feelings or emotions in you – or they may have special meaning to you for some other reason. What **are** the places **in your community** that are particularly important or special to you? Where are they, and why are they special? (Please describe these places, and write why or how they are special to you; if there are none, simply write “None.”)

<u>NAME/DESCRIPTION OF SPECIAL PLACE</u>	<u>LOCATION</u>	<u>WHY IS IT SPECIAL?</u>

2. How attractive do you feel the downtown area of your **community** is? (Circle *one number*.)

EXTREME LACK OF CHARACTER: Unattractive	1	2	3	4	5	6	7	EXTREME ABUNDANCE OF CHARACTER: Attractive
--	---	---	---	---	---	---	---	---

3. How attractive do you **feel** your wmmunity’s residential neighborhoods are? (Circle *one number*.)

EXTREMELY UNATTRACTIVE NEIGHBORHOODS	1	2	3	4	5	6	7	EXTREMELY ATTRACTIVE NEIGHBORHOODS
--------------------------------------	---	---	---	---	---	---	---	------------------------------------

4. Keeping in mind your previous responses, how attractive do you feel your community is overall?
(Circle one number.)

EXTREMELY UNATTRACTIVE 1 2 3 4 5 6 7 EXTREMELY ATTRACTIVE

B. The Attractiveness of the Region Outside Your Community

1. Please list the three most important places that you use outside of your community's town limits (within 100 miles). You might use these for recreation activities or work, as a place to escape to when you want to get away, as a special place to take a friend, as a special place to be alone, as a special place to shop or eat out, or as a place that you use for any other purpose you feel is special.

NAME OF PLACE (Location)

WHAT DO YOU DO THERE?

2. How important do you feel the scenery outside your community is to the overall character of your community? *(Circle one number.)*

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

3. How abundant would you say special places (that is, places that are special to *you*) are outside your community (within 100 miles)? *(Circle one number.)*

NOT AT ALL ABUNDANT 1 2 3 4 5 6 7 EXTREMELY ABUNDANT

4. How important are nearby (within 100 miles) outdoor recreation opportunities to the overall character of your community? *(Circle one number.)*

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

5. How important are nearby (within 100 miles) designated wilderness areas, national parks, wild and scenic rivers, or other kinds of high-quality natural environments to the overall character of your community? (*Circle one number.*)

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

6. How important do you feel the history and traditional customs and culture of your region are to your community's overall character? (*Circle one number.*)

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

7. How unique do you feel your community and its surroundings are in terms of special qualities and travel attractions, such as its historical heritage, theme parks, etc.? (*Circle one number.*)

EXTREMELY COMMON No unique, special features 1 2 3 4 5 6 7 EXTREMELY UNIQUE Outstandingly special, unique features

8. Keeping in mind all the answers in this section dealing with the attractiveness of your community's region, how attractive do you feel your region is? (*Circle one number.*)

EXTREMELY UNATTRACTIVE REGION 1 2 3 4 5 6 7 EXTREMELY ATTRACTIVE REGION

C. Community Attachment

1. To what extent do you feel at home in your community? (*Circle one number.*)

NOT AT ALL 1 2 3 4 5 6 7 A GREAT DEAL

2. If you had to move away from your community, how sorry or pleased would you be to leave? (*Circle one number.*)

EXTREMELY SORRY 1 2 3 4 5 6 7 EXTREMELY PLEASED

3. Keeping in mind all of the answers you have given in this section about the special **places** in your community and **region**, how attached do you feel to your community?

EXTREMELY UNATTACHED:

Some other community 1 2 3 4 5 6 7
 could easily substitute for
 this one.

EXTREMELY ATTACHED:

This community is like a
 part of me.

Section 2. COMMUNITY COHESIVENESS

The cohesiveness of a community refers to the degree to which the residents of a community work together to get things done. It is essentially the “sense of community” that is held by residents. The cohesiveness of a community will have an effect on the ability of a community to maintain its identity in a changing world. This section asks questions about the cohesiveness of your community and how much people identify with and are committed to the community.

1. What are the different kinds of people and/or groups that make your community diverse?

2. How often do people work together to get things done in your **community**? (*Circle one number:*)

SELDOM IF AT ALL 1 2 3 4 5 6 7 VERY OFTEN

3. How supportive of one another *are* people who live in your *community*? (*Circle one number*)

EXTREMELY NONSUPPORTIVE 1 2 3 4 5 6 7 EXTREMELY SUPPORTIVE

4. How committed are residents to your *community*? (*Circle one number:*)

EXTREMELY UNCOMMITTED 1 2 3 4 5 6 7 EXTREMELY COMMITTED

5. How similar are the beliefs and values in your community? (*Circle one number:*)

EXTREMELY DIFFERENT 1 2 3 4 5 6 7 EXTREMELY SIMILAR

6. How strongly do residents identify with your community? (Circle one number:)

WEAKLY IDENTIFY 1 2 3 4 5 6 7 STRONGLY IDENTIFY

7. Which of the following best describes your town's sense of community? (Circle *only one*.)

- a. By and large, most of us in the community hold similar values and usually are in agreement.
- b. We are a community of diverse values but have learned- how to work out our differences.
- c. We are a very diverse community and generally there is **no real** agreement among us.

8. Keeping in mind all of the answers that you have given in this section of the workbook dealing with your community, please rate the overall cohesiveness of your *community*. (Circle one number:)

EXTREMELY WEAK SENSE OF COMMUNITY 1 2 3 4 5 6 7 EXTREMELY STRONG SENSE OF COMMUNITY

Section 3. COMMUNITY SERVICES

Community services – those services provided by both government and the private sector – can make an important contribution to a community's livability and desirability. Please provide the following information about the services found in your community.

1. How adequate are the following services in your community? Please indicate whether the service is found inside or outside your community and rate its adequacy. (Note — if the service is located outside your community, please estimate the number of miles you have to travel from your community to reach that service.) If you have *No Experience* with this set-vice, just circle the "NE" rating category. (Check one box and circle **one** number per item).

SERVICE (ESTIMATED # OF MILES FROM COMMUNITY)

a. Doctor
 Inside
 Outside _____(miles)
 E X T R E M E L Y I N A D E Q U A T E 1 2 3 4 5 E X T R E M E L Y A D E Q U A T E 6 7 N E

b. Hospital
 Inside
 Outside _____(miles)
 E X T R E M E L Y I N A D E Q U A T E 1 2 3 4 5 E X T R E M E L Y A D E Q U A T E 6 7 N E

c. Other health service
 Inside
 Outside _____(miles)
 E X T R E M E L Y I N A D E Q U A T E 1 2 3 4 5 E X T R E M E L Y A D E Q U A T E 6 7 N E

Community Services (continued on next page)

Community Services (*continued*)

d. Elementary School	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
e. High school	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
f. Bank	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
g. Food shopping	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
h. Other stores (drug, department, clothing, etc)	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
i. Museums & cultural facilities	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
j. Church	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
k. Sports events (non-school)	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
l. Sports & recreation facilities (pools, fields, gyms, etc.)	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside								
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE

2. Keeping in mind all the answers in this section about services in your community, how do you feel about the overall adequacy of **services** and facilities in your community? (Circle **one number**.)

EXTREMELY
INADEQUATE 1 2 3 4 5 6 7 EXTREMELY
ADEQUATE

Section 4. COMMUNITY AUTONOMY

The degree to which a community is linked – economically, socially, and physically – to **neighboring** communities and to the region as a whole (the level of autonomy of a community) can influence a community’s response to a changing world. Please answer the following questions about the degree of autonomy that your community possesses.

1. Please list up to three communities with which your **community** has the strongest connections, and state the reasons why your community’s residents come from or go to the other communities.

<u>Community</u>	<u>Reasons Why People Come/Go</u>
1. _____	_____
2. _____	_____
3. _____	_____

2. How **often** is your community influenced by social, political, and economic events which take place outside the community? (*Circle one number:*)

COMMUNITY IS SELDOM INFLUENCED BY EXTERNAL EVENTS	1	2	3	4	5	6	7	COMMUNITY IS OFTEN INFLUENCED BY EXTERNAL EVENTS
---	---	---	---	---	---	---	---	--

3. How much social interaction (for example, visiting friends/relatives, attending events, shopping, attending group meetings) does your community have with neighboring communities? (*Circle one number:*)

FEW SOCIAL ACTIVITIES WITH NEIGHBORING TOWNS	1	2	3	4	5	6	7	MANY SOCIAL ACTIVITIES WITH NEIGHBORING TOWNS
--	---	---	---	---	---	---	---	---

4. How much of your shopping do you do inside your community? (*Circle one number:*)

DO VERY LITTLE SHOPPING IN MY COMMUNITY	1	2	3	4	5	6	7	DO MOST SHOPPING IN MY COMMUNITY
---	---	---	---	---	---	---	---	--

5. How many community residents are able to work inside your *community*? (*Circle one number:*)

MOST RESIDENTS WORK OUTSIDE OUR COMMUNITY	1	2	3	4	5	6	7	MOST RESIDENTS WORK INSIDE OUR COMMUNITY
---	---	---	---	---	---	---	---	--

6. Which of the following statements do you think best describes the autonomy of your community? (Circle one number.)

- a. My community is very dependent on other communities.
- b. My community depends on other communities for some things, but stands alone and is independent on other things.
- c. My community stands alone and functions pretty independently of other communities.

7. Keeping in mind the answers you have given above, how autonomous is your community? (Circle one number:)

NOT AT ALL									EXTREMELY
AUTONOMOUS	1	2	3	4	5	6	7		AUTONOMOUS

Section 5. ECONOMIC DIVERSITY

The economy of a community is an important influence on its ability to adapt to change. The mix of the types of industries and employment opportunities within a community helps describe that community's economic diversity. Please provide the following information about the economy of your community.

1. Please list the five most important businesses, industry types, or government institutions in order of importance to the **local** economy (#1 is most important, and so on). In making your determination, consider payroll amounts, numbers of employees, and overall impact on the local economy.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

2. How many **different** types of businesses (for example, agriculture, timber, mining, retail stores, etc.) are present in the economy of your community? (Circle one number)

ONLY A FEW TYPES									A GREAT MANY TYPES
OF BUSINESSES	1	2	3	4	5	6	7		OF BUSINESSES

3. Which of the following best describes your business community? (*Circle one letter.*)

- a. Mostly **small** businesses with few employees
- b. Mostly large businesses with many employees
- c. A pretty even mixture of both small and large businesses

4. Which of the following best characterizes your community's economy? (*Circle one letter.*)

- a. Our economy is mainly centered around the growing, gathering, or harvesting of raw materials (for example, agricultural crops or logging or mining).
- b. Our economy is mainly centered around adding value to or processing raw materials (for example, a lumber mill, a food processing plant, a manufacturing facility).
- c. Our economy is mainly centered around retail stores and/or tourism services.
- d. Our economy is mainly centered around government jobs.
- e. Our economy is too diverse to be described by any one of the above.

5. Does most of the work force in your community work for the government or for the private sector? (*Circle one number:*)

MAINLY PRIVATE	1	2	3	4	5	6	7	MAINLY PUBLIC
SECTOR EMPLOYMENT								SECTOR EMPLOYMENT

6. Which of the following statements best describes the economic diversity of your community? (*Circle one letter:*)

- a. Our economy consists of a small number and limited variety of businesses (for example, tourism stores, agriculture, timber, etc.). Most other rural communities have an economy that is more diverse than ours.
- b. Our economy consists of a fair number of businesses that represent a modest variety of business sectors. Our economy is fairly diverse, but many other rural communities are more diverse than ours.
- c. Our economy consists of many businesses which represent a wide variety of business sectors. Few other rural communities have an economy which is as diverse as ours.

7. Keeping in mind the answers you have provided in this section of the workbook, what do you think about the overall economic diversity of your community? (*Circle one number.*)

EXTREMELY								EXTREMELY
UNDIVERSIFIED	1	2	3	4	5	6	7	DIVERSIFIED

Section 6. RESOURCE DEPENDENCE

The economies of some communities are highly dependent upon natural resources (water, soil, vegetation, fish, minerals, wildlife, scenery) from the lands that surround them. These lands are often managed by one or more government agencies, as well as by private individuals or organizations. Changes in how these lands are managed may have an impact on local communities that depend upon them. The extent to which a community depends upon the natural resources around it is **often** referred to as a community's resource dependence.

1. Below are several categories of **business/industries**. Please identify what you believe to be your community's level of dependence on these **businesses/industries**, ranging from 1 (extremely dependent) to 7 (extremely independent). If the type of **business/industry** listed below is completely absent in your community, indicate by circling the NA category for *Not Applicable*. (Circle one response per item.)

	EXTREMELY INDEPENDENT							EXTREMELY DEPENDENT		
	1	2	3	4	5	6	7		NA	
Forest Products	1	2	3	4	5	6	7		NA	
Mining and Minerals	1	2	3	4	5	6	7		NA	
Grazing and Ranching	1	2	3	4	5	6	7		NA	
Farming and Agriculture	1	2	3	4	5	6	7		NA	
Outdoor Recreation/ Tourism	1	2	3	4	5	6	7		NA	
Commercial Fisheries/ Aquaculture	1	2	3	4	5	6	7		NA	
Other _____	1	2	3	4	5	6	7			

2. Keeping in mind the answers you have provided above, what do you feel is the overall natural resource dependence of your community? (Circle one **number**.)

EXTREMELY INDEPENDENT	1	2	3	4	5	6	7	EXTREMELY DEPENDENT
-----------------------	---	---	---	---	---	---	---	---------------------

Section 7. ATTRACTIVENESS FOR BUSINESS

A community's economic **development often** depends upon the community's business climate including the availability of essential business services. Please answer the following questions about the **opportunities** for business in your **community**.

1. Please list the positive things about your community that you think might be attractive to new businesses.

2. Please list the negative things about your community that you think might deter businesses **from** opening or coming to your community.

3. Considering both the positive and negative aspects of your community from a business perspective, how would you rate the overall attractiveness of your community for businesses? *(Circle one number)*

EXTREMELY UNATTRACTIVE 1 2 3 4 5 6 7 EXTREMELY ATTRACTIVE

Section 8. COMMUNITY SOCIAL **ATTRACTIVENESS/QUALITY** OF LIFE

In this section, we would like you to reflect upon the social attractiveness and quality of life in your community. Quality of life may be thought of as consisting of a number of **different** ingredients, ranging **from** social relationships to physical safety to psychological enjoyment. Please answer the **following** as they describe your community.

1. How many of your **friends** and relatives live in your *community*? (*Circle one number.*)

NONE OF THEM 1 2 3 4 5 6 7 **ALL OF THEM**

2. How many people do you know in your community? (*Circle one number:*)

VERY FEW 1 2 3 4 5 6 7 **A GREAT MANY**

3. What do you think about the air quality in and around your *community*? (*Circle one number.*)

EXTREMELY BAD QUALITY ALL THE TIME 1 2 3 4 5 6 7 **EXTREMELY GOOD QUALITY ALL THE TIME**

4. What do you think about the public water supply quality in your town? (*Circle one number:*)

EXTREMELY BAD QUALITY; TASTES BAD, DISCOLORED, SMELLS FUNNY 1 2 3 4 5 6 7 **EXTREMELY GOOD QUALITY; GOOD TASTE, NO PROBLEMS**

5. What do you think about the **traffic** circulation in your *community*? (*Circle one number.*)

VERY CONGESTED: CANT GET WHERE I NEED TO GO IN REASONABLE AMOUNT OF TIME 1 2 3 4 5 6 7 **TRAFFIC FLOWS WELL, MINIMUM CONGESTION**

6. How friendly do you feel your community is? (*Circle one number:*)

EXTREMELY UNFRIENDLY 1 2 3 4 5 6 7 **EXTREMELY FRIENDLY**

7. How *safe* do you feel in your community? (Circle one *number*.)

EXTREMELY UNSAFE; TENSE	1	2	3	4	5	6	7	EXTREMELY SAFE; RELAXED
----------------------------	---	---	---	---	---	---	---	----------------------------

8. How abundant are the social activities in your community? (Circle one *number*.)

FEW SOCIAL ACTIVITIES	1	2	3	4	5	6	7	MANY SOCIAL ACTIVITIES
--------------------------	---	---	---	---	---	---	---	---------------------------

9. How interesting is your *community* to you? (Circle one *number*.)

EXTREMELY UNSTIMULATING, BORING	1	2	3	4	5	6	7	EXTREMELY STIMULATING, EXCITING
---------------------------------------	---	---	---	---	---	---	---	---------------------------------------

10. To what extent does your community have social problems (for example, alcoholism, drugs, child or spouse abuse, school dropouts, etc.)? (Circle one *number*.)

MANY SOCIAL PROBLEMS	1	2	3	4	5	6	7	FEW SOCIAL PROBLEMS
-------------------------	---	---	---	---	---	---	---	------------------------

11. Which of the following statements best describes your community's social well being and quality of life? (Circle one *number*.)

a. Our community is safe, friendly and good place to live. There are few rural communities that **can** match the quality of life we enjoy.

b. Our community is not the best place to live for either health, safety, or social reasons. But even with our community's shortcomings, it still offers a reasonable quality of life when compared to other rural communities.

c. Our community has serious social problems or lack of opportunities for enjoyment to the point where it can not be described as offering good quality of life. Most other rural communities offer a better quality of life.

12. Keeping in mind your answers dealing with your community's quality of life, what do you think the overall quality of life is for your community? (Circle one *number*.)

EXTREME POOR QUALITY OF LIFE	1	2	3	4	5	6	7	EXTREME HIGH QUALITY OF LIFE
------------------------------------	---	---	---	---	---	---	---	------------------------------------

Section 9. COMMUNITY LEADERSHIP

1. Please list the most important non-governmental clubs, organizations, or groups within your community.

2. Community leadership can come **from** many different sources. To what extent do you feel the following sources contribute to leadership *in your community?* (**Circle one number per item.**)

Leadership	NO LEADERSHIP						VERY STRONG LEADERSHIP
a. Elected officials	1	2	3	4	5	6	7
b. Business community	1	2	3	4	5	6	7
c. Government agencies (e.g., Soil Conservation Service, Forest Service)	1	2	3	4	5	6	7
d. Non-government organizations (e.g., Labor Unions, Farm Bureau, Service clubs)	1	2	3	4	5	6	7
e. Other Active Individuals							
f. Other (if any) _____	1	2	3	4	5	6	7

3. How visionary are your community leaders?

OUR COMMUNITY LEADERSLACK A VISION FOR THE FUTURE	1	2	3	4	5	6	7	OUR COMMUNITY LEADERS HAVE A VERY CLEAR VISION FOR THE FUTURE
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4. How flexible and creative are your community leaders?

OUR LEADERS ARE EXTREMELY IN-FLEXIBLE AND UNCREATIVE	1	2	3	4	5	6	7	OUR LEADERS ARE EXTREMELY FLEXIBLE AND CREATIVE
--	---	---	---	---	---	---	---	---

5. How consistent are the opinions and values of your community leaders with your values and opinions? (*Circle one number.*)

EXTREMELY INCONSISTENT	1	2	3	4	5	6	7	EXTREMELY CONSISTENT
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5. Which of the following statements do you think best describes how your community government operates? (*Circle one number:*)

- a. Does pretty much what citizens want
- b. Does what some influential people want
- c. Does what it thinks is best
- d. Doesn't know what to do

6. Keeping in mind the answers above about your local government, how would you rate the overall effectiveness of your community government? (**Circle one number:**)

EXTREMELY										EXTREMELY
INEFFECTIVE	1	2	3	4	5	6	7			EFFECTIVE

Section 11. COMMUNITY ORIENTATION TO CHANGE

Community orientation to change is the degree to which a community is looking towards, and planning for, the future. In addition to a view to the future, community change orientation refers to the willingness of communities to change, if necessary, to ensure that they are able to weather changes taking place in society as a whole.

1. List **specific** projects your **community** has begun to implement during the last two years to stay the course it has always been on, or to set a new course for the future. (Please place a star next to the projects that you feel will take you in a new direction.)

2. What things still need to be done?

3. How much has your community changed since 1990?

NO CHANGE 1 2 3 4 5 6 7 A GREAT DEAL OF CHANGE

Please explain your answer: _____

4. How committed is your community to making plans for the future, irrespective of whether it intends to change or remain the same? (*Circle one number:*)

EXTREMELY UNCOMMITTED 1 2 3 4 5 6 7 EXTREMELY COMMITTED

5. How involved are your community leaders in thinking about whether your community desires to change or remain as it is? (*Circle one number*)

EXTREMELY UN-INVOLVED 1 2 3 4 5 6 7 EXTREMELY INVOLVED

6. How involved are your community organizations in thinking about whether your community desires to change or remain as it is? (*Circle one number.*)

EXTREMELY UNINVOLVED 1 2 3 4 5 6 7 EXTREMELY INVOLVED

7. How concerned is your community about planning for the future, irrespective of whether it intends to change or remain the same? (*Circle one number:*)

EXTREMELY UNCONCERNED 1 2 3 4 5 6 7 EXTREMELY CONCERNED

Section 12. A FEW QUESTIONS ABOUT YOURSELF

Finally, in this last section, we would like to learn a little bit about you.

1. Where do you live in your community? (*Circle one letter.*)

- a. In town
- b. Outside town but within 5 miles of town
- c. Between 5 and 10 miles of town
- d. More than 10 miles from town

2. How long have you lived in this community?

_____ YEARS

3. What is your age?

_____ YEARS

4. Are you: (*Please circle one*)

Male Female

5. Which perspective in your community do you most closely represent? (*If you represent more than one perspective, check the one **category** below that most strongly influences your perspective*).

- _____ Elected official
- _____ Business community leader
- _____ Civic group leader
- _____ Environmental group leader
- _____ Educational leader
- _____ Retirement community leader
- _____ Health services leader
- _____ Other Community leader
- _____ Other _____

6. How would you rate yourself politically? (*Circle one number.*)

LIBERAL 1 2 3 4 5 6 7 CONSERVATIVE

7. What is your occupation? _____

PART 2

CASE-STUDIES OF TEN
RURAL COMMUNITIES
UNDERGOING CHANGE
IN THE INTERIOR AND
UPPER COLUMBIA
RIVER BASINS

Dr. Chuck Harris

Research Team:

Dr. Bill McLaughlin

Jean Haley

Chris Wall



EXECUTIVE SUMMARY

Introduction

The Interior Columbia River Basin Ecosystem Management Project has gathered data on the biological, physical, and social characteristics of the Interior and Upper Columbia River Basin ecosystems' with the goal of ecosystem-based strategies applying to resource management (EEMP 1994). This transition to ecosystem management has important implications for both natural and social systems. To better understand the social systems of the Inland Northwest, social science has been applied to survey and assess the current characteristics and conditions of all small rural communities in the basins (see, for example, Part 1 of this report). The community case-studies described in this volume examined a select group of ten of these communities -- ones that have experienced major changes.

The case-studies were conducted to provide important additional, in-depth information for the community assessment. In particular, a key use of the information gathered with this research was to help forecast the social impacts of resource-management policies and actions in the context of other socio-economic forces and trends influencing small, rural communities. A problem commonly faced by people carrying out social impact assessment is the uncertainty inherent in trying to predict future impacts of resource management decisions (Geisler 1993, Finsterbusch 1985). The historical experiences of communities in the region can provide insights into changes and possible responses to them that may result from actions related to the current transition to ecosystem-based management.

Research Methods

The research used the community self-assessment workbook that had been developed to assess the current conditions of small rural communities in the Interior and Upper Columbia River Basins; this “current assessment” workbook was designed to help currently active community members describe the characteristics of their communities and their aspirations for them: Workshops like those described in Part 1 of this report were conducted for residents to share information and insights and to work toward a consensus on their understanding of the current situation for their community.

To assess major changes in the community since 1980 and its responses to them, the “current assessment” workbook was modified for “retrospective assessments” of the ten case-study communities. The instructions and questions in the community self-assessment workbook were rewritten to ask participants to assess their community as it was just prior to the changes that took place, not as it is today. The workbook focused on the events viewed to be important for the community, such as a mine closure or a period of significant growth. Again, workshops like those described previously were conducted for residents to share information and insights and to work toward a consensus on their understanding of past changes affecting their community, its responses to the changes, and the impacts of those changes and responses.

The majority of responses in the case study communities could be characterized as organizational or group responses, where people-came together to try to solve the problem or get something done, or where an existing organizational structure (for example, government or clubs)

tried to manage the changes taking place. These efforts were directed toward benefiting the community as a whole, rather than only individuals. The organizational responses tended to fall into one of several different categories: economic development, grants and funding, infrastructure improvement, and planning and zoning activity.

Results

The communities selected for the case studies faced a number of different types of change. Some of the changes were gradual and cumulative, as in Salmon, Idaho, and Riggins, Idaho. They did not involve one specific event per se. Instead, a number of changes occurred all at the same time that combined to change the character of the community. Other changes, such as the mine closure in Kellogg, Idaho, and the mill closure in Burns, Oregon, were sudden and important enough by themselves to significantly change the community. In addition, the nature and cause of the specific changes differed across communities. Some changes occurred due to global economic factors, some due to changes in federal natural resource policy, and some because a community was discovered to be a good place to live.

In spite of differences in the magnitude and speed of community change, and the causes of the changes, the responses of the ten case study communities were fairly similar. These responses could be categorized as psychological responses, individual responses, and organizational responses. In five of the ten case study communities, the initial response of residents can be characterized as being psychological in nature. In Pomeroy, Washington, the initial response to the various changes taking place was frustration, resignation, and denial. In Kellogg, Idaho, the

mine closure created a state of shock in the community. Driggs, Idaho, was in disbelief and was slow to realize that changes were occurring. Much conflict surrounded the changes in Joseph, Oregon, but people eventually began to cope with the new situation. Bums, Oregon, felt that it had been defeated and had hit rock-bottom, losing hope for the future and adopting a “why try” attitude. In the remaining five case study communities -- Baker City, Oregon; Mattawa, Washington; Riggins, Idaho; Salmon, Idaho; and Whitefish, Montana -- no response of this type was reported by workshop participants.

Eight of the 10 communities (80%) studied with the case studies were in the upper one-third of communities in terms of having a high resilience (CRI) score. Of the ten “significant change” communities examined with in-depth case studies, half were among those currently in the high -resilience class, while another three were classified as moderately high in resilience; only two were rated much lower, in the moderately low resilience class. Only Driggs and Whitefish, communities that were reported to be amenity-based and experiencing rapid population growth, had relatively low resilience scores that placed them in the moderately low resilience class. Generally speaking, communities in the highly resilient category were the ones that seemed to be the most pro-active in creating their own future and expanding economic opportunities, while the other communities were less able or willing to do so.

Also, a comparison of the resilience scores and net increases in construct ratings between the retrospective and current workshops for the 10 case-study communities show a clear trend toward increased resilience that is related to larger net increases of construct ratings: a total of zero net increases of construct ratings characterized the five case-study communities with the

lower CRI scores, while a total of +16 net increases of construct ratings resulted for the other five with the higher CRI scores.

The results of the analysis of change in the ten case-study communities since 1990 also affirm that experiencing major change in the past can help prepare a community to better adapt to change in the future; these communities were selected specifically because they were reported to have undergone major changes, and the mean rating of change since 1990 for these communities was 5.1, well above the mean rating for low resilience communities of 3.5. Also, the majority (60.8%) of changes in the ratings for the constructs between the two independent panels of participants in the both the retrospective and current assessment workshops were increases as had been theorized. This finding supports the hypothesis that conditions for many of the community constructs had improved for many of the communities.

Conclusions

The changes affecting the case-study communities were often characterized by long-time residents as having originated outside the community -- for example, in the case of Burns, Oregon, and Riggins and Salmon, Idaho, the federal government; in the case of Kellogg, Idaho, a large minerals corporation. In cases where the federal government was viewed as being responsible, a great deal of animosity toward and mistrust of the government were expressed: In the cases where citizens identified that global economics or inadequate mill equipment were responsible, less animosity was expressed toward the corporate entities. Regardless of the source, the changes were generally viewed by retrospective workshop participants as negative for the

community. It should be noted that these views were not expressed as strongly by key informants in the current community assessments. In addition, it was often the accumulated impacts of a number of events, rather than a single event, that was viewed as the problem.

Regardless of the source or type of change, responses by the case study communities were fairly similar. Most of the organized responses by the communities involved some type of economic development: either attempts to bring in new industries, develop a new economic sector such as tourism, or maintain a traditional but struggling local industry. Most of the communities have come to view recreation and tourism development as a legitimate part of the local economy, but none want to become solely dependent on that sector of the economy. Communities obviously differed in the level of success they achieved through economic development efforts.

Another common response was the improvement or development of the local infrastructure of roads, utilities, and facilities. Updating the local infrastructure increased a community's attractiveness to new businesses and to tourists and recreationists, and it enhanced its quality of life for community residents. Many of the communities had engaged in some planning activities, but they had been only partially successful. Nonetheless, virtually all the communities felt that they were more prepared for the future than they had been previously. The consistency of these community responses suggests that, for the most part, communities did not respond differently to different types of change.

The case studies suggest two potential problems for the ability of small, rural communities to manage change in the future. The first involves the difficulty of a community maintaining a viable base of leaders. In many of the case-study communities, only a small, core group of active leaders was involved in community affairs, which is not that unusual for any situation or

organization. However, in times of significant change in which a number of aspects of life in the community are being affected, the potential for leader burn-out is great. Retrospective workshop participants mentioned this potential, and it also became evident in the course of setting up the retrospective workshops, when asking these people to participate. Since leadership is crucial to a community's ability to manage change, efforts are needed that keep it strong and active.

A second problem is the ability of communities to manage the growth that many of the case study communities were experiencing. While most of the communities noted that they had engaged in some planning, most said that more would be needed for the community to maintain the community qualities that local residents value the most. They also noted that the planning already carried out was not entirely successful. While planning activity is often viewed as an intrusion by government and counter to the emphasis on individuality found in most towns in the American West, it does provide a community with the opportunity to envision and work toward a new future. 'In the face of growth and an influx of new people and new ideas, planning that involves citizens may be the only way for a community to resolve differences in residents' desires. This fact was recognized by participants at both the retrospective and current assessment workshops.

The case study data suggest that active development of a community's leadership base and its pro-active implementation of plans for the future are not typical responses to change in small, rural communities. Perhaps the greatest concern expressed in the case studies was that the quality of life and other characteristics of the community had changed in a manner that the community was unable to control. Communities have changed in the past, and they will continue to do so in the future, and the desire by some rural communities to be left alone and remain as they have

always been will become increasingly problematic. Active leadership, a willingness to give up some individual control for the good of the community, and perhaps some financial and technical assistance from the outside could aid small, rural communities to direct changes in ways that suit them best and help them realize a future that is desirable but feasible.

INTRODUCTION

Over the last several decades, federal land management has been in a state of flux, with many of the assumptions that have guided land-management decisions in the past being reassessed (Brown and Harris 1992, Grumbine 1993, Wilkinson 1992). Until recently, resource management emphasized the maximization of commodity production on public lands and maintaining some form of stability in resource dependent communities. (Exactly what stability should mean, and whether it is an appropriate policy goal have been the subject of much debate; see LeMaster and Beuter 1989.) In recent years, the emphasis of resource-management agencies has shifted to concerns for resource stewardship and the interconnections among the various parts of natural systems; that focus reflects the assumption that entire ecosystems, rather than political or agency administrative boundaries (designated national forests and ranger districts, for example), are the proper level of scale for making resource-management decisions (Clark et. al. 1991; Caldwell 1970, cited in Grumbine 1994).

Defining “ecosystem management,” and determining what type of management framework is best suited for maintaining ecosystem sustainability, have proven difficult (Bormann et al 1994). However, Grumbine (1994) has identified “ten dominant themes of ecosystem management” based on a review of 33 different papers and books. Among these are two themes directly related to this study:

9. Humans Embedded in Nature. People cannot be separated from nature. Humans are fundamental influences on ecological patterns and processes and are in turn affected by them. **10. Values.** Regardless of the role of scientific knowledge, human values play a dominant role in ecosystem management goals. (p. 3 1)

Grumbine later describes five specific goals for ecosystem management that recur in the literature:

1. To maintain viable populations of all native species *in situ*.
2. To represent, within protected areas, all native ecosystem types across their natural range of variation.
3. To maintain evolutionary and ecological processes (i.e., disturbance regimes, hydrological processes, nutrient cycles, etc.).
4. To manage over periods of time long enough to maintain the evolutionary potential of species and ecosystems.
5. To accommodate human use and occupancy within these constraints. (p.31)

The fifth goal focuses on the role of people in ecosystems. As Krannich et. al. (1994) stress, individuals, families, stakeholder groups and other various social groups obviously are a necessary and integral part of ecosystems and their management.

The Interior Columbia River Basin Ecosystem Management Project has gathered data on the biological, physical, and social characteristics of the Interior and Upper Columbia River Basin ecosystems with the goal of ecosystem-based strategies applying to resource management (EEMP 1994). This transition to ecosystem management has important implications for both natural and social systems. To better understand the social systems of the Inland Northwest, social science has been applied to survey and assess the current characteristics and conditions of all small rural communities in the basins (see, for example, Part 1 of this report). The community case-studies described in this volume examined a select group of these communities -- ones that have experienced major changes.¹

¹ This volume of the report is based on research carried out by Research Assistants Jean Haley and Chris Wall, and on a draft report they authored; for more detail on the potential policy implications of these community case-studies, see Wall 1995.

The case-studies were conducted to provide important additional, in-depth information for the community assessment. In particular, a key use of the information gathered with this research was to help forecast the social impacts of resource-management policies and actions in the context of other socio-economic forces and trends influencing small, rural communities. A problem commonly faced by people carrying out social impact assessment is the uncertainty inherent in trying to predict future impacts of resource management decisions (Geisler 1993, Finsterbusch 1985). The historical experiences of communities in the region can provide insights into changes and possible responses to them that may result from actions related to the current transition to ecosystem-based management.

ABOUT COMMUNITY CHANGE

Although it is a truism that human communities constantly change (Moore 1963), current understandings of the actual structures and processes of community are subject to debate. Even the very concept of community has provided problems for researchers and theorists.

The Community as a Unit of Analysis

Community is a multi-dimensional concept that has proven to be difficult to define, and numerous operational definitions exist in the research literature (Wilkinson 1986, Machlis and Force 1988, Hillery 1955). Some researchers have gone so far as to assert that “community” no longer exists, that the global village has eliminated the significance of the community (Warren 1972), or that the community has been superseded by smaller units such as neighborhoods (Wellman 1979). In spite of these conceptualizations, it is apparent that people live, work, and

play in more or less discrete spheres that they would identify as communities Wilkinson (1986, p. 5) states that “the community, delineated as having three essential elements, persists despite the importance of larger and smaller structures in social life, and this phenomenon continues to influence social well-being.” The three elements described by Wilkinson (1986), and the school of theoretical thought from which they arise, are as follows: The presence of people who are meeting their daily needs in a particular geographic area (human ecological theory), some kind of social and/or economic structure (structural-functionalism), and some form of cooperative actions designed to meet the needs of people and increase community solidarity and identity (community action theory).

Human ecology emphasizes environmental factors (e.g., biology, geology, physics) in explaining the development and location of communities. (Stoneall 1983, Poplin 1979, Hawley 1950). This school of thought, which likens human communities to animal and plant communities, asserts that environment, competition, and survival dictate how and where communities form. Community institutions develop to facilitate the meeting of subsistence needs (Stoneall 1983). Human ecology has been criticized for its determinism, and for not addressing the social aspects of human, as opposed to plant or animal, communities (Poplin 1979).

Structural functionalism and social system theory emphasize cooperation and social cohesiveness for explaining the presence and operation of communities (Poplin 1979, Stoneall 1983, Warren 1972). (Social system theory, as described by Warren, is similar to structural functionalism, and the two were considered to be subsumed under the broader theory here.) The various structures in a community, including groups, organizations, governmental bodies, and facilities, arise as a means of cooperatively meeting the needs of the community’s residents.

According to structural functionalism, all community structures are dependent on one another for the maintenance of community equilibrium, and the central parts of the community are institutions that meet collective needs (Stoneall 1983). Structural functionalism has been criticized for overly emphasizing the role of cooperation in communities, for its mechanistic model of community functioning, and for minimizing the conflict that invariably exists in communities (Poplin 1979).

Community action theory emphasizes the importance of community-level actions, as well as community leadership, for adequately understanding community functioning (Poplin 1979, Wilkinson 1970). Community action theory focuses on community decision-making processes (e.g., who makes decisions affecting the community and how they are made) and the impacts of community actions on community identity and solidarity.

These theories, while providing broad perspectives on how small, rural communities function, do not provide detailed insights into how communities respond to change in general or changes in natural resource policy in particular. To gain these insights, it is useful to review the literature in community and social change.

Theoretical Framework

Much of the literature on the topic of community change defines change as an outcome caused by some kind of larger societal process. Warren described the “Great Change” in American communities, which he used to refer to the “overcommercialized, overdirected, overmilitarized, and overmaterialistic” aspects of modern American life (Warren 1972, p. 342). This change parallels the early concepts of *Gemeinschaft* and *Gesellschaft*, which roughly translate to community and society (Bender 1978): *Gemeinschaft*, which is characterized by family, kinship

groups, friendship networks, and neighborhoods, is transformed into *Gesellschaft*, which is characterized by “competition and impersonality” (p. 17). This transformation was theorized to occur due to the spread of capitalism and urbanization. In his related “modernization theory,” Parsons proposed that communities evolve from traditional to modern ones, with the modern community characterized by increased social complexity and a more technological orientation’ (Bender 1978).

These evolutionary theories of community change suggest an important premise for a theoretical model. Each of the above theories deals with changes occurring in society as a whole. Society is constantly evolving as the result of national and global forces that can have unintended and unforeseen effects at the community level (Poplin 1979, Moore 1963). Warren refers to “crescive” change as change that occurs regardless of people’s attempt to direct it in a particular way (Warren 1972). These crescive changes can affect demographics, economics, and social relations and, in turn, small rural communities in major ways. ’

In addition to, and related to, this ongoing process of societal change are ongoing changes at the community level. These community-level processes “include the basic social processes, such as cooperation, competition, and conflict, and the ecological processes of centralization–decentralization, invasion, succession, symbiosis, and segregation” that reflects a human ecological perspective (Warren 1972, p. 308). These types of change may warrant some kind of response or action by the community, but it is not necessarily, or even usually, the case. In some cases, members of the community choose to deny that a problem exists, or they ignore it, hoping it will resolve itself. In others, community residents decide to act to solve a perceived problem, or simply to accomplish a task. Poplin (1979) terms these latter responses “initiated community

actions,” in contrast to “spontaneous community actions,” such as riots and protests, and “routinized community actions,” such as festivals, fairs, and other annual community events.

The impetus for initiated community actions can come from a variety of sources. The perceived need to act can arise from events outside the community, such as a change in forest policy that reduces the flow of timber, or from events internal to the community, such as an important local business closing when the owner retires. Events that trigger community action can be sudden, such as the closing of a mine, or gradual, such as the transition from an extractive industry community to a retirement or bedroom community.

Events, in turn, have impacts on the community. An impact is some kind of alteration in community structure or process within a given temporal context. Impacts can be either positive or negative, and they can result from a community’s responses to changes, as well as from the changes themselves. A key determinant of the success of a community’s efforts to minimize negative impacts (or to maximize positive ones) is the capacity of the town’s leadership to take appropriate, effective action, including recognizing the changes that are occurring in their community and then confronting the challenges and problems those changes present. Successful responses also depend on the ability of local groups to articulate and achieve goals and solve change-based problems (Poplin 1979, Warren 1972). It has been suggested that the more community leaders work together on problem solving and goal attainment, the greater the likelihood of positive results (O’Brien et al. 1991). If so, communities that have solved problems and achieved goals in the past are in a better position, *vis a vis* other communities without problem-solving experience, to do so in the future. Although some changes impact communities

that they are powerless to control, the negative impacts of many problems can be minimized by effective, appropriate action.

A Model of Community Change

Based on the above literature, a model of community change (see Figure 1) was developed for the research. That model provides a framework for examining the processes through which a community responds to various influences and through which these responses facilitate or mitigate impacts to the community. The components of the model are drawn broadly by design, rather than specifying in advance or in detail the events and responses examined. An event such as the closure of an important local business may be purely local in nature, or it may result from regional or national economic conditions; and this distinction may ultimately be irrelevant, or it may prove to be an important variable in determining how communities respond.

The model focuses on the process of community change. Events continuously occur at both the societal and community levels, but not all of these events will cause a community to perceive a problem or an opportunity that needs to be addressed. These events are included in the “Ongoing Processes of Societal and Community Change” box in the model, which represents the larger social forces affecting communities and resulting in change, as well as changes originating within the community. Those changes and events that cause the community to perceive a problem or opportunity are represented by the “Internal Events” and “External Events” boxes, which recognize the different loci in which change originates; the “Mixed Events” box is a recognition that some events are a true mix in their sources. The realization by a community of a problem that needs to be addressed, or an opportunity to be taken advantage of, is represented by the

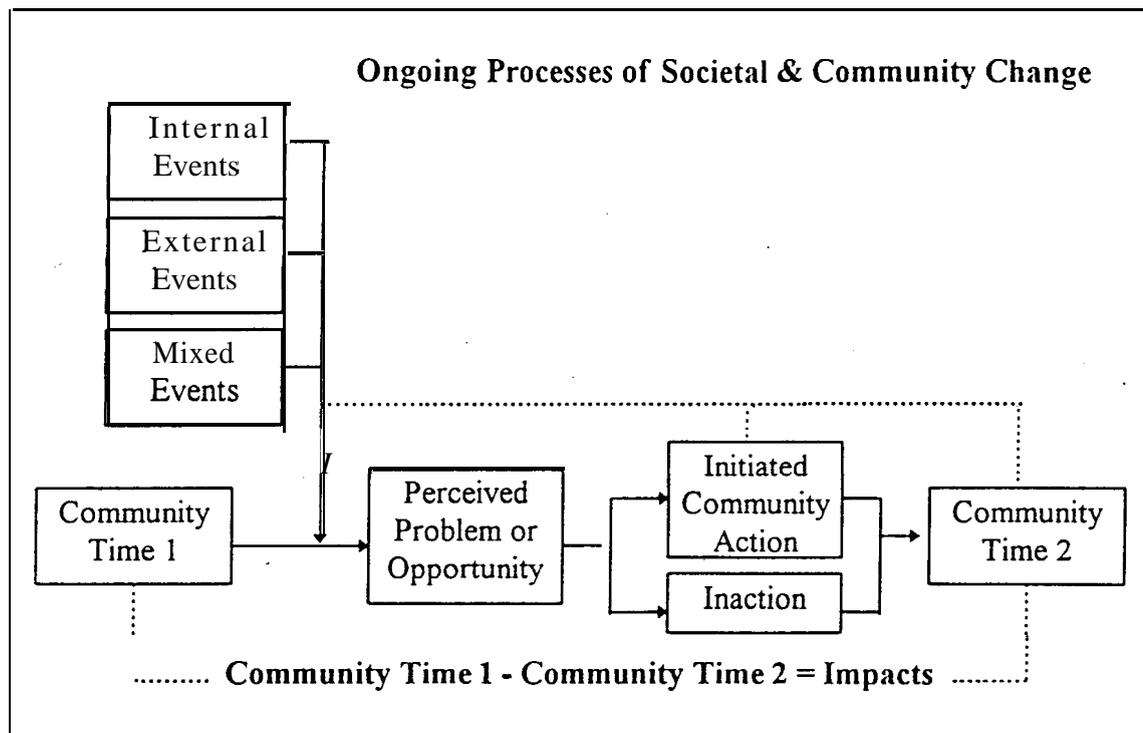
“Perceived Problem/Opportunity” box. The community action literature asserts that the recognition of a problem is the necessary first step to the process of taking action (Poplin 1979). After identifying a problem or opportunity, the community can either attempt to take some kind of appropriate action, or do nothing, as represented by the “Initiated Community Action” and “Inaction” boxes. The outcomes resulting from the specific actions undertaken by the community, (or its lack of action) also can influence later community perceptions and actions, or the outcomes can directly change a community’s characteristics and conditions, as measured at time 2. The cyclical nature of the process is represented by the dotted lines, which indicate the relationships among decision outcomes, actions, and influences on the community. Changes in a community’s characteristics and conditions from Time 1 to Time 2 represent the cumulative impacts of events affecting the community and its responses to them.

Research Questions

Using this model as a starting point, community case-studies were conducted to gather more detailed knowledge about how small, rural communities in the Interior and Upper Columbia River Basin have responded to local and societal changes in the past. The study’s research questions are based on that model of community change:

1. What are the events that cause a small, rural community to perceive a problem or an opportunity?
2. What happens as a community perceives that a problem or opportunity exists? What is the nature of the process of this perception; who is involved?

Figure 1. A Model of Community Change.



Processes of Societal Change: The larger environment of demographic, economic, policy, and other changes that occur constantly at state, national, and international levels, such as changes in composition of the population and changes in international economic markets.

Processes of Community Change: A community constantly changes. Some changes involve cyclical and predictable events, such as elections and business cycles, while other changes are more unusual and unexpected, such as corporate layoffs or a court challenge to timber sales that reduces a town's timber supplies. These changes may affect a community's ability to recognize a problem or opportunity and take appropriate action.

Event: Events are happenings that can be sudden and singular, such as the closing of a mill or mine, or ones that are gradual and cumulative, such as the slow transition to a retirement or bedroom community; they cause the community to perceive that there is a problem to be solved, or an opportunity to take advantage of

Internal Events: Events that are completely internal to a community are due to actions, decisions, or phenomena that occur in the community. An example would be the closing of a major local business due to the owner retiring. The happening is clearly unrelated to forces or influences outside the community.

External Events: Events whose origin are completely external to a community, such as the decision of a corporate board in a distant city to close a local mill. The event is due to actions,

decisions, or phenomena outside the community, and it is unrelated to happenings or influences inside the community.

Mixed Events: Events whose source is both internal and external to the community, such as growth in population due to in-migration of retirees; this change is due to larger social and demographic forces, but may be related to community characteristics, such as a pool of retirees already residing in a community and who persuade friends or relatives to move there. In many such instances, second or third order effects are important. In other cases, a gradual buildup of external and internal influences will eventually reach a threshold and cause a community to perceive a problem or opportunity. This box acknowledges the complexity of communities in transition.

Community Time 1: The description of the community in terms of its characteristics and conditions at an initial point in time, measured by selected variables included in a “retrospective” community-assessment workbook and U.S. Census data. These variables include community attachment, natural resource dependence, economic diversity, housing, infrastructure, population, poverty, and sectorial employment change.

Perceived Problem/Opportunity: The point at which a community recognizes that there is a problem that needs to be addressed, or an opportunity that the community should take advantage of. This construct recognizes that some people’s problems will be other people’s opportunities. Initial problems or opportunities can be perceived by individuals, civic organizations, or the local government.

Initiated Community Action: The point at which a community makes the decision to take some kind of action in response to the perceived problem or opportunity. The action might be the formation of an economic development council in response to a mill closure, or planning and zoning activity in response to significant local growth. These actions are normally processes, rather than singular events, and the course of an action may last several years. The addition of information after a problem or opportunity is first perceived can affect later perceptions of the problem or opportunity, as well as the actions that are eventually taken.

Inaction: The failure of a community to take action to solve a problem or respond to an opportunity. Inaction needs to be distinguished from the failure of a community to recognize that a problem or opportunity exists.

Community Time 2: The description of the community in terms of its characteristics and conditions at a point in time after Time 1; they are measured by the same variables as those for Time 1, as included in a “current” community-assessment workbook and U.S. Census data.

Impacts: The cumulative difference in the community characteristics and conditions that are being measured for Community Time 1 and Community Time 2. Impacts can be positive, negative, or neutral.

3. What happens as a community moves from perception of the problem/opportunity to acting or not acting? What is the historical experience of particular communities as they move from the perception of a problem or opportunity and initiate action or inaction?
4. If the community chooses to take action, what are the specifics of the actions taken and the key actors? Why do some communities act or not act?
5. What were the community characteristics and conditions before and after the community change process, and what were the actual and/or perceived impacts to the community?
6. What are the variables (community characteristics and conditions), patterns among variables, and the relative importance of variables that a community perceives to be related to the community change process?
7. How does the community change process compare among communities that experience similar events but differ in characteristics and conditions?
8. Is the community change model an accurate representation of the community change process? How might it be refined and improved?

RESEARCH METHODS

Research Design

The research methods for the study included both qualitative and quantitative approaches. A qualitative research style is implicit in the methods that were used to understand in greater depth how communities perceive and interpret their experiences in the world. Analysis of narration from interviews of individuals who were living in the communities at the time of change is an important source of knowledge about these perceptions and interpretations (Feldman 1995).

The research design was kept flexible to allow researchers in the field to “respond to and make the most out of data relevant to situations that may arise while in the field” (Strauss and Corbin 1990, p. 178). While “qualitative investigators tend . . . to describe the unfolding of social processes...social structures...are often the focus of quantitative researchers” (p. 10, Van Maanen 1983). Focus on both processes and structures requires both qualitative and quantitative methods that are combined in a complementary way to “capture a more complete, *holistic*, and contextual portrayal of the unit(s) under study” (Jick 1983, p. 138). Sieber (1973) notes that this combination will “contribute . . . to the validation of the results, the interpretation of the statistical relationships, and the clarification of puzzling findings” (cited in Jick 1983, p. 139).

The research design for this study was comparative, or multiple, case studies. A case study is “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used” (Yin 1989, p. 23). Critical objectives of this design

were to uncover key variables of interest and ensure methods of triangulation that would help corroborate, elaborate, and clarify the concepts and relationships being examined.

Community Selection

Cases for the study were chosen from the total of 387 small rural communities with a population under 10,000 in the study area comprised of the Interior and Upper Columbia River Basins. A process was developed to identify which of these communities experienced major change since 1980.

The first step in the case selection process was to contact a variety of people who work with communities in the study area and, it was hoped, would have insights into suitable study communities. They included agricultural extension agents, economic development personnel, and federal agency (i.e., U.S. Forest Service and Bureau of Land Management) personnel. In cases where individuals were unable to provide us with the information sought, they were asked to recommend people who might be able to do so.

The people contacted were asked a number of questions designed to identify communities that have been forced to manage change of one kind or another (see Appendix A). Other questions addressed the types of community responses as well as the overall impacts on the community. These initial phone contacts yielded the names of approximately 90 communities that had undergone significant change; these communities were termed *significant change communities*.

A number of the communities mentioned were located near urban areas such as Boise and Spokane. It was felt that these communities were special cases, since they were so closely tied to

events taking place in urban population centers. They were dropped from the sample frame, leaving approximately 80 communities.

In addition, changes in population figures for communities were considered. Communities whose population had changed more than 20 percent between 1980 and 1995 were added to this list of communities. Again, communities close to urban areas were removed from further consideration. The final sample frame totaled approximately 145 communities.

City clerks of the identified communities were contacted by telephone and asked to identify the resident who would be most knowledgeable of the changes that had taken place and the community's attempts to manage those changes. These people were then contacted and surveyed: they were asked questions about their community to verify and elaborate on the data previously collected and to reveal information not obtained from the original contact (see Appendix B). The survey also asked about the changes the community had experienced, the responses of the community, and the impacts to the community.

It was impossible to contact all of the knowledgeable residents prior to selecting the case-study communities. Most small communities have part-time officials, and in some cases weeks passed before messages were answered, calls returned, and contacts established. Representatives of approximately 80 communities were surveyed following this process.

Several criteria were used to select case-study communities from the larger population of significant change communities. First, the research process was designed to examine changes in a variety of different kinds of communities. These differences were assessed from the information gathered about the community in the phone survey, such as whether it was a timber, mining, agricultural/ranching, tourism/amenities, or mixed-economy community. Communities also were

selected representing a range of population sizes from a low of approximately 500 people (Riggins, Idaho) to a high population of approximately 9,500 (Baker City, Oregon). Finally, communities were selected to ensure a wide geographic distribution to account for regional variations.

The ten communities selected for the case studies included:

1. Baker City, Oregon - mixed economy, large population
2. Burns, Oregon - timber/government economy,
3. Driggs, Idaho - agriculture (ranching) economy
4. Joseph, Oregon - mixed economy, medium-small population
5. Kellogg, Idaho - mining economy
6. Mattawa, Washington - agriculture (irrigated) economy
7. Pomeroy, Washington - agriculture (dryland) economy
8. Riggins, Idaho - mixed economy, small population
9. Salmon, Idaho - mixed economy, medium-large population
10. Whitefish, Montana - tourism/amenities economy

Current and Retrospective Community Assessments

The research used the community self-assessment workbook that had been developed to assess the current conditions of small rural communities in the Interior and Upper Columbia River Basins; this “current assessment” workbook was designed to help currently active community members describe the characteristics of their communities and their aspirations for them.

Following the process described in Part I, each of the participants in the assessment was asked to fill out the community self-assessment workbook (which took about an hour or so to complete). The purpose of the workbook was to rate 12 “critical variables” about their community, including:

- Attractiveness of the community itself
- Attractiveness of the region surrounding the community
- Community Attachment (personal attachment to the community)
- Community Cohesiveness (“sense of community”)
- Adequacy of Community Services
- Community Autonomy
- Economic Diversity
- Resource Dependence
- The Community’s ability to attract business
- The Quality of Life
- The Strength of Community Leadership
- The Effectiveness of the Community’s Government
- The Community’s Preparedness for the Future (whether they wanted it to change or remain largely as it was).

Then, the representatives attended a two-hour community workshop to discuss the answers they gave individually in their workbooks. After sharing their ideas and information, they were asked to vote as a community (of eight) on the 12 critical variables.

The goal of the workshops was to bring together a focus group representing the diversity of opinion within each community and explore the depth and complexity of views of the community. Comparisons of the results across all 198 self-assessment communities have been used to better describe the communities in the region, and the results for the ten case-studies have been compared with the findings of the retrospective assessments of those communities.

To assess major changes in the community since 1980 and its responses to them, the “current assessment” workbook was modified for “retrospective assessments” of the ten case-study communities. The instructions and questions in the community self-assessment workbook were rewritten to ask participants to assess their community as it was just prior to the changes that took place, not as it is today. The workbook focused on the events viewed to be important for the community, such as a mine closure or a period of significant growth. People’s recollections of events often change as the years pass, and temporal distortions of events were a concern for this retrospective assessment (Krannich et. al. 1994). However, the format of the community workshops, where information and recollections were shared among participants to provide a picture of the shared reality of the situation before ratings were finalized, was designed to help minimize these kinds of distortions.

To gather the names of potential community informants and willing participants for the retrospective community assessment workshop, non-probabilistic snowball sampling was utilized (Branch et al. 1982). The city or town clerk, an elected official (preferably the mayor), the Chamber of Commerce executive or administrative secretary, an officer in a major civic group, and the superintendent of schools or a principal of a school in the town were asked to provide the names of people who resided in the community during the period in which the community was

affected by the events of interest. Participants were solicited who were cognizant of the events taking place, who were active in the community, and who would likely have insights into the community response process. In addition to these community residents, a federal agency person, typically a planner or other person who works with the communities, was contacted for an outside opinion of the important players in the community. As was the case with the current community assessments, the intent was to involve people having on specific roles or perspectives, including:

1. Elected official
2. Civic group leader
3. Economic sector leader
4. Schools or health care leader
5. Active newcomer
6. Historic preservation or environmental group leader
7. Conservative
8. Liberal

The intent in using these leadership categories was to get a diversity of ideas and opinions at the workshop. Different individuals and groups may respond differently to influences which bring about change (Machlis and Force 1988), and the variety of responses that these long-term community residents had experienced could be examined (Branch et. al. 1982).

Once a list of possible participants was generated from the different community sectors, it was examined for names that appeared on multiple lists. People whose names appeared consistently were contacted and asked to participate. It was believed that if a person's name was mentioned frequently, they were clearly important players. Other people were invited to

participate based on the number of times they were mentioned, and on the categories of leadership types that still needed to be filled.

Because the participants were asked to recollect specific times and events of the past, the retrospective workshop required that modifications be made to the current assessment workshop. As with the current assessments, participants were asked to come to the workshop with their workbooks already completed. The workshop started with a discussion of change in the community -- in particular the event that was the focus of the modified workbook. All insights and comments were written down on large sheets of paper. This initial discussion started participants thinking about the various changes that had taken place in their communities.

After this discussion of change, the workshop focused on the retrospective workbook. Each main construct was introduced, and the participants were asked to write their individual ratings on a colored dot, which was placed along the top side of a scale with seven intervals and anchor words at the ends. (The scale was pre-written on a large sheet of paper.) Rather than go immediately into a discussion of the individual ratings, time was taken to account for recollection and story telling. Newspaper searches provided information, particularly headlines from the time period being discussed, that was useful for this process. A discussion of the individual ratings then took place, and comments were recorded directly on the construct rating sheet.

The purpose of the recollection and discussion was to allow people to share their insights and knowledge into the events that had taken place in the past. After the recollection period and discussion of the individual ratings, the participants were asked to make a second rating, and the dots were placed along the bottom side of the scale. Major changes in the pattern of ratings, or the fact that no one changed their ratings, were commented upon. It was emphasized that

participants did not need to come to consensus, and that the purpose of the discussion and re-rating was to share knowledge. This process continued through each of the 12 main constructs in the retrospective workbook.

Next, the workshop turned to a more open-ended format, where participants were asked to give their responses to the following two questions: How did the community respond to the changes taking place? What did the changes mean to the community? Responses were written down on large sheets of paper, and researchers followed up on comments as needed to fully understand the responses, or to expand on any topics that came up in the discussion. As with the construct ratings, participants were free to interact and share insights and knowledge.

The next portion of the workshop was designed to validate the constructs used in the current and retrospective assessment workbooks. Participants were asked to comment on whether the constructs used were accurate descriptors as far as their communities were concerned. None of the participants at any of the meetings stated that the constructs were invalid, inappropriate, or too broadly drawn to be useful. Participants were then asked to comment on any constructs that they felt were missing, at least in the context of their own community. (Although some constructs were listed, all represented refinements of constructs that were used in the workbooks, rather than new constructs that had been missed during the development of the instrument.)

The final portion of the workshop was designed to determine the constructs that were most important, and those least important, to how the case-study communities had managed the various changes that had occurred. Participants were first asked to select the three constructs that had been most important for determining how their community managed change. They were

instructed that they were free to choose any of the constructs, including those that they had added in the previous portion of the workshop. Participants were also asked to select the three constructs that were least important for determining how their community managed change. It is worth noting that in all communities, people did not feel comfortable in rating constructs as least important; participants made these ratings as requested, but they tended to do so reluctantly.

Attempts were made to tape-record all of the retrospective workshops. Technical difficulties resulted in four non-usable recordings, and one community was unwilling to have the workshop recorded. This left a total of five usable workshop recordings.

RESULTS

BAKER CITY, OREGON (mixed economy, large population)

The primary changes that Baker City has been experiencing all hinge on and revolve around economic development (Figure 1, Box 2). To create more employment for community residents, the community agreed to have a prison built there. They have also been successful in attracting new business in the timber industries (Marvin Wood Products and S&R Manufacturing) (Boxes 3, 4, 5). Also related to the timber industry, they have modernized the mill (Box 6).

The main event in Baker City, however, has been the opening of the National Historic Oregon Trail Interpretive Center in May 1992. A partnership among the Bureau of Land Management, the State of Oregon, and local organizations and individuals helped bring this about (Boxes 7, 8). These agencies and individuals worked together to conceive, plan, and implement an Oregon Trail project to develop the National Historic Oregon Trail Interpretive Center. The overall attitude toward tourism has changed, and tourism is now being actively promoted throughout the county (Boxes 9, 10). The community has also been active in the historical remodeling of downtown, and they organized a “town clean-up” where the residents come out to literally clean up the town (Boxes 11, 12). They have also fixed and paved streets, put in a traffic light, built hotels to accommodate tourists, put up signs on the freeway and in town to direct people to the interpretive center, and they have upgraded Campbell Street, which is the street closest to the freeway (Boxes 13 through 17).

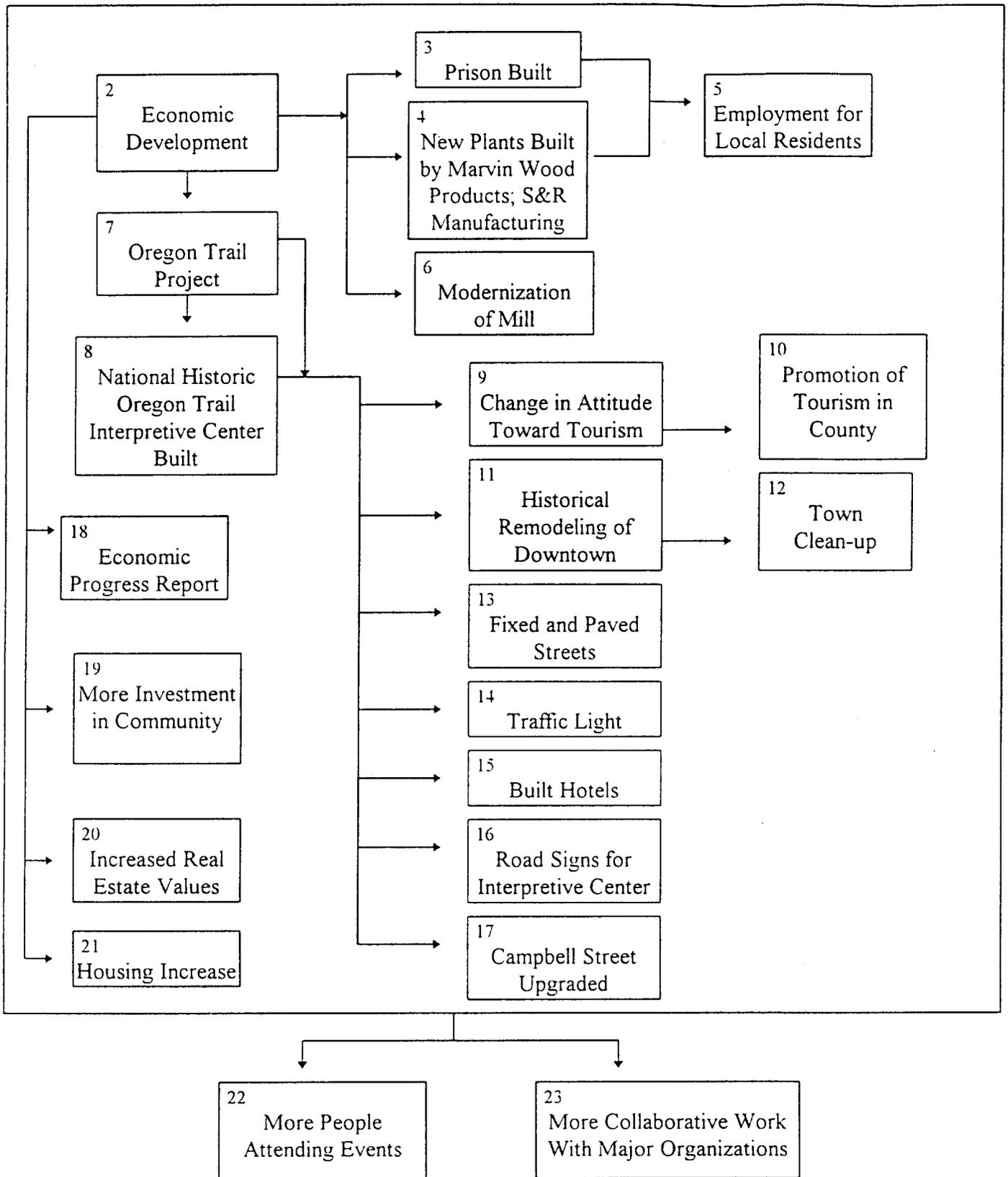


Figure 1. Community leaders' perceptions of change in Baker City, Oregon; 1986-1995.

Linked to all of the above, and primarily to promote the active economic development in the community, economic progress report was written. This report details the economic gains the community has experienced (Box 18). There has also been more investment in the community (Box 19). Real estate has become more valuable, and they have seen an increase in the number of houses being built in the community (Boxes 20, 21).

As a result of everything contained in Box 1, there are now more people attending community events, and more collaborative work is being done with major organizations at the community, state and federal levels (Boxes 22, 23).

Participants at both the retrospective and current assessment workshops were very positive about, and proud of, the strides the community has taken to develop the local economy and move toward tourism development. There is, however, an awareness that the growth that may follow these successful economic development efforts has the potential to destroy what has been described as a friendly, rural atmosphere. Current assessment workshop participants mentioned the need to hire a full-time planner, and to make the planning commission more proactive. One participant stated that “I would like to make sure our leaders develop infrastructure and public services parallel to developing the **need** for these services by recruitment of businesses and citizenry” and that “Hopefully the change will bring good things for our community because community leaders had vision and planned well.” Clearly stated here is the concern that growth and economic success not ruin those aspects of the community that were most worth working to maintain in the first place.

BURNS, OREGON (timber / government economy)

Major events that community leaders in Burns, Oregon reported as affecting their town included policy mandates from congress and NEPA (Figure 2, Box 2). This change is related to what they perceive as changes in the federal agencies, a reduction in timber harvest, and an increase in timber prices (Boxes 3, 4). They see all of these things as broken promises by the federal agencies, and they pointed out the inability of these agencies to work with the local communities. They also stated that the agencies are not adaptable to change, whereas the communities are, as evidenced by the constant need to adapt to climate changes (e.g., droughts, floods, etc.). As a result, there is an overall “lack of trust” in the federal government in this community (Box 5). In 1980 the Hines lumber mill closed, and later they “scrapped the plywood mill” (Box 6). This is related to the Martin exchange, which they saw as a bad union contract, and is coupled with outdated mill equipment (Boxes 7, 8).

After the mill closure in 1981, Burns “hit rock bottom,” they felt “defeated,” and as one participant stated it, there was “no hope, why try?” This feeling lasted about a year. Some individuals came forward at this time to help pull the community up. The community opened a road so that a small mill could get started (Boxes 9, 10). The local business community became more active on natural resource issues, because “they now understand the importance of them.” For example, the Chamber of Commerce has taken stands on environmental issues and they are going to more hearings (Box 11). There was an attempt to develop an industrial park in the community, but this attempt has failed twice (Box 12). They have formed organizations to look at the future, but splinter groups have formed that the workshop participants think need to work

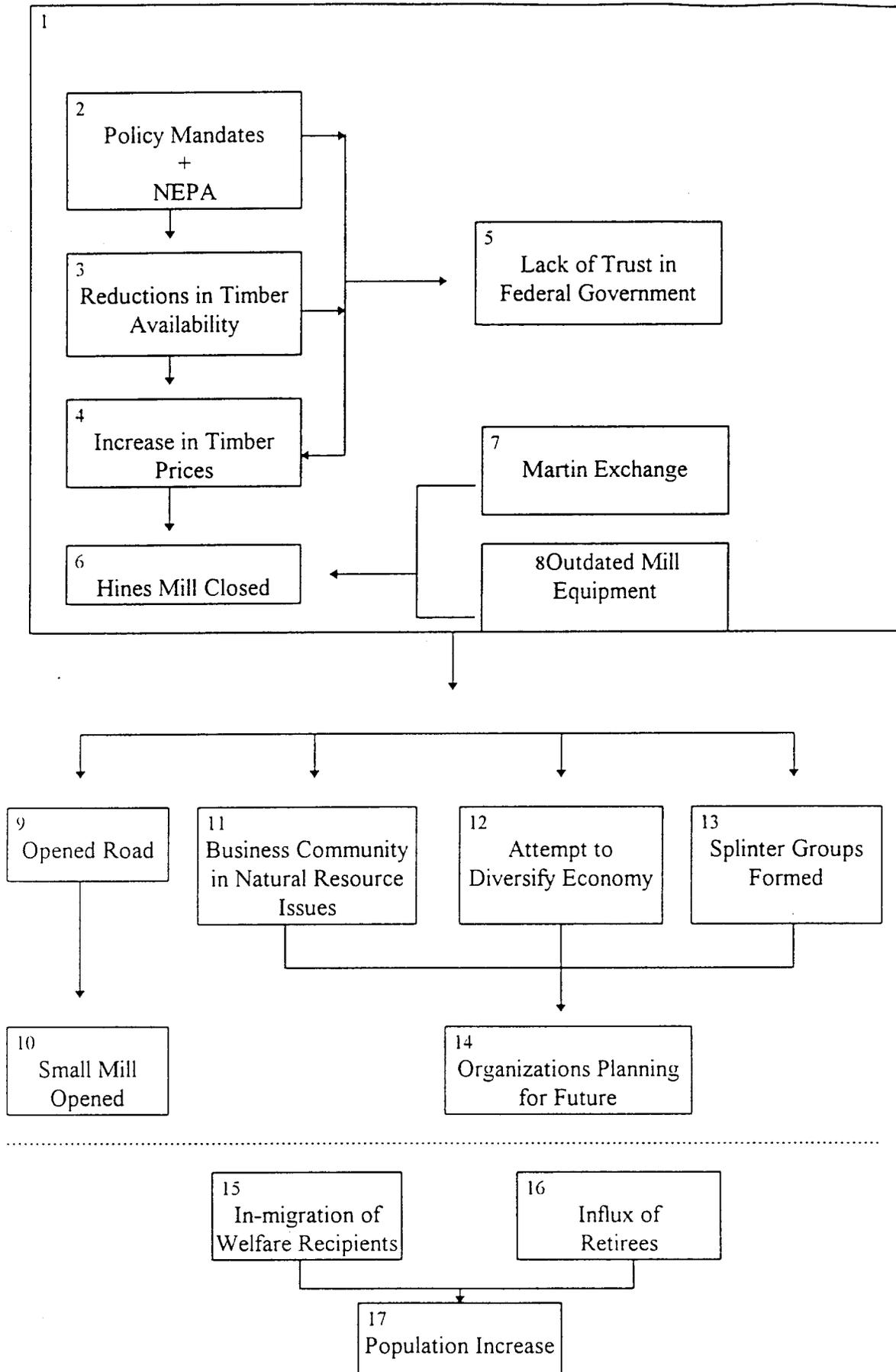


Figure 2. Community leaders' perceptions of change in Burns, Oregon; 1976-1995.

together more (Boxes 13, 14). There has been a recent increase in population in Burns. This is due to the in-migration of welfare recipients and senior citizens (Boxes 15 through 17)..

Burns has survived difficult times in the past, and the community is proud and confident of its ability to do so in the future. Attempts are currently underway to diversify the local economy, and planning is underway for a high desert events and interpretive center for visitors to the area. Current assessment workshop participants discussed the need to improve the community infrastructure, including the telecommunications infrastructure, in order to be more attractive as an industrial development site. Participants were concerned, however, with the decline in resource availability that has continued to impact the local natural resource industries. Workshop participants felt that federal regulations are strangling the local timber industry, and, as a result, changing the character and quality of life of the community. Growth and development has the ability to change the character of the community even further, and participants noted that it will be important to strike a balance between any growth that may occur in the future and the changes in quality of life that growth might cause).

DRIGGS, IDAHO (agriculture / ranching economy)

The region surrounding Driggs has traditionally been an agricultural and ranching area. These industries have been in a state of gradual decline (Figure 3, Box 1). Agricultural and ranch land has undergone at least some amount of ranchette subdivision, and jobs in these industries have been decreasing (Box 2). In responding to this change, the community has instituted an economic development council to investigate economic options for Driggs and the region (Box 3). Since the early 1980's, Driggs has undergone a period of steady population growth (Box

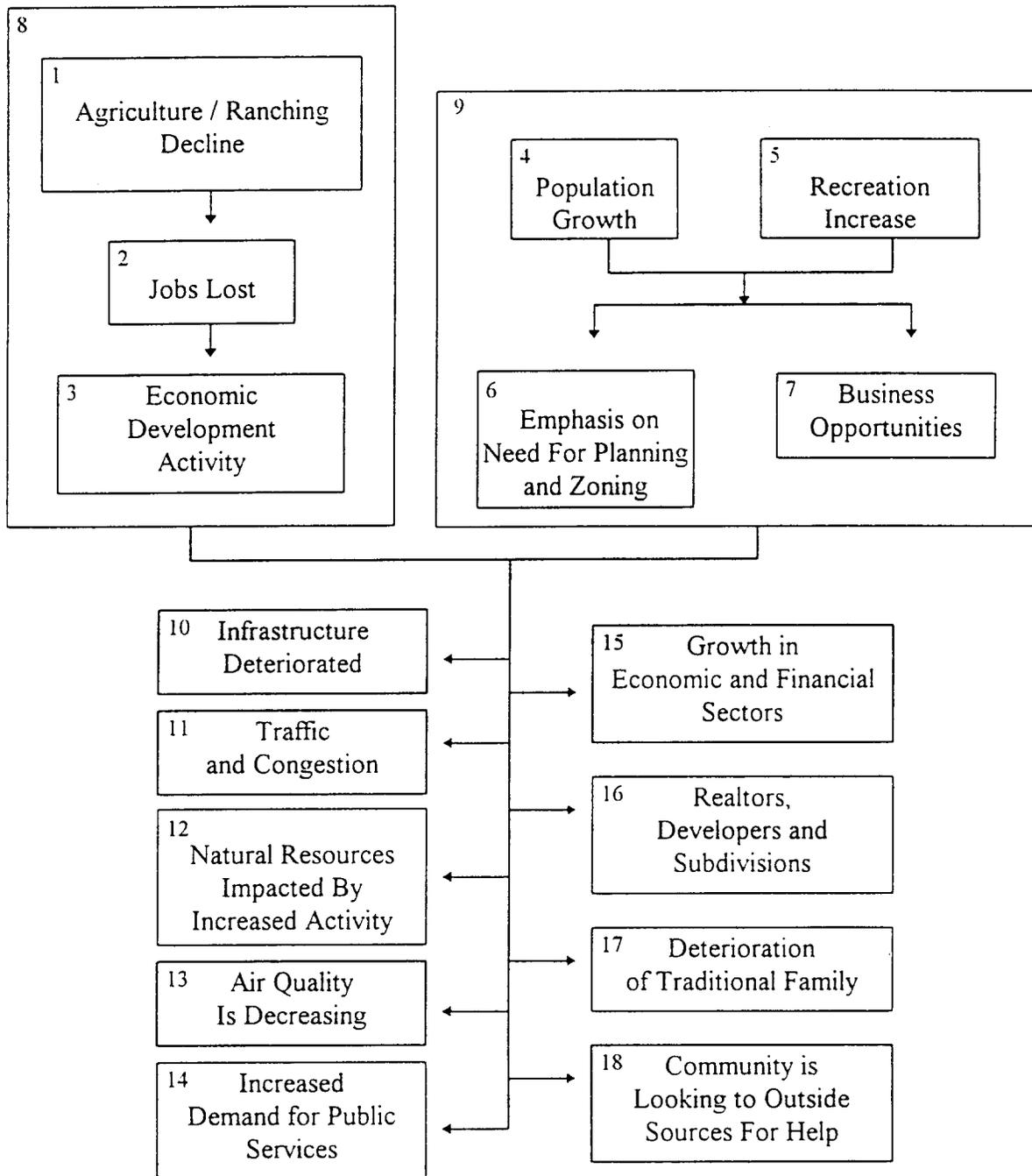


Figure 3. Community leaders' perception of change in Driggs, Idaho; 1980-1995.

4). At the same time, recreational use of the region was on the increase (Box 5). The close proximity of Driggs to Yellowstone and Grand Teton National Parks, several wilderness areas, and several National Forests, makes the Teton Valley a desirable place to live and play. This growth has brought about a realization by the community that there is a need for planning and zoning (Box 6) if the change is to be managed effectively, and some planning activity was undertaken. Both the growth and the increase in recreation created new job opportunities for those who chose to pursue them (Box 7). They also brought new people into the community, along with new ideas.

The changes that have taken place in Driggs (Boxes 8,9) have changed the character of the community. Growth has resulted in some deterioration of the community infrastructure (Box 10), and the community has attempted to make improvements in some of its components. Road improvements were made, in particular Highways 20 and 26, and the sidewalk system was expanded and improved. The City of Driggs got a grant to improve the community water system. The sanitary landfill has become a problem for the community, but thus far little progress has been made in dealing with this. The water system was feeling the effects of growth, but the community got an improvement grant and upgraded the system. Traffic has increased, especially in the last five years, and congestion has become a problem (Box 11). Workshop participants felt that the natural resources in the region, specifically the forests and rivers, are being impacted by the increased use they are receiving (Box 12). Air quality in the Teton Valley is also thought to be getting worse (Box 13). In general, the growth in the region has resulted in an increased demand for public services (Box 14).

The economic and financial sectors of the community have grown (Box 15), and there are more shops and buildings. There are opportunities for new businesses, and a realization that value-added businesses can fill some of the spaces left by declining extractive industries. Experimental well drilling has been taking place in the region. Along with the greater number of people has come realtors, developers, and subdivisions (Box 16). According to workshop participants, the changes taking place have meant a change in, and deterioration of, the traditional family (Box 17), and there are now many single-parent families or families where both parents work. There are many housing units where a number of non-related people share a home. Participants did, however, mention that some of the growth in the community is from people who lived in Driggs while younger and who are now returning.

The community has been subjected to significant outside influences, and newcomers have brought with them new ways of thinking. Outsiders encouraged the community to evaluate itself and look at economic development and other options. Outsiders have changed the local health care structure, and the hospital has an almost entirely new staff. Many of the people who were able to capitalize on economic and business opportunities have been newcomers. The community has come to the realization that it cannot do everything for itself (Box 18), and has started looking to outside sources for improvement grants.

Community assessment participants stated that they wanted to maintain the rural character of the community and the area, but that people were not always able to agree on exactly how the community should look in the future. Participants recognized the need, in the past as well as the present, to engage in planning and zoning, but realize that success has been limited. A lack of consistent planning, as well as a failure to enforce the zoning ordinances that are in place, were

seen as problems that needed to be addressed. Concerns over the loss of natural resource jobs, and the need to maintain farming and ranching on the local landscape, were raised by participants. People with the money to create their own employment opportunities continue to move to the Driggs area, and growth continues to be a problem. Workshop participants recognize the need to be more proactive in planning for the future if the community hopes to have a say in what that future will be.

JOSEPH, OREGON (mixed economy, medium-small population)

In 1983 the first bronze foundry began in Joseph (Figure 4, Box 1). A local artist got tired of traveling outside the community to have his work produced, so he started the foundry with five employees, all from outside the community. There are now four foundries in the area, and this is seen as an opportunity for the community. They are using skills in the community and accommodating the local residents. For example, one participant at the workshop mentioned that people who had grown up on a farm and had learned to weld were able to find employment at the foundries. It has also created employment opportunities for single mothers, which one participant pointed out is “saving millions of tax dollars” (Boxes 2, 3). Several retail stores and galleries have also opened in the community (Box 4).

At the workshop, the participants mentioned that “Joseph was discovered” as a nice place to live, and as a destination spot for tourism (Box 5). This was seen as an opportunity, but the general feeling is that they do not want it to turn into a “tourist town” like Vail, Colorado, for example. The negative side of this “discovery” has been skyrocketing real estate prices (Box 6). On the positive side, they have expanded retail trade in the community, and there has been an

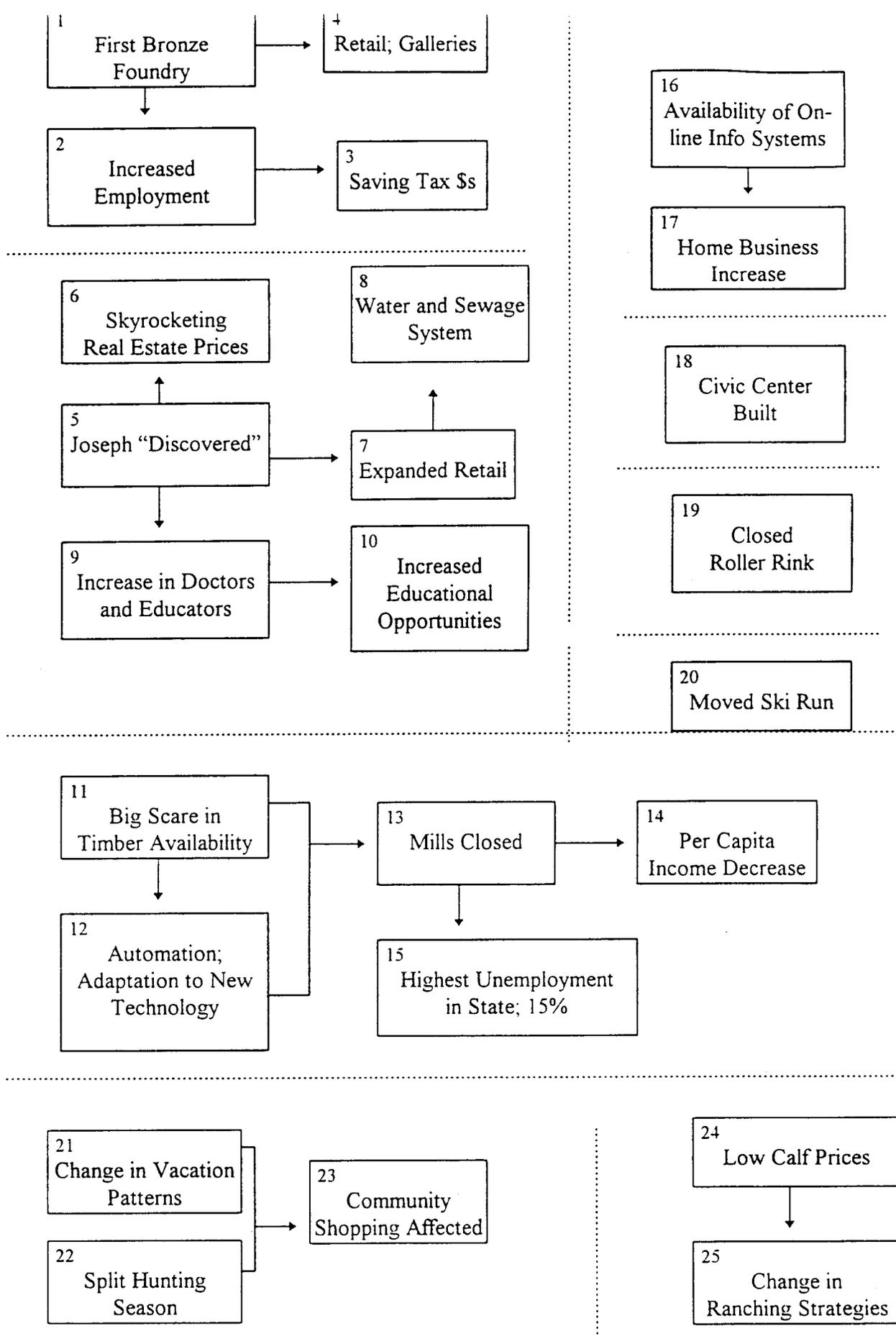


Figure 4. Community leaders' perceptions of change in Joseph, Oregon; 1980-1995.

increase in doctors and educators moving in (Boxes 7, 9). However, this increase has resulted in the need for an estimated two million dollar update on the water and sewage systems, which has already been updated once since 1980. The workshop participants see the water and sewage systems as “both a response and an impetus to change” (Box 8). The increase in doctors and educators in the community has possibly led to more educational opportunities for the community. For example, there is now a hospital training program in town, as well as other educational programs for adults (Box 10).

There has been a constant decline in the timber industry in Joseph since the early 1980s. This began with a “big scare” in timber availability, and the perceived need for automation and adoption of new technology to reduce the cost of production (Boxes 11, 12). The mills nonetheless closed in May 1994 and December 1994 (Box 13). At the time of this writing, one mill has since re-opened. Since the decline in the timber industry, Joseph has experienced a per capita income decrease, and at 15%, Wallowa County currently has the highest unemployment rate in the state of Oregon (Boxes 14, 15).

Farms, irrigation, and timber are still present in Joseph, but as one participant of the workshop noted, “all our eggs are not in one basket” anymore. The community has been successful at diversifying its economy, as evidenced by the many different industries present. With the availability of on-line informational systems, Joseph has seen an increase in home businesses (Boxes 16, 17). They have expanded the retail industry with trinket and tourist shops (Box 7), but also for meeting the needs of the community, e.g. auto parts stores, sporting goods, cottage industries. In the early 1980s, they built a Civic Center, but they also closed a local roller-skating

rink (Boxes 18 19). They built a ski run using a local labor force, which is the only private ski hill in the state (Box 20). The community has been active in planning and updating old plans.

They have also noted a change in vacation patterns, which began in the 1980s. For example, people are taking shorter vacations, but the season has extended about a month beyond Labor Day (Box 21). In 1980 the elk hunting season was split. This, coupled with the change in vacation patterns had an effect on shopping that was taking place in the community (Boxes 22, 23). Because hunters were out for a shorter time, they were more inclined pack what they needed for their trip. Before the hunting season was split, many out-of-town hunters would come to Joseph and shop before they went hunting. In the cattle industry, the price of calves decreased. In response to this, some ranchers have changed strategies. Despite the risks associated with this practice, some are retaining ownership of calves all the way through to slaughter (Boxes 24, 25).

Participants of the current assessment workshop, when asked to predict what Joseph would look like in ten years, suggested that while the community would not grow much, there would be more retirees and tourists. One workshop participant stated that outside forces, including the Forest Service, timber companies, and the whims of recreation practitioners, extend greater and greater control over the events taking place in Joseph. Land-use planning is currently underway in the community, but workshop participants seemed to feel that even more needed to be done. One participant suggested that Joseph would be ruined if appropriate action is not taken to keep the community from developing too fast. Joseph has been successful at managing the changes it has faced, and in diversifying its economy. There is a concern, however, that if the community is unable to articulate and plan for its future, those things that residents most like about the community may become victims of that same success. According to one workshop

participant, many native Wallowa County residents feel Joseph is no longer as good a place to live as it once was. Crowding, traffic, safety, crime, and poor water contribute to this feeling.

KELLOGG, IDAHO (mining economy)

The Silver Valley, where Kellogg is located, is an area that has traditionally been heavily dependent on mining and mining related industries. In 1981, the Bunker Hill Mine in Kellogg closed (Figure 5, Box 1), which meant the loss of approximately 2,100 jobs (Box 2). At this same time there was a general downturn in mining activity in the valley which, according to retrospective workshop participants, was due to changes in global mineral markets. In 1982, the Star Mine closed, with a resulting loss of 325 jobs. The Sunshine Mine closed for one year, sometime around 1983, costing 500 jobs. When the mine reopened, the workforce was approximately 150. The Lucky Friday Mine also closed for one year. The Galena and Coeur Mines closed in 1993, and have yet to reopen. The total number of mining jobs lost in the Silver Valley has been significant. Workshop participants reported that in 1980, there were 4,000 mining related jobs in Shoshone County, today the total is 300-350. These job losses have had a significant impact on the quality and style of life in Kellogg, including a number of business closures, a decrease in the local tax base, and a decline in population as people sought work elsewhere.

The initial response by the community revolved around attempting to keep the mine in operation (Box 3). Employees established their willingness to take pay and benefit cuts in order to make the mine more attractive as a potential investment. The employees themselves attempted to finance a purchase plan, but were unsuccessful. A Bunker Hill Task Force was formed to try

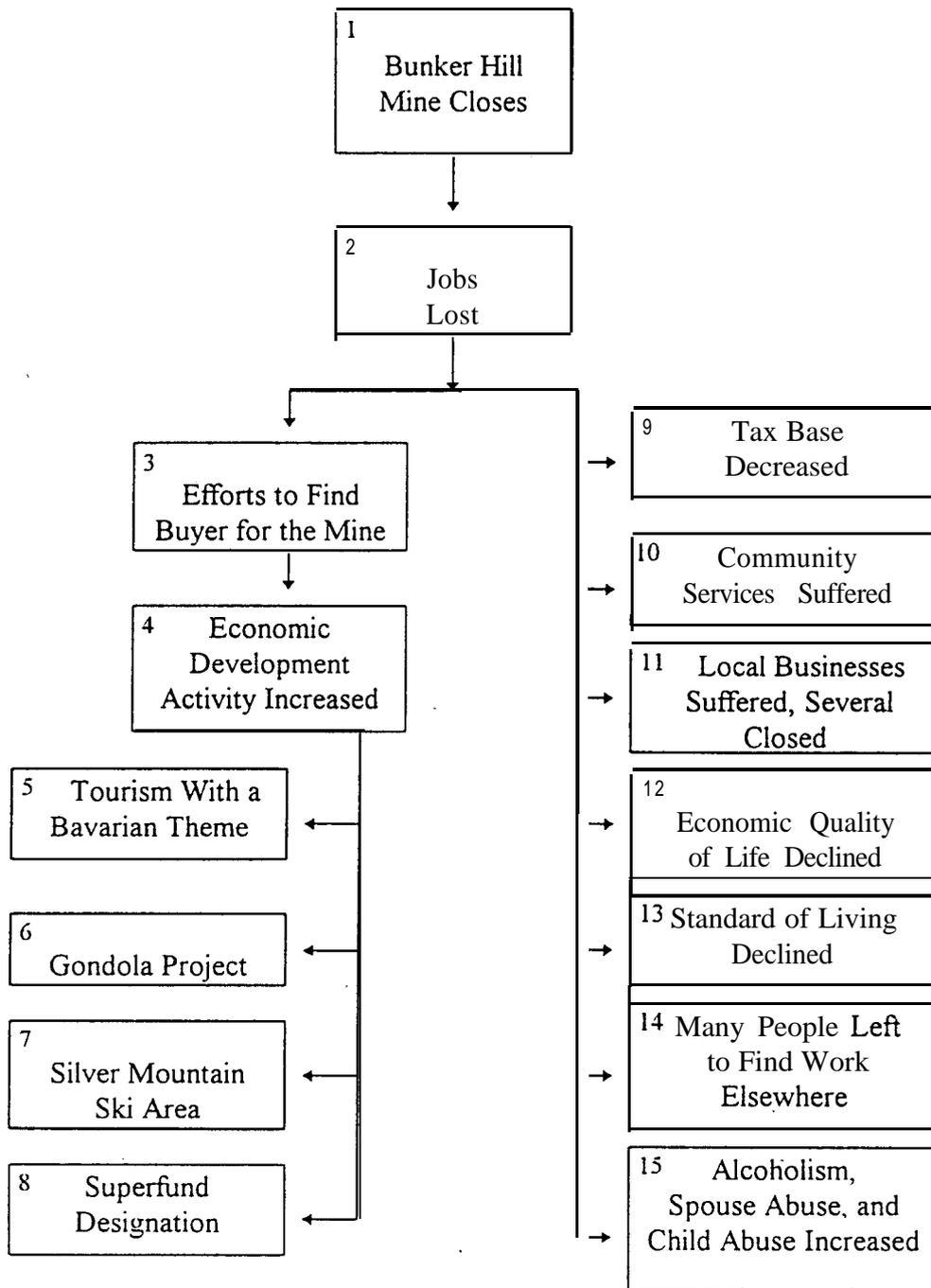


Figure 5. Community leaders' perceptions of change in Kellogg, Idaho; 1981-1995.

to find a buyer, but they were also unsuccessful. From the outset, there was optimism that a “white knight” would be found to buy the mine and rescue the community, but this would not be the case. In November of 1982, a business partnership bought what was left of Bunker Hill, but the mine never reopened.

After the realization that the mine would not resume operations had sunk in, the community responded by examining economic development options (Box 4). Visits were made to Leavenworth, Washington to investigate tourism theme options for the Kellogg area. Tourism proponents later decided on a Bavarian theme, which was subsequently **included** in the town’s tourism development program (Box 5). The Silver Mountain Gondola, promoted as the world’s longest gondola, was built with the assistance of federal dollars (Box 6). The City of Kellogg took over operations of the Silverhorn Ski Area, which is now known as the Silver Mountain Ski Area (Box 7). These actions created some economic opportunities for people, but it was not possible to replace all the jobs that were lost in the Bunker Hill closure. In 1985, the Silver Valley was designated as a federal Superfund Site (Box 8).

The Bunker Hill Mine closure had significant impacts on the City of Kellogg. The community was in shock, and most people did not realize how extensive the damages would be. The largest employer in the city was gone, and with it a large portion of the local tax base (Box 9). Community services, including police, fire, and maintenance, suffered (Box 10), and school enrollments dropped substantially. Local businesses saw a large decrease in patronage, and many went out of business (Box 11). Overall, the economic quality of life in Kellogg declined substantially (Box 12), although workshop participants pointed out that other aspects of quality of life, including recreation, still remained high, and some such as air quality, improved.

At the individual level, the closure meant that people had to lower their expectations, demands, and, needs, and adjust their standard of living (Box 13). People initially asked what the closure meant for them, before turning attention to what it meant for the community. Salaries for those who were able to find work went from \$14 per hour to \$6 per hour. Many of the more skilled miners were able to find work elsewhere and left (Box 14), the less skilled stayed and collected unemployment and welfare. City, county, and school jobs became the desirable jobs to have in the community. There was an increased reliance on outdoor recreation by individuals, since it was generally free of charge. There was an increase in alcoholism, spouse abuse, and child abuse (Box 15), and church attendance declined. Individuals who had worked for the mine were left with many unanswered questions about pensions and health benefits.

Kellogg continues to engage in efforts to beautify the community and diversify the economy. The Alpine Village improvements are continuing, and an uptown local improvement district has been designated. Efforts to improve the local infrastructure are ongoing. The need to attract new retail and manufacturing establishments, and not depend solely on tourism, was discussed, as were concerns about the ability of the community to utilize the natural resources found on the forests in the area. Current assessment participants indicated that if Kellogg was able to overcome the Superfund stigma, then the amenities provided by the city's location would serve as a draw for new businesses. One current assessment participant stated that Kellogg has "had a multitude of hazards, disasters, and setbacks, but we continue to respect our past and work for our future." Although proud of what it has already accomplished, Kellogg is using this as a stepping stone for additional efforts to improve the economic and social life of the community.

MATTAWA, WASHINGTON (irrigated agriculture economy)

In Mattawa, Washington, the major recent event to cause the community to perceive opportunity was the expansion of the area's water districts and a change in crop production. In the 1950s, the construction of two dams along the Columbia River (Figure 6, Box 1) provided additional water supply to this arid climate that contributed primarily to economic investment and the adoption of irrigated agricultural practices in the area (Boxes 2, 3). The dam construction, in conjunction with economic investment and the change in agricultural practices, led to population growth (Box 4). More recently, many orchards were established, starting in 1982-83, and they continue to grow in number and size. With a change in agriculture from raw crops to orchards migrant workers moved to the area, primarily from Mexico (Box 6). These workers were mostly males who began bringing their families from Mexico in about 1988 and staying in the community. This influx added to the already rapid population growth. U.S. Census Bureau data indicate an increase of 214.7% from 299 residents in 1980 to 941 residents in 1990. The population continues to grow at a rapid rate, 1994 population estimates put Mattawa at 1535 residents, which is a 63.1% increase since 1990. Actions reflecting this population growth include adding a high school to the school system in 1986, and upgrading the city's water system (Boxes 5, 7), the city is currently undertaking planning for a sewage system.

The city's increased Hispanic population has greatly changed the community's culture. According to some participants in the retrospective community assessment, it has affected residents' ability to "communicate with everyone." It has also created a perceived increase in crime and a decrease in safety (Box 8). One participant mentioned that before the growth there was never any fear of letting the children out on their own. In addition, a perceived problem with

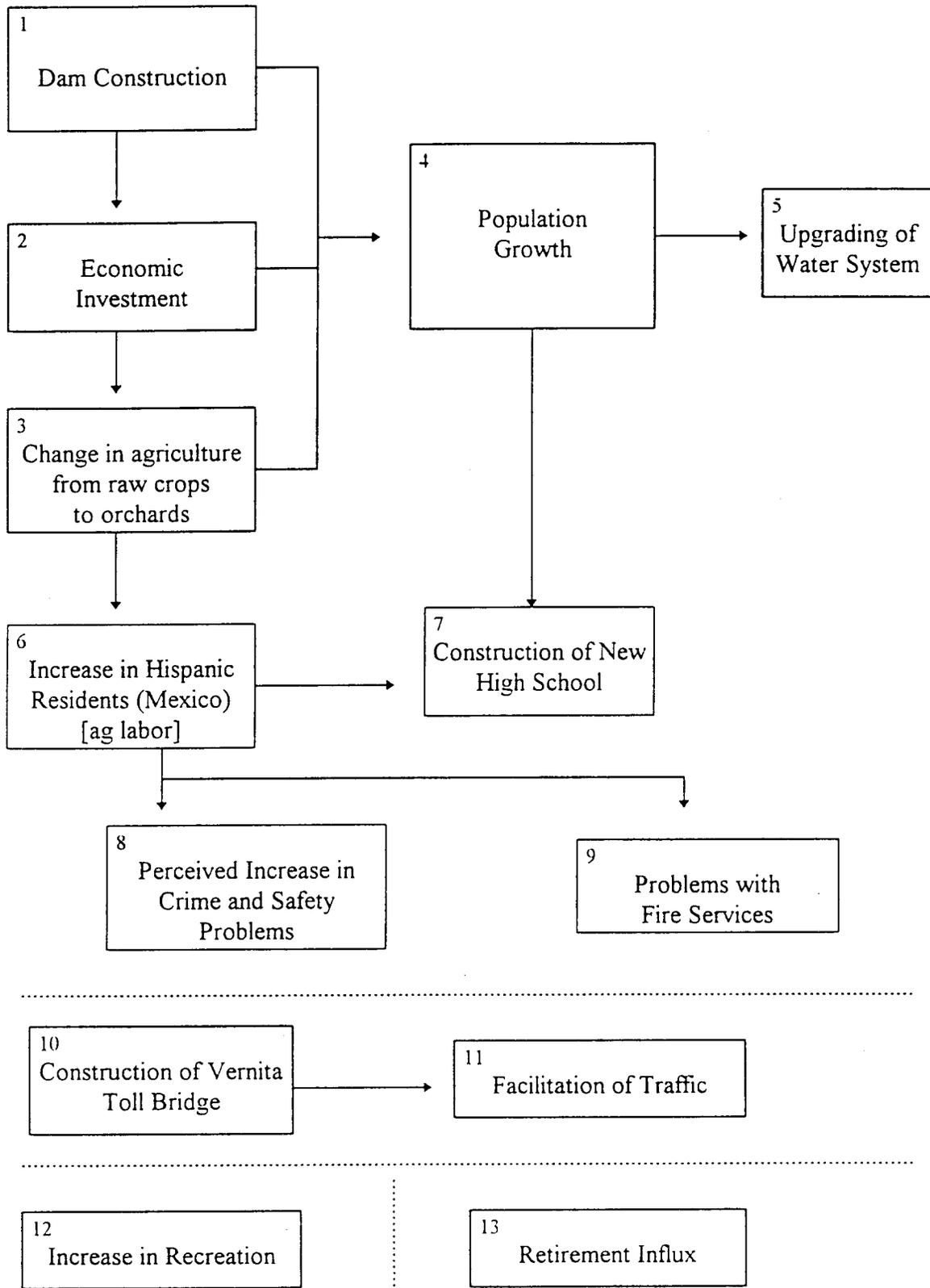


Figure 6. Community leaders' perception of change in Mattawa, Washington; 1950-1995.

fire services has resulted due to the language barrier (Box 9). The local fire district is unable to recruit Hispanic volunteers or adequately train them. There also seems to be a problem when responding to the greatly increased number of calls. Once “on the scene” it is sometimes difficult to communicate and understand the situation. Other events that were discussed include the construction of the Vemita Toll Bridge in the 1960s, which facilitated traffic in the region and was paid off in eight years (Boxes 10, 11). There has also been an increase in recreation and an influx of retirees in the area (Boxes 12, 13).

Mattawa has experienced a tremendous amount of growth in the past fifteen years or so, and there is pride in how the community has thus far managed that growth. The community has worked, and continues to work, at improving the local infrastructure, most importantly water, sewer, and roads. A number of new businesses have opened in Mattawa, including a bank, grocery and hardware stores, and some light industrial establishments. A desire was expressed that the Hispanic and Anglo communities work together more, but, according to workshop participants, this has improved. The overriding concern expressed by workshop participants has to do with water and property rights. Residents of Mattawa are very wary of possible changes in water availability and stated that this would be in violation of their “Columbia River Treaty Status” rights, which were handed down by the federal government. Workshop participants believe that interference by the federal government will limit the ability of the community to diversify and grow, and may ultimately be illegal.

POMEROY, WASHINGTON (dryland agriculture economy)

Major historical events in Pomeroy, Washington include the closing of the Green Giant cannery in 1961 (Figure 7, Box 1), and the dam projects on the Snake River that were completed around 1975 (Box 2). During the time of the dam projects, the participants said that the economy was better, and there was an increase in population, as seen in the larger classes at school. They also stated that “every store on Main Street was open” (Boxes 3 through 6).

Since the dam projects, the major event appears to be a gradual decline in agriculture (Box 8). The farms got bigger with fewer people to run them. Not as many family members continue to work on the farms (Boxes 9 through 11). Linked to this, the community perceives a problem that “there is no cohesive organization in agriculture, even though [it] is a major force in the community” (Box 15). There has been a decline in health services, for example they no longer have O.B. services in the community. They have also seen a constant decline in population since 1975 (Box 12). In the last few years the amount of leased land and absentee ownership has increased. As a result of this, the participants of the workshop see an increase in the amount of the community’s income going outside of it (Boxes 13, 14)

Another interesting event in the community that the participants identified was that people are more willing to drive for services (Box 16). This has produced an increase in commuters to Dayton and Lewiston/Clarkston, and has led to the perception of a loss of some loyalty to the community for shopping (Boxes 17, 18). Housing prices have increased, although they mentioned that compared to other small communities they are still low (Box 19).

All of the events mentioned above (contained in box 7) have led to an overall realization of the need for planning in the community and the need to be more creative in their planning

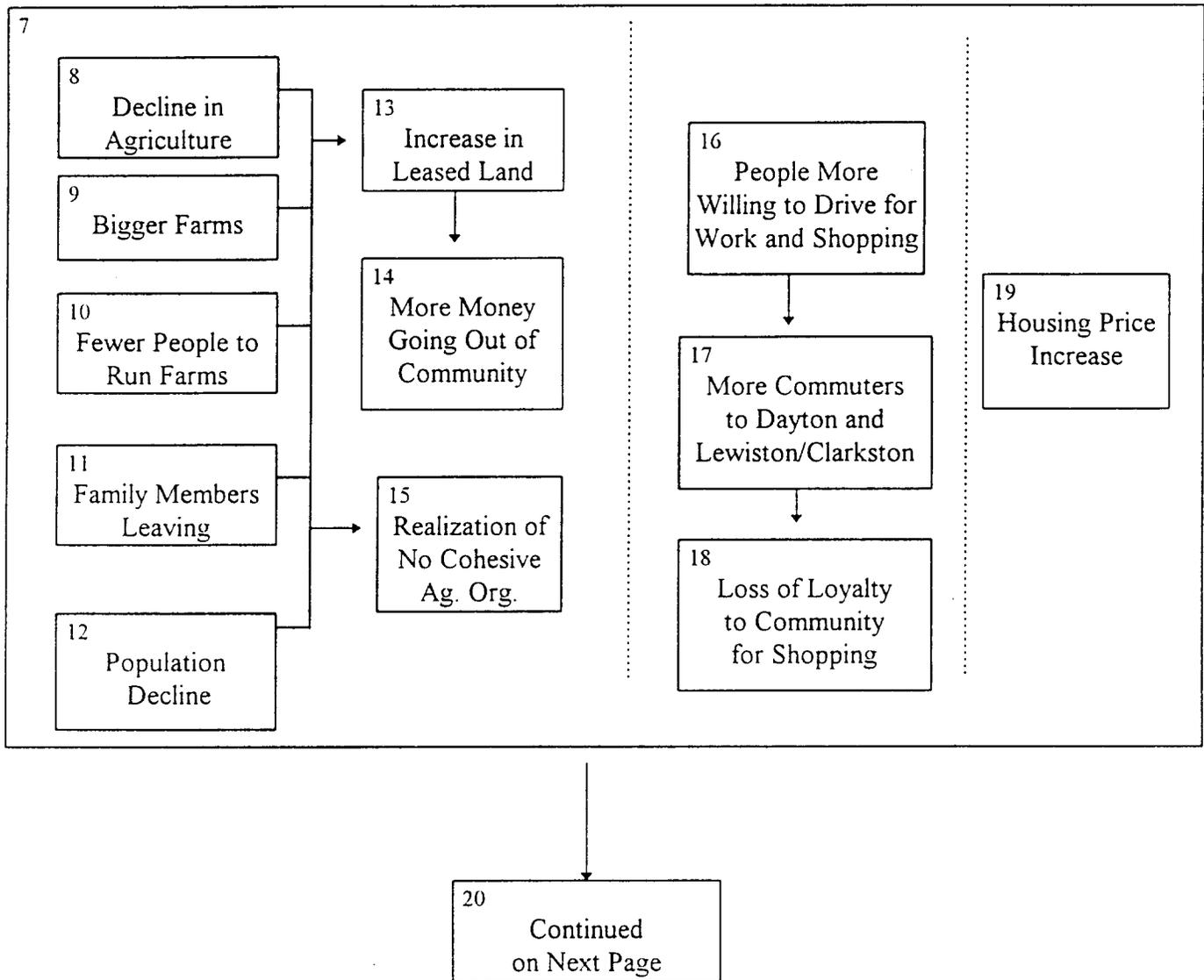
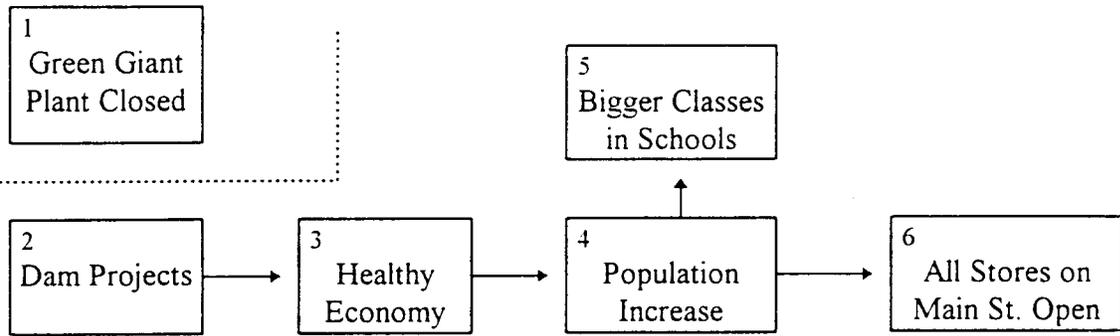


Figure 7. Community leaders' perceptions of change in Pomeroy, Washington; 1961-1995.

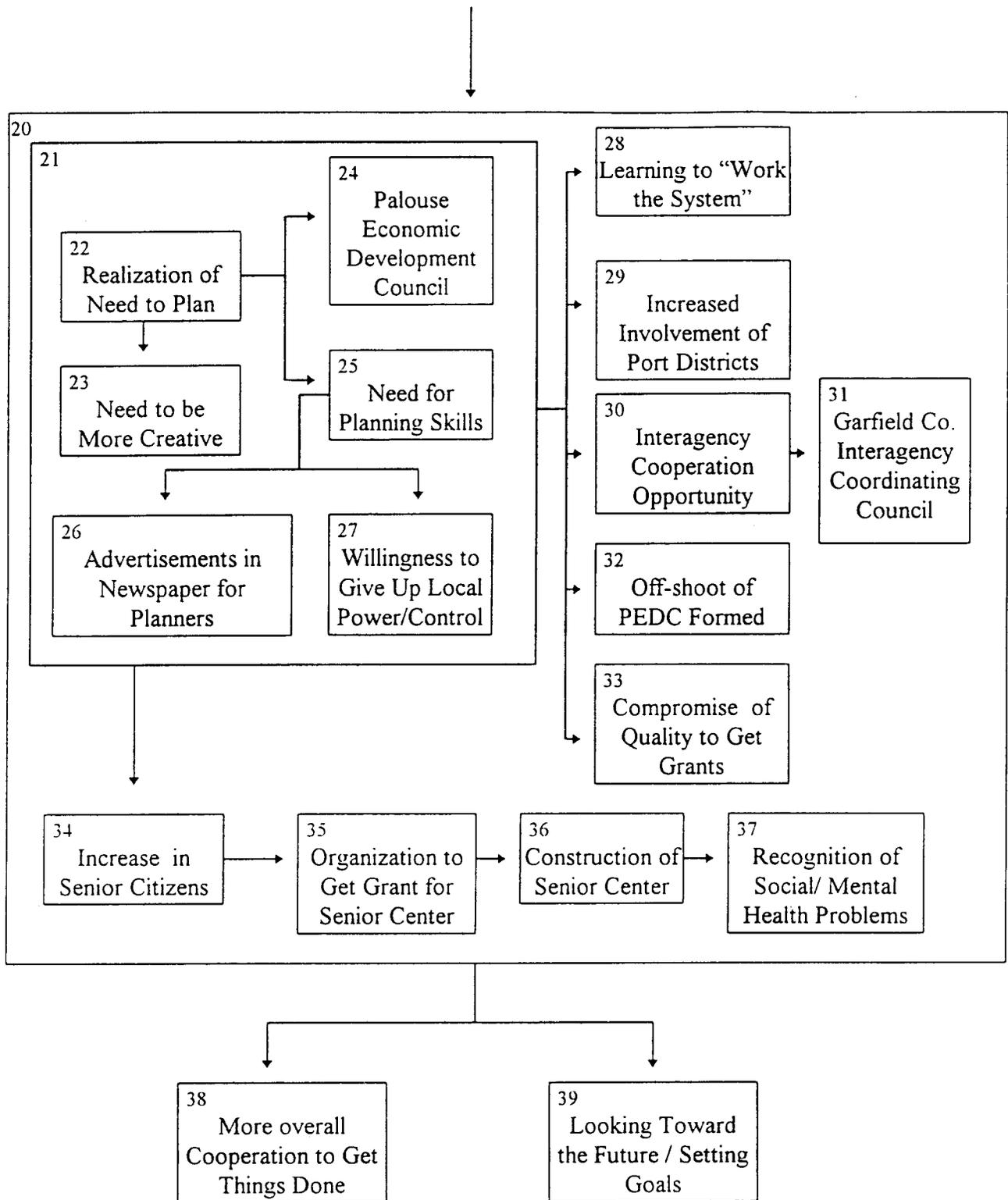


Figure 7 (Con't). Community leaders' perceptions of change in Pomeroy, Washington; 1961-1995.

efforts (Boxes 22, 23). The Palouse Economic Development Commission (PEDC) has helped in this respect (Box 24). The town has also perceived and accepted the need to go outside the community to find the necessary planning skills, which is accompanied by a willingness to “accept to some degree the giving up of local power/control to use outside help” (Boxes 25,27). For example, the community has actively sought outside help for planning and development by advertising in outside newspapers for planning positions with the community (Box 26).

As a result of this combination of events (Box 21), the community is learning how to “work the system” and “play the game” (Box 28). The Port Districts have also become more involved in community development (Box 29). In addition, the community has perceived an opportunity in interagency cooperation (e.g., hospital, clinic, and public health working together) to get things done and “keep what we like about our community” (Box 30), which led to the creation of the Garfield County Interagency Coordinating Council. This group formed to coordinate the different individuals involved in different areas, mostly social services (Box 31). An off-shoot of the PEDC has formed for local (as opposed to regional) development and is comprised of a community volunteer group (Box 32).

The participants of the workshop also mentioned the need to compromise quality to get the grants to get things done (Box 33). For example, they might receive a grant for an expensive prenatal program, but what they really need is basic equipment, such as scales to weigh pregnant women. The community has also upgraded the infrastructure (water and sewer), and they have actively worked on town beautification, for example “the avenue” with flowers and trees where the train tracks used to be. Pomeroy has seen an increase in senior citizens (Box 34). As a result of this influx, a local organization formed in 1985 to get a grant for constructing a Senior Citizens

Center (Boxes 35, 36), and they have branched out to do more work that is not directly related to senior citizen issues. Related to this has been wider recognition of social and mental health problems in the community (Box 37). The result of the above planning efforts (Box 20) has been an overall cooperation among residents to get things done, as well as the development of the community's vision of the future and goal setting (Boxes 38, 29).

In addition to these planning efforts, current assessment workshop participants saw a need for continued long-range planning in order for Pomeroy to manage the growth that many in the community see for the future. Although most of the newcomers to the community in recent years have been welfare families, workshop participants believe that this may be starting to change. The Lewiston, Idaho-Clarkston, Washington area is growing, and nearby Pomeroy is a potential residence area for people willing to commute. Workshop participants stated the need for the community to work at annexing land and promoting new housing construction. The community is already in the process of planning for school improvements, and is improving local park facilities. Infrastructure improvements, which will allow for growth and also serve to attract new businesses, are underway.

There is a concern, however, that continued changes in federal rules and regulations may hinder Pomeroy's attempts to take advantage of the opportunities that exist for the community. One current assessment workshop participant stated that one size doesn't fit all for rules and regulations, and that there should be more control at the local level. Related to this was a belief that there is a lack of commitment to the community by agency people who are not from the community and are constantly being shuffled around. Workshop participants believe that unless

the various rules, regulations, and policies are changed, Pomeroy will not be fully able to create the future it desires.

RIGGINS, IDAHO (mixed economy, small population)

Beginning in 1964, the availability of timber from the Nez Perce National Forest began to decline. Federal natural resource policy and planning changes (Figure 8, Box 1), in particular the passage of FLPMA in 1976, and the designation of wilderness study areas on the forest, were seen by workshop participants as contributing to this decline. In 1982, the timber mill in Riggins burned down (Box 2), putting number of people out of work. Participants felt that although the event was memorable, it really was not a significant event in the life of the community.

Employees had already been laid off prior to the burning of the mill, and there was already an awareness on the part of the community that the resource policy changes were having an effect on the community. The burning of the mill made this all the more obvious.

The significant event in the minds of workshop participants was the overall change in natural resource policy, particularly at the federal level, that had reduced the levels of resource availability and utilization (Box 3). The timber industry was in a state of decline (Box 4), and the decrease in the number of timber sales from the Nez Perce National Forest also resulted in a decrease in the amount of money the community received from “in lieu of tax” funds for the government. The Riggins area has also seen a decline in the ranching industry (Box 5), and participants felt that federal land regulations were at least partially responsible. However, general uncertainty about the economy and the future profitability of ranching were also mentioned as

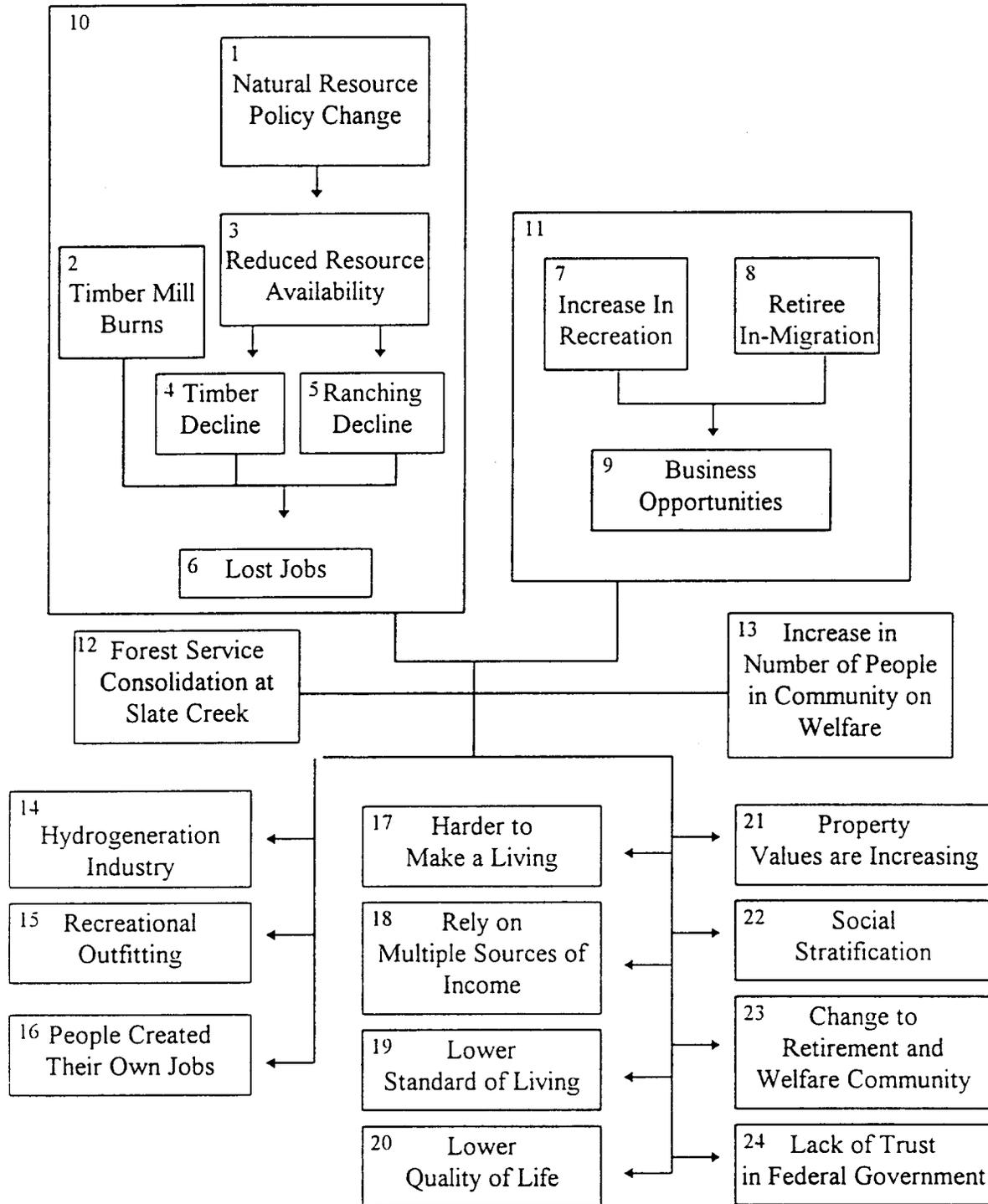


Figure 8. Community leaders' perceptions of change in Riggins, Idaho; 1964-1995.

contributing to this change. These changes were viewed as causing the decline in the local timber industry, which meant the loss of jobs and income (Box 6).

At the same time that natural resource policies were changing, commercial recreation was on the increase in the Riggins area (Box 7). Hunting, fishing, rafting, hiking, and wilderness use opportunities all exist in close proximity to Riggins, providing diverse leisure options for residents of the area. Along with this increase in recreation has been an influx of newcomers, particularly retirees, to the Riggins area (Box 8). This has created job opportunities for residents in terms of guiding trips and activities, as well as feeding and lodging visitors to the area (Box 9), at the time of the retrospective workshop eighteen raft companies were operating in Riggins. Although these jobs are still dependent on natural resource use, they represent an increase in the diversity of the local economy.

Related to the changes in natural resource policy was the consolidation of Forest Service facilities at Slate Creek (Box 12), which is approximately twenty miles north of Riggins. This consolidation caused school enrollments in Riggins to decline. In the minds of workshop participants, it also meant that federal land managers who were making decisions that could affect Riggins no longer lived in the community, and were disassociated from the effects of their decisions, which participants felt was a problem. There has also been an increase in what workshop participants referred to as “ologists.” These are the biologists, hydrologists, ecologists, and others, who are viewed as pushing paper and being out of touch with the resources they are managing. Participants felt that this is not a positive development.

Another significant change which has taken place in Riggins is its transition to a welfare community. Workshop participants noted that the number of people in the community on welfare

has increased significantly (Box 13), and it has even, in some cases, become a lifestyle decision. One participant equated some residents of Riggins with a “strapless gown,” which has “no visible means of support.” People felt that this change to a welfare community has had a negative impact on the town, which used to be a place where people took pride in the hard work that they did.

Since it was the cumulative effects of several changes that were significant for the community (Boxes 10-13), workshop participants were unable to connect specific community responses with specific events. Actions taken by the community were aimed at managing the overall changes taking place in Riggins. An attempt was made to start an industry which would have sold the power generated from the construction of small hydroelectric dams (Box 14). Retrospective workshop participants reported that three dams were permitted and built, but subsequent permit applications were denied by the government, probably due to the increasing prominence of water issues. Although the increase in recreational businesses did not necessarily start as a response to the decline in the traditional resource use industries, recreation did provide new employment options for those who were affected by changes in these industries (Box 15). In general, the community response was of the “pull ourselves up by the bootstraps and solve our own problems” variety. People looked at realistic options and worked at creating their own jobs (Box 16). There was no large-scale response by the community as a whole to manage these changes, but the community also did not sit back and allow itself to become a victim of circumstances.

These events have combined to change the quality and style of life in the Town of Riggins. With changes in the traditional economy, it has become harder for people to make a living (Box 17). The increase in recreation and tourism has helped provide some new business opportunities,

but in many cases households have come to rely on multiple sources of income from **multiple**, usually part-time, jobs (Box 18). Some people find it necessary to work away **from** home. There has been a great deal of stress and depression among those who were **unemployed** or displaced from their traditional work. People were forced to decide if it was worth living in **Riggins**, and, in many cases, accept a lower standard of living and a lower quality **of** life (Boxes 19, 20). In spite of these individual hardships, there has also been a high degree of cooperation among residents who are trying to find a way to stay in **Riggins**.

The in-migration that has been taking place has also impacted **Riggins**. Property values are on the rise (**Box 21**), and have already become **unaffordable** for many community residents. The influx of newcomers, many of whom are retirees or urban refugees with significant financial resources, has resulted in social stratification, something that was never present in the past (**Box 22**). The increase in the number of people in the community on welfare has exacerbated this situation. **Riggins**, which used to be a traditional resource community, has become, in the minds of workshop participants, a retirement and welfare community (**Box 23**).

In addition to the jobs lost due to changes in natural resource policy, there have been monetary losses to the community. The federal government does not pay taxes, and counties receive 25% of the revenue from Forest Service timber sales in the form of “in lieu of tax” **funds**. The schools in **Riggins** lost money, as did the county roads department. In a larger sense, these changes have created the feeling that the federal government is not interested in the well-being of **Riggins** and other small, rural communities. The community feels that it has lost control and is no longer able to determine its future. The result is a definite lack of trust in the federal government (**Box 24**).

Riggins is often touted as a community that has made a successful transition to a tourism and recreation economy, which is generally portrayed as being more sustainable than the traditional extractive industries. There is a great amount of concern in Riggins, however, for the fact that the community is still dependent on natural resources. Participants at both the retrospective and current assessment workshops mentioned that additional changes in federal natural resource policy, particularly in the context of salmon and the Endangered Species Act, threaten the new economy that has become the mainstay of Riggins. According to workshop participants, rafting permits may be decreased in an attempt to help the endangered salmon runs. When asked what type of community response will work in the future, participants stated that communities should not wait for someone else, the federal government, for example, to come in to solve the problem. They further stated that responses NOT based on natural resources will be the most appropriate responses in the future. Workshop participants were very concerned about the future of Riggins, and of all resource-dependent communities.

SALMON, IDAHO (mixed economy, medium-large population)

In 1983, the Noranda Mine in Salmon closed (Figure 9, Box 1), putting a number of people out of work. The Salmon area had been subject the boom and bust cycles of the mining industry, and the mine closure was viewed as a continuation of that general process. No organized community response was made to try to manage the impacts of the mine closure, but people were already starting to leave the community. In 1985, the timber mill in Salmon closed (Box 2), which also put a number people out of work. Wood products had not traditionally been a large industry in Salmon, and activity, which peaked in the 1970s, had already returned to

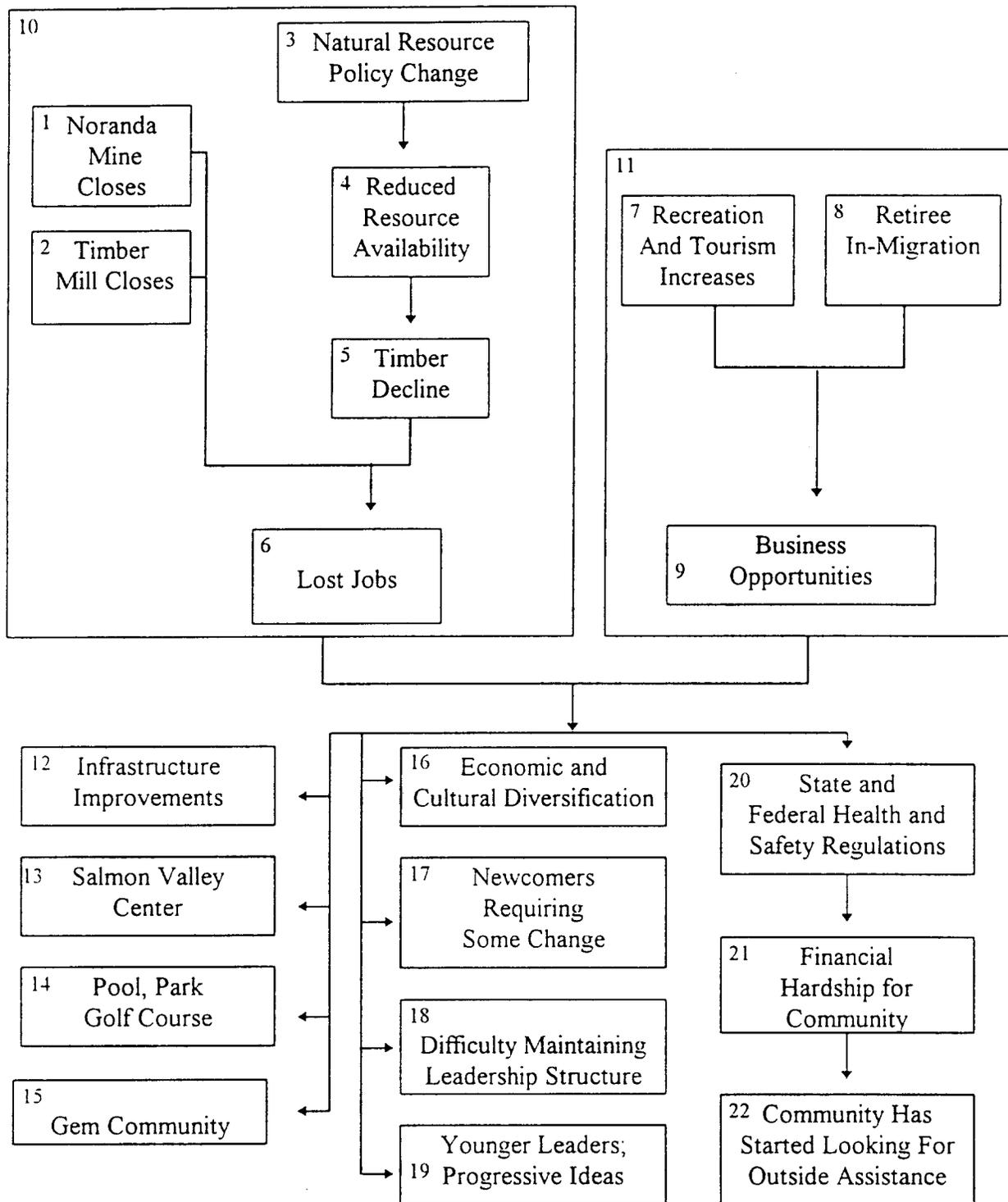


Figure 9. Community leaders' perceptions of change in Salmon, Idaho; 1983-1995.

historic levels by the time the mill closed. The mill reopened by year's end, but the closure prompted people to begin discussing economic development options for the community.

Workshop participants were uncertain as to whether anything concrete ever came out of these preliminary discussions. Overall, these closures, when considered individually, were not viewed as significant for the community as a whole.

What were important for Salmon were the cumulative effects of these and other changes taking place in the community. Although they were not specific as to individual policies, retrospective workshop participants felt that changes in natural resource policy (Box 3), particularly at the federal level, were affecting the traditional resource use industries on which Salmon depended. There was a decline in the availability of the resources that these industries needed for their operations (Box 4), and timber began to decline (Box 5). Salmon is totally dependent on natural resources, but flux within the various industries has been a common occurrence. Most of the jobs in these industries were seasonal. For many people this was a lifestyle choice, and for others it was the nature of the industries. Regardless of the nature of the jobs, policy changes were having an effect on the industries. Jobs were being lost (Box 6), weakening the community's traditional economy.

During this same time period, recreational use of the Salmon area was on the increase (Box 7). The area was discovered as a good location for hunting and fishing, and guiding became a reasonable employment option. Rafting was also growing in popularity, and Salmon, which had developed a local rafting industry forty or so years ago, saw an increase in large, sometimes out of state, outfits that purchased permits. This change resulted in a larger rafting industry in Salmon. In addition to the increase in recreation, Salmon also saw an increase in retiree in-

migration (Box 8). These events created job opportunities for those who chose to take advantage of them (Box 9), but it also created an increase in newcomers to the area.

Since it was the cumulative effect of several changes (Boxes 10, 11) that was significant for the community, workshop participants were unable to connect specific community responses with specific events. Action was taken by the community to respond to the overall changes taking place in Salmon. Portions of the community infrastructure, including the water treatment facility, roads and sidewalks, and communications system, were improved (Box 12). A solid waste disposal project that had been in a holding pattern for years was eventually pushed to completion. The Salmon Valley Center, a community center, was built, as were a swimming pool, golf course, and city park (Boxes 13,14). A new health clinic was constructed. Salmon participated in the Gem Community program through the Idaho Department of Commerce, and has already seen positive results from the program (Box 15), although workshop participants did not mention any specific successes.

Participants reported that Salmon is totally dependent on natural resources, although the various industries, timber, ranching, mining, and recreation, are subject to periodic fluctuations. The workshop participants were unable to point to a singular event as one which caused some kind of organized response on the part of the community. In the case of Salmon, it is more useful to think in terms of a threshold of change which, when crossed, caused the community to realize that something needed to be done.

The events that occurred in Salmon have changed the quality and style of life in the town. The community has become more economically diverse (Box 16), and some of the jobs, such as those at a new mine that opened in 1993, are more stable than the seasonal jobs that are found in

the area. The community has also become more culturally diverse (Box 16), as people with different ideas and lifestyles, particularly retirees, have moved into the area. Workshop participants reported that some of these newcomers are “requiring” changes, such as a higher level of community services, in the way things are done (Box 17). Not all of these changes are in keeping with the reasons that many of the long-term residents have chosen to be there. Many of the potential leaders, particularly as far as government is concerned, live outside the city limits, and are unable to participate. At least partly because of this, it has become difficult to develop and maintain a leadership structure in the community (Box 18). Many of the leaders that have come forward are younger and have more progressive ideas (Box 19), which represents another type of change for the community.

The community has also been impacted by a variety of state and federal regulations related to health and safety (Box 20). Pollution and water quality guidelines require tests which are fairly expensive, and for which the cost does not vary in relation to the size of the community. The tests cost the same for Boise as for Salmon, but the cost per community resident is much greater for Salmon, which has created some financial hardship for the community (Box 21). Workshop participants reported that the community, which has normally fended for itself, has come to the realization that it cannot do everything for itself. As the number of restrictions and regulations that come from entities outside the community has increased, and the “do-it-yourself” philosophy has become less effective, the community has started to look outside itself for help in meeting these new requirements (Box 22).

There seemed to be an awareness, at least on the part of participants in the retrospective and current assessment workshops, that changes of one type or another were, and are, likely to

take place in Salmon. This awareness does not, however, imply that participants viewed the possibility of change favorably. There was discussion in both workshops of the need to undertake planning and zoning activity at both city and county levels in order to manage growth and change in the community. One current workshop participant stated that planning would be the only way that Salmon would be able to maintain the qualities that attracted people to the community. Although the statement was made that planning could have started earlier, it seemed as if participants believed that growth was something they had the ability to control if they chose to do so. There seemed to be more concern among participants for the changes they were not able to manage, specifically changes in natural resource policy. One participant in the current assessment workshop asserted that “if the government persists in its present mode, we will be a ghost town in a national park,” a sentiment that was echoed by most participants in both workshops. Although the community has successfully weathered the various changes that have taken place in Salmon, there is a definite concern for what future changes in natural resource policy may mean for the community.

WHITEFISH, MONTANA (tourism /amenities economy)

Whitefish sits at the head of the Flathead Valley in northern Montana. Glacier National Park lies to the east, Flathead Lake lies to the south, the Cabinet Mountains are to the west, and the Whitefish Range is to the north. The natural beauty of the area has proven to be a magnet for those seeking to live in a scenic location. Significant growth began in Whitefish sometime around the mid-1960's (Figure 10, Box 1). Workshop participants felt that the growth was directly related to the passage in Montana of the Unit Ownership Act in 1965, which allowed for

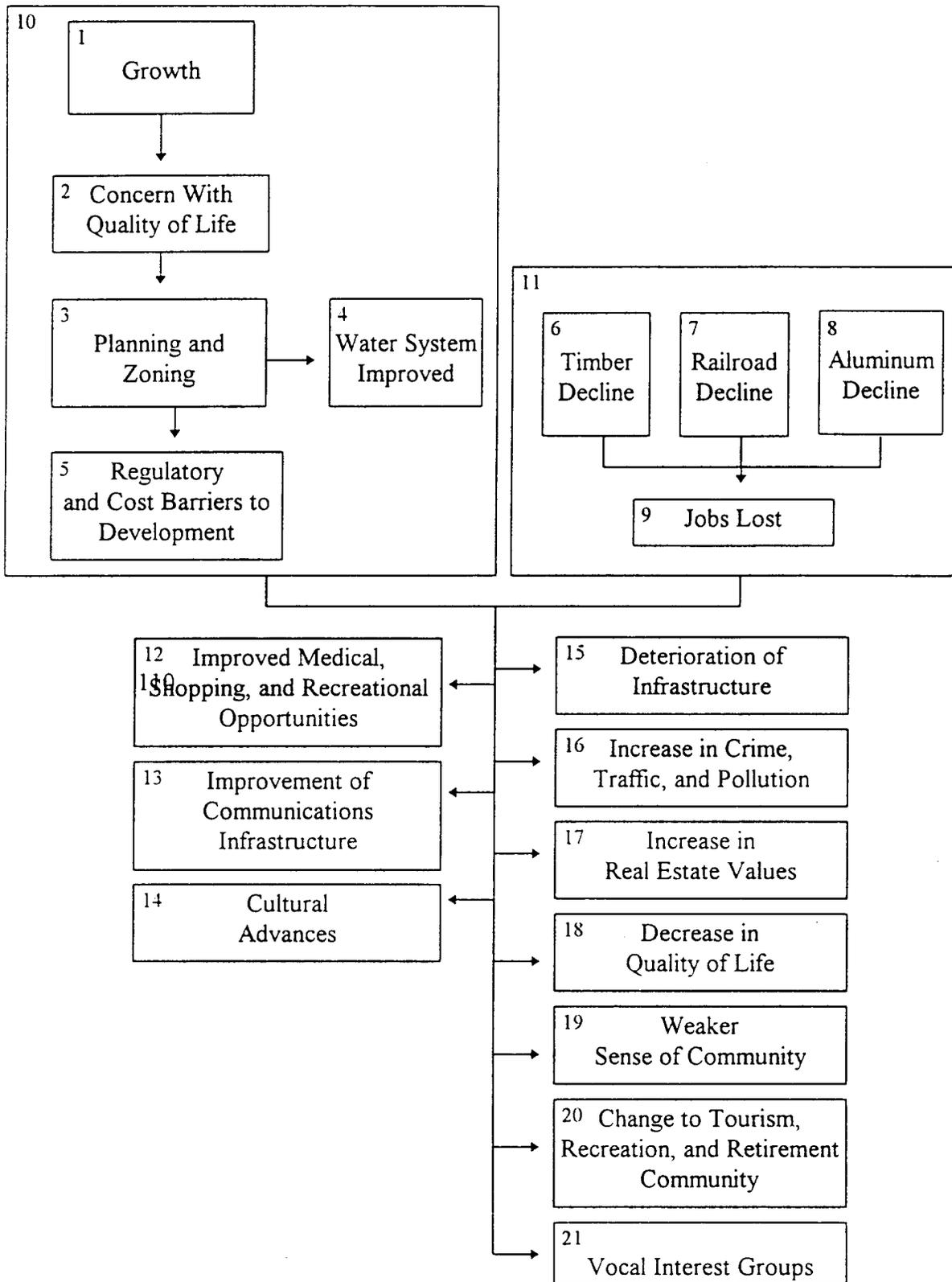


Figure 10. Community leaders' perceptions of change in Whitefish, Montana; 1966-1995.

condominium ownership. Growth led to a concern for the local quality of life (Box 2), and the first master plan for Whitefish was adopted in 1981 (Box 3). Because various local interests were opposed to portions of the plan, it was never fully implemented. The initial period of growth ended in 1982, when the national economy was in the midst of a recession. Much of the growth had been due to Canadians who were involved in that nation's oil industry, so global economic factors played a role as well. The most recent period of growth began in 1985 (Box 1), and continues today. In addition to, and related to, this growth, recreation and tourism have been on the increase in the entire Flathead Valley.

The community responded in several ways to the growth that was taking place. Zoning ordinances were enacted (Box 3), although they were different from what the master plan had originally called for. A bed tax for hotels and motels was implemented, as was a sign ordinance. The local sewer system was improved (Box 4) and, in an attempt to decrease water pollution, Big Mountain Ski Area was connected to the system in 1983. The need to establish a new water supply is currently being discussed. Although there are now certain regulatory and cost barriers to development (Box 5), growth continues to be an issue for Whitefish.

Whitefish started out as a timber town, and wood products were a mainstay for many years. The Burlington Northern Railroad went through Whitefish and facilitated natural resource extraction and distribution. The timber industry and the railroad, along with the local aluminum industry (Boxes 6-8) which operated out of Columbia Falls, remained fairly stable until the early 1980's. Since then, the industries have been undergoing a gradual decline, and a number of jobs have been lost (Box 9). Early in 1995, one-third of the Burlington Northern workers in Whitefish

were laid off. Workshop participants reported that the transition to a recreation, tourism, and retirement community has been a wrenching experience for the community.

These events (Boxes 10,11) have created a mix of positive and negative impacts for the City of Whitefish. On the plus side, some local facilities have improved. Medical facilities have been upgraded, as have the available shopping opportunities. Recreational opportunities have also been improved (Box 12). The local communications infrastructure has been upgraded and allows for telecommuting by community residents (Box 13). The newcomers have brought some cultural activities, such as symphonies and plays, with them, and dining opportunities have improved (Box 14). There have, however, been significant negative impacts, as well. The community infrastructure, which has been under a great deal of stress, has deteriorated (Box 15). At the same time, the cost of providing public services by the government has increased. The increase in population has resulted in the growth of crime, and it has been necessary for the city to expand the police department. Traffic and congestion have increased, and air pollution is on the rise (Box 16). Real estate values have gone up, and the community has become a more expensive place to live (Box 17). Some older residents, unable to afford the rising property taxes, have been forced to sell. In this context, one participant stated that the property tax was approaching the point where it was no longer an equitable financing system for government. Although most of the growth that has taken place has been outside the incorporated area of the city, the City of Whitefish has been impacted by the problems of urban growth.

In a more general sense, the quality of life in Whitefish has decreased (Box 1 S), and, according to one workshop participant, Whitefish has gone downhill. The character of the community has changed - it is not as friendly and has lost much of its ambiance and character.

There is a weaker sense of community in Whitefish than there was previously (Box 19), and there is less trustworthiness among residents. Whitefish has been transformed into a recreation, tourism, and retirement community (Box 20). People in the community are resentful of growth and new taxes, and a number of vocal interest groups have emerged (Box 21). Participants felt that in the future divergent interests will need to compromise on issues affecting the community. Participants also felt that a “smaller, kinder, better informed bureaucracy” would be better able to manage growth related issues in the future.

Most of these issues are unresolved, and growth continues to be a problem for Whitefish. One of the current assessment workshop participants commented that the community was more prepared for the future ten years ago than it is today. Attempts, such as the Master Plan that was adopted in 1981, to manage growth have been made, but there are a number of parties that have a vested interest in seeing that they are not fully implemented. Local infrastructure was a problem ten years ago, and the community is still trying to keep up with the improvements and expansions that have been necessitated by the growth of Whitefish. Efforts are currently underway to develop a new master plan, and current assessment workshop participants discussed a need to maintain affordable housing in the area and control the proliferation of strip developments. Participants in both the retrospective and current assessment workshops seemed less than optimistic about the likely success of the effort to maintain the attractive character of Whitefish.

DISCUSSION

The communities selected for the case studies faced a number of different types of change. Some of the changes were gradual and cumulative, as in Salmon, Idaho, and Riggins, Idaho. They did not involve one specific event per se. Instead, a number of changes occurred all at the same time that combined to change the character of the community. Other changes, such as the mine closure in Kellogg, Idaho, and the mill closure in Burns, Oregon, were sudden and important enough by themselves to significantly the community. In addition, the nature and cause of the specific changes differed across communities. Some changes occurred due to global economic factors, some due to changes in federal natural resource policy, and some because a community was discovered to be a good place to live.

In spite of differences in the magnitude and speed of community change, and the causes of the changes, the responses of the ten case study communities were fairly similar. These responses could be categorized as psychological responses, individual responses, and organizational responses.

Psychological Responses of Community Residents

In five of the ten case study communities, the initial response of residents can be characterized as being psychological in nature. In Pomeroy, Washington, the initial response to the various changes taking place was frustration, resignation, and denial. In Kellogg, Idaho, the mine closure created a state of shock in the community. Driggs, Idaho, was in disbelief and was slow to realize that changes were occurring. Much conflict surrounded the changes in Joseph, Oregon, but people eventually began to cope with the new situation. Burns, Oiegon, felt that it

had been defeated and had hit rock-bottom, losing hope for the future and adopting a “why try” attitude. In the remaining five case study communities -- Baker City, Oregon; Mattawa, Washington; **Riggins**, Idaho; Salmon, Idaho; and Whitefish, Montana -- no response of this type was reported by workshop participants.

Participants in eight of the case study communities listed responses to change that are best characterized as being by, and for, individuals in the community. In Joseph, Oregon, a number of cottage industries sprang up, including home businesses based on an availability of on-line computer access. Residents of **Riggins**, Idaho, created their own jobs, including ones in the local rafting industry. In Baker City, Oregon, a property owner has been renovating his historic buildings in the downtown area. (The community also has been working at renovating historic buildings on Main Street, but some of his buildings are not included in the program.) Businesses have been started by some people in Whitefish, Montana, in order to take advantage of growth-related opportunities. The same thing has occurred in Driggs, Idaho. In Kellogg, Idaho, some people “hunkered down” to deal with the hardship caused by the mine closure, while others left for better jobs elsewhere.. New businesses, particularly related to recreation and outfitting, were started in Salmon, Idaho. In Bums, Oregon, an individual affiliated with the timber industry came forward and assumed a leadership role in helping the community manage the mill closure. (Although the community ultimately benefited from his leadership, it was a response by an individual, rather than a group or organization.) In the remaining two case study communities, Pomeroy and Mattawa, Washington, no responses of this type were mentioned by workshop participants.

Organizational Responses

The majority of responses in the case study communities could be characterized as organizational or group responses, where people came together to try to solve the problem or get something done, or where an existing organizational structure (for example, government or clubs) tried to manage the changes taking place. These efforts were directed toward benefiting the community as a whole, rather than only individuals. The organizational responses tended to fall into one of several different categories: economic development, grants and funding, infrastructure improvement, and planning and zoning activity.

Economic development activity having varying degrees of success took place in Baker City, Oregon; Bums, Oregon; Driggs, Idaho; Kellogg, Idaho; and Pomeroy, Washington. Although no formal activity took place in Riggins, Idaho, attempts were made to start a local hydroelectric generation industry. The power sold would have created significant revenue for residents, but only three dams received permits. Efforts to acquire grant money for the community took place in Driggs, Idaho; Kellogg, Idaho; Pomeroy, Washington; and Salmon, Idaho. Again, some communities have been more successful than others at getting grants for community projects. Participants in Pomeroy, Washington, expressed the belief that most grants have strings attached, but that “learning to work the system” had proven valuable in terms of acquiring money for the community.

Improvements to community infrastructure were made in six of the case study communities, including Baker City, Oregon (streets, traffic lights); Driggs, Idaho (water system, roads, sidewalks); Joseph, Oregon (water and sewage system); Mattawa, Washington (high school, upgraded water system); Salmon, Idaho (water treatment, roads, sidewalks,

communications); and Whitefish, Montana (upgraded sewer system, communications). Planning and zoning activities have taken place in Burns, Oregon; Driggs, Idaho; Pomeroy, Washington; Joseph, Oregon; and Whitefish, Montana. Regardless of whether they engaged in formal planning and zoning activities, case study communities felt that they were more prepared for the future than they had been before.

All of the case study communities made concerted efforts to manage the changes that were taking place. In some cases these efforts followed a period of shock, disbelief, or denial, but none of the communities failed to act. The communities have been successful so far in managing the changes that have taken place, and none would be said to be dying. It is clear from the retrospective workshops and workbooks, moreover, that while some participants question whether the changes taking place in their community are for the better, other residents are more fatalistic, if not positive, in assuming that change is inevitable and must be responded to constructively. While some residents explicitly state their concern that the future may hold changes that their community cannot manage, others are more optimistic and talk of needed change and working to realize a vision for the future.

Validating the Assessment Workbook Constructs

The final portion of the retrospective workshop assessed the validity of the constructs used in the current assessment workbook and, in a modified form, in the retrospective assessment workbook.. Participants were asked whether the constructs used in the workbooks made sense in terms of being useful descriptors of their communities. They were also asked to list any variables or constructs that they felt would be useful for describing their community that had not been

included in the assessment workbooks. Participants felt that the constructs were valid community descriptors. None of the constructs were singled out as being irrelevant, inappropriate, or too broadly drawn to be useful. Participants did, however, have some variables which they felt would be useful for describing their communities. These additional variables are listed below by community:

Baker City, Oregon

- community development organization - what can it provide to handle economic change
- shared vision among community members
- length of projects - related to ability of community to see projects through to completion

Burns, Oregon

- public land dependence - how dependent is community on federal, as opposed to private or state land
- public land policy changes
- national policy and interests - elections at national level that effect local level interests
- economic opportunities for the future
- resource availability

Driggs, Idaho

- family life - resources and programs aimed at helping families
- police, medical, and schools: it is hard to lump these together as is done in the workbook

Joseph, Oregon

- religious diversity
- self-reliance and self-determination on the part of the community
- local leaders and activists that have influence and impact at the state and federal levels
- diversity of ages in community and level of intergenerational communication
- access to natural resources

Kellogg, Idaho

- global economic ties - is the community subject to changes in national or global economies

Mattawa, Washington

- tax base of community

Pomeroy, Washington

- diversity of population
- wealth of the community as a whole
- private industry influence and availability of **funding**
- knowledge of available funding and other resources

Riggins, Idaho

- economics - number of **jobs** needed by household to make ends meet
- economics - number of people in the community on welfare
- banking based on knowing locals and being involved in the community
- acceptance of new ideas and people

Salmon, Idaho

- communications - level and frequency of mail and phone service
- public transportation
- radio stations involved in community to help residents meet needs

Whitefish, Montana

- tax structure - individual, corporate, and property
- political representation - does a community have power in the county or region
- governmental structure - especially with city manager type government
- senior citizen facilities

Although participants felt these constructs were missing, most are represented by the constructs assessed in the community workbooks, and could be viewed as refinements of the constructs used.

Ranking the Assessment Workbook Constructs

In the final portion of the retrospective workshop, the workbook constructs were ranked in terms of their importance for the communities managing the changes they faced. After assessing the validity of the workbook constructs and adding any missing variables, participants were asked to list the three constructs that had been most important, and the three least important, to how their community had managed change. Participants were instructed that they were not limited to the workbook constructs, and they were free to choose the variables they had added if appropriate.

The constructs that were most and least important to how the case study communities managed change are presented in tables 1 and 2. The percentage in each cell represents the percentage of retrospective workshop participants in each community that rated a construct as the most or least important factor influencing how the community has managed change. For example, four of the six participants (67%) in Riggins, Idaho, rated “Quality of Life” as being most important for how the community has managed change, while five of the six participants in Whitefish, Montana, rated “Leadership” as being most important for how their communities managed change, for a total of 83 percent. Because each participant selected three constructs as being most important, and three constructs as least important, the overall total equals 300 percent (plus or minus rounding error) and not 100 percent.

Table 1. Most Important Constructs for Managing Change.

Construct	Baker City	Burns	Driggs	Joseph	Kellogg	Mattawa	Pomeroy	Riggins	Salmon	Whitefish
Attractiveness			20%		50%			17%		17%
Regional Attachment					50%			17%	100%	17%
Cohesiveness	43%	80%	20%	83%			80%		14%	17%
Services						50%				
Autonomy									71%	
Diversity		20%	100%	50%		25%	20%	33%		17%
Dependence					25%	25%		50%	14%	
Business			20%		25%	50%				
Quality of Life	57%		20%		50%	25%	100%	67%	71%	17%
Leadership	71%	100%	20%	83%	25%	25%				83%
Government		100%			25%					33%
Preparedness	71%		60%	17%	25%	50%	100%		29%	50%
Other	*		**	***		****		*****		*****

Note: all figures are the percentage of workshop participants that listed the construct as being most important to how the community managed change

* 100% shared vision

** 40% police, medical, and schools

*** 17% self reliance/determination,
17% leaders/activists with state and national influence
33% access to resources

**** 50% tax base of community

***** 17% number of people in community on welfare
17% banking based on knowing locals/involvement
in community
83% acceptance of new ideas and people

***** 33% tax structure
17% political representation

Table 2. Least Important Constructs for Managing Change.

Construct	Baker City	Burns	Driggs	Joseph	Kellogg	Mattawa	Pomeroy	Riggins	Salmon	Whitefish
Attractiveness	14%		60%						14%	17%
Regional	57%	100%	80%			100%		17%		17%
Attachment	29%	100%	40%	67%		50%			29%	33%
Cohesiveness			20%					33%		33%
Services						25%			57%	17%
Autonomy	86%	100%	80%	100%	75%	75%	100%	83%		
Diversity	71%				50%					33%
Dependence	29%				50%	25%				33%
Business	29%			50%					43%	33%
Quality of Life			20%							
Leadership								50%		
Government	29%				75%			33%	14%	
Preparedness					50%			83%		33%
Other				*			**	***	*****	*****

Note: all figures are the percentage of workshop participants that listed the construct as being least important to how the community managed change

* 17% religious diversity
 17% self-reliance and determination
 33% age diversity and level of intergenerational communication
 17% access to resources

** 100% diversity of population
 80% wealth of community as a whole
 20% private industry influence and funding availability

*** 17% accept new ideas and people

**** 14% radios stations

***** 17% governmental structure
 17% senior citizen facilities

Assessing the Validity of Community Resilience Index (CRI) and Its Implications

The Community Resilience Index (CRI)

As described in Part I of this report, the current study developed a community resilience index (CRI) based on findings from the community self-assessment as well as from the case studies described in this volume. The CRI was based on factors that the research findings indicate play an important role in a community's ability to manage change in a pro-active manner, including social organization (working together to achieve common visions and goals), amenities (high-quality scenery and attractions in region), civic leadership (active, creative, and effective leadership), and economic structure (strong, diverse economy). The basic assumption of the CRI is that communities that score higher on these factors, relative to other small communities, will be more resilient in managing change.

When developing the CRI, the proportions of retrospective workshop participants reporting that the constructs were among the most important for their communities responding to change (see table 1) were analyzed. These proportions were similar to the weightings obtained for the various CRI constructs through the empirical analysis described in Part 1 of this report, where factor analysis of the current assessment workbook data yielded critical factors and weightings that mirrored those obtained from participants across the ten retrospective workshops.

In addition to learning more about how small, rural communities respond to changes in natural resource policy, as well as other societal changes, a goal of the case study research was to assess the validity of the findings of the larger community assessment project. For example, the results of the current self-assessments indicate that communities that have undergone and dealt with change in the past will be better able to do so in the future. If so, the communities examined

with the case studies should be more resilient than other communities and have **significantly** higher CRI scores, given that they were ones identified as having experienced significant change. Also, improvement in construct ratings (an increase in say, civic leadership or economic diversity) would be expected between the retrospective and current workshops within a particular community.

Results

Eight of the 10 communities studied with the case studies (80%) were in the upper one-third of communities in terms of high resilience. Only Driggs and Whitefish, communities that were reported to be amenity-based and experiencing rapid population growth, had relatively low resilience scores that placed them in the moderately 'low resilience class. Generally speaking, communities in the highly resilient category were the ones that seemed to be the most pro-active in creating their own future and expanding economic opportunities, while the other communities were less able or willing to do so.

Table 3 contains the mean construct ratings for the critical variables for both the retrospective and current assessment workshops for all ten of the case study communities. are Construct ratings that have improved or declined from the retrospective to the current workshop discussed in the following sections; only those changes greater than or equal to $+ / -.5$ are mentioned, except where exceptions to this are noted. (Although this cutoff figure was arbitrary, it was intended to remove some of the "changes" that might actually have represented noise in the data.)

Table 3. Mean Construct Ratings From Retrospective and Current Assessment Workshops.

TOWN	ATT	REG	COH	SERV	AUT	ECON	DEP	BUS	QUAL	LEAD	GOVT	FUT
Baker City retro	6.00	6.29	5.13	5.50	4.75	4.75	6.13	4.63	6.00	5.63	4.38	4.88
Baker City	5.80	6.60	5.80	5.00	5.80	5.40	6.60	5.60	6.00	6.40	5.40	5.40
Burns retro	5.20	6.60	5.60	5.40	5.60	2.60	7.00	4.00	6.20	5.20	5.20	4.00
Burns	4.38	5.75	4.75	4.75	4.38	3.63	6.13	3.88	5.88	5.38	4.88	3.38
Driggs retro	4.60	5.80	4.60	5.80	4.40	4.80	5.40	3.80	6.20	4.20	3.60	2.80
Driggs	5.00	6.40	4.00	5.00	3.40	4.60	6.00	3.50	6.00	3.50	3.50	2.50
Joseph retro	5.50	6.83	5.67	4.80	4.60	4.20	6.40	3.80	5.80	4.80	4.00	4.00
Joseph	6.20	6.60	4.60	5.60	4.40	6.60	5.40	5.00	6.40	5.00	5.40	4.20
Kellogg retro	3.50	5.75	5.00	5.50	5.75	2.25	6.25	3.50	5.25	4.00	4.00	3.25
Kellogg	4.88	6.25	5.63	5.88	4.63	3.75	6.25	5.75	6.38	5.50	5.50	5.00
Mattawa retro	4.20	4.40	6.20	4.00	2.40	4.50	6.25	3.00	5.75	5.00	4.25	3.50
Mattawa	3.17	4.83	4.83	6.17	5.17	5.17	7.00	4.83	6.17	5.83	5.67	5.00
Ponieroy retro	4.75	5.50	5.50	5.50	5.00	3.80	6.00	2.20	6.80	5.00	4.80	2.60
Pomerooy	4.63	5.63	6.00	5.25	4.38	3.25	6.50	2.75	5.75	5.00	4.88	3.88
Riggins retro	5.00	6.33	6.00	4.83	5.00	3.83	6.50	3.17	6.33	5.33	6.17	2.33
Riggins	5.13	6.50	5.38	4.38	4.38	3.13	6.38	4.38	6.13	5.50	5.25	5.00
Salmon retro	4.57	6.57	5.57	5.71	5.86	5.86	6.29	3.86	6.00	5.14	4.86	4.14
Salmon	4.86	6.29	5.29	5.86	5.29	5.86	6.29	5.43	6.43	5.00	5.14	4.43
Whitefish retro	6.17	6.17	3.33	6.00	4.00	5.50	5.33	3.00	6.17	4.50	3.83	3.33
Whitefish	4.50	6.14	4.57	6.14	3.57	4.43	6.29	3.57	5.43	4.14	4.00	4.43

Constructs	
ATT	Community Attractiveness
REG	Regional Attractiveness
COH	Community Cohesiveness
SERV	Community Services
AUT	Community Autonomy
ECON	Economic Diversity
DEP	Resource Dependence
BUS	Attractiveness for Business
QUAL	Quality of Life
LEAD	Community Leadership
GOVT	Effectiveness of Community Government
FUT	Preparedness for the Future

Baker City, Oregon

The CFI score for Baker City, Oregon, and also the ratings from the town's retrospective assessment were generally high. Nonetheless, seven of the construct ratings increased in size from the retrospective to the current assessment, including *cohesiveness, autonomy, economic diversity, attractiveness for business, leadership, effectiveness of government, and preparedness for the future.*

The largest increases were in the ratings of the community's *economic diversity, attractiveness for business, and leadership.* Only one of the construct ratings, that for *community services,* decreased from the retrospective to the current workshop, for a net increase in six constructs. These ratings are reflected in the generally positive outlook of the community leaders who attended the assessment workshops.

The CRI rating of high resilience for Baker City is consistent with the case-study findings, which were of a healthy town actively working to achieve its desired future. The ratings of constructs were generally high at both workshops, and none of the changes in ratings from retrospective workshop to current workshop were dramatic. Those construct ratings that did increase were among the ones most critical for the CRI. Baker City, the largest of the case study communities, has taken a pro-active stance toward managing change and working toward developing new economic options, something that community leaders are proud of. The community clearly was actively pursuing a planned course of action.

Burns, Oregon

Many of the ratings from the Burns, Oregon, retrospective assessment were higher than those for other case study communities. In particular, the rating of the *resource dependence* and

regional attractiveness constructs were very high. In contrast, the rating on the *economic diversity* construct was very low, which is not unexpected for a town that was once highly dependent on natural resources.

The large number of ratings for Burns that decreased between the retrospective and current assessment workshops presents somewhat of an anomaly, given the town's moderately high CRI rating. However, Burns did have the lowest CRI score of the eight case-study communities that were in the high resilience categories. Seven construct ratings decreased from the retrospective workshop to the current workshop, including *regional attractiveness*, *community services*, *autonomy*, *resource dependence*, and *preparedness for the future*. Significantly, *community attractiveness* and *social cohesiveness* -- two important parts of the resilience index -- also declined. However, the construct ratings for Burns were fairly high to begin with.

The one construct rating that increased from the retrospective to the current workshop was an important one, *economic diversity*. A net decrease in six construct ratings was recorded for Burns, and its CRI rating was still comparatively high despite this decrease. Although it would like to keep some facets of local life the same, Burns has been working to manage the changes taking place in the community, with workshop participants reporting that the community has been actively planning for new economic opportunities and for developing a new vision for the future,

Driggs, Idaho

The construct ratings from the retrospective workshop in Driggs, Idaho, ranged from moderately low to moderately high. Ratings for only two of the constructs, *regional*

attractiveness and *resource dependence*, increased at the current assessment workshop, with the increase in *resource dependence* likely reflecting the increased recreation and tourism activity in the area. Ratings for four of the constructs -- *community services*, *social cohesiveness*, *economic diversity*, and *leadership* -- decreased in the current workshop, for a net decrease in two construct ratings. Three of these constructs were components of the CRI. These changes reflect the belief by retrospective workshop participants that the community had not been as successful at planning as it might have been. Driggs had yet to agree on what the future of the community should be.

Given the moderate construct ratings and the finding that ratings for three of the constructs had declined -- *cohesiveness*, *economic diversity*, and *leadership* -- that are important to the CRI calculation, a moderately low resilience score for Driggs does not seem inconsistent. The rating *for preparedness for the future* also declined, although by less than the ± 0.5 threshold that was established. Population growth continues in the Driggs area, and the community has only had limited success in planning for the future and solving growth-related problems. The community and its leaders need to work together if they are to successfully manage growth and the changes that growth brings.

Joseph, Oregon

The construct ratings for the retrospective workshop in Joseph, Oregon, were relatively high. In addition, six construct ratings, including those for *community attractiveness*, *community services*, *economic diversity*, *attractiveness for business*, *quality of life*, and *effectiveness of government*, increased in the current assessment. *Economic diversity* had a large increase of 2.4' points, and with such a large increase in this rating, it is not surprising that the ratings for *resource*

dependence and *social cohesiveness* declined. The net change was an increase in ratings for four constructs.

In light of the construct ratings and the case study findings, the high resilience score obtained for Joseph is not surprising. Although the rating for *social cohesiveness* decreased, which likely reflects the new people (e.g., retirees, artists) moving into the area and **diversifying** its economy, the size of the rating for *leadership* was surpassed by the ratings for only three of the other communities studied, and it stayed the essentially the same. Also, the rating for *economic diversity* increased.

The community's resilience is perhaps best reflected in its high level of activity in trying to manage the changes taking place, and in developing new plans or updating old ones. People perceive that the community could be developing too fast and appropriate action is needed. Although Joseph has been successful at managing past changes and **diversifying** its economy, residents are concerned that, if the community is unable to articulate and plan for its future, those things that residents most like about the community may become victims of that same success.

Kellogg, Idaho

Construct ratings from the retrospective workshop in Kellogg, Idaho, were moderate to moderately low. The ratings of nine constructs, including *community* and *regional attractiveness*, *cohesiveness*, *economic diversity*, *attractiveness **for** business*, *quality **of** life*, *leadership*, *effectiveness **of** government*, and *preparedness **for** the future*, increased in the current assessment workshop. The only construct that dropped, even marginally, was *community autonomy*, for a net increase in eight constructs.

Kellogg has been active in trying to increase economic opportunities and quality of life, which is reflected by the number of construct ratings that increased. The high CRJ score for Kellogg is consistent with the increase in the workbook ratings between the retrospective and current assessment workshops and the findings of the case study. Despite the jobs lost when the Bunker Hill Mine closed, Kellogg continues to take an active stance toward defining and pursuing its future.

Mattawa, Washington

The construct ratings from the retrospective workshop in Mattawa, Washington, were comparatively low, with the exception of *social cohesiveness* and *resource dependence*. Ratings on a total of eight constructs, including *community services*, *autonomy*, *economic diversity*, *resource dependence*, *attractiveness for business*, *leadership*, *effectiveness of government*, and *preparedness for the future*, increased in the current assessment workshop. Two of the constructs, *community attractiveness* and *social cohesiveness*, declined in the current assessment workshop, for a net increase of six construct ratings. The efforts by the community to improve local services and infrastructure, and to generally manage growth, are reflected in these rating changes.

The high resilience score for Mattawa is reflected by the number of construct ratings that increased; among those that increased were *economic diversity* and *leadership*, both of which are important for the resilience index. Also, the current assessment ratings were generally high. Additionally, retrospective workshop participants were proud of the efforts by the community to manage major growth in population.

However, the retrospective workshop also discussed growth-related problems that Mattawa had yet to fully address. These problems include crime, infrastructure stress, and cultural change which has yet to fully manifest its impacts on the community. Residents also were concerned that the community might be impacted from the outside by changes in water and property rights, something the community will have little control over. These problems need to be addressed before the community can be said to have fully managed the changes taking place in Mattawa.

Pomeroy, Washington

The construct ratings for the retrospective workshop in Pomeroy, Washington, were generally moderate to low, with the constructs *for preparedness for the future*, *attractiveness for business* and *economic diversity* rated particularly low. However, ratings for four constructs, including *social cohesiveness*, *resource dependence*, *attractiveness for business*, and *preparedness for the future*, increased in the current assessment workshop. This community, which has long depended on agriculture and food processing, has been engaged in economic development and planning efforts, as reflected in these ratings. Although ratings on three constructs, including *autonomy*, *economic diversity*, and *quality of life*, decreased between the retrospective and the current assessment workshop -- for a net increase in one construct -- the case study results and construct ratings otherwise support the moderately high resilience score assigned to Pomeroy.

The community has been taking an active role in planning for the future, including upgrading its infrastructure and community services. Future growth from the Lewiston/Clarkston area is anticipated, and current assessment participants saw a need for continued long-range

planning if Pomeroy hopes to manage the expected growth. The community has been taking a pro-active stance toward creating economic opportunities and improving the future of the community.

Riggins, Idaho

The construct ratings for the retrospective assessment workshop in Riggins, Idaho, were moderately high, with the exception of *preparedness for the future*, which was low. Ratings for two constructs, *attractiveness for business* and *preparedness for the future*, increased in the current assessment workshop. A total of four construct ratings, including those for *cohesiveness*, *autonomy*, *economic diversity*, and *effectiveness of government*, decreased in the current assessment workshop, for a net decrease of two construct ratings. The *resource dependence* rating declined slightly, but participants at the retrospective workshop recognized that recreation and tourism (outfitted rafting, in particular) are just another type of *resource dependence*.

Riggins, the case-study community with the smallest population, does not have the resources to engage in large scale planning and economic development efforts. It is perhaps different from most of the other case study communities in this respect. Significantly, two components of the CRI, *social cohesiveness* and *economic diversity*, decreased in the current assessment workshop; these changes in the town's economy and character likely reflect a shift from a broad economic base that included a sawmill to one primarily dependent on tourism and retirees. However, Riggins still was rated as highly resilient. Although hard feelings persist in the community about perceived negative impacts of changes in natural resource policy, the town's economy has successfully shifted to recreation and tourism. Participants at the retrospective

workshop emphasized that Riggins' residents were willing to do what they had to do to remain there. The community's high resilience score reflects this dedication to community and place.

Salmon, Idaho

Construct ratings from the retrospective workshop in Salmon, Idaho, were moderately high, with the exception of *regional attractiveness*, *resource dependence* and *quality of life*, which were among the highest for any community examined with the case studies. The rating for only one construct, *attractiveness for business*, increased in the current assessment workshop; also, the rating for only one other construct, *autonomy*, had decreased since the retrospective assessment workshop. The relative constancy of these ratings, with no net change in construct ratings between the two workshops, reflect the belief of retrospective assessment participants that, apart from the ebbs and flows of the resource extraction industries, many aspects of life in Salmon have been fairly stable.

The high resilience score for Salmon seems appropriate consistent with the construct ratings, given that both the retrospective and current workshop construct ratings were relatively high. Workshop participants realized that change of some kind, and growth in particular, was likely to occur in Salmon. Some in-migration had already occurred, and consequently changes to the town's quality and style of life. Residents were aware that planning and zoning activity might be necessary to maintain the qualities that attracted people to Salmon in the first place, and they were concerned about trying to achieve a vision for the future.

Whitefish, Montana

Construct ratings from the retrospective workshop ‘in Whitefish, Montana, were low to moderate overall. Ratings for a total of four constructs, including *social cohesiveness*, *resource dependence*, *attractiveness for business*, and *preparedness for the future*, increased by the current assessment workshop. However, ratings for three other constructs, including *community attractiveness*, *economic diversity*, and *quality of life*, decreased for a net increase of only one construct rating.

Although the community attempted long-range planning, it failed: one of the retrospective assessment participants commented that the community was more prepared for the future ten years ago than it is today. If so, the moderately low CRI score calculated for Whitefish might be appropriate. That resilience score likely reflects the moderately low ratings for most of the constructs. In particular, the rating for *economic diversity* had decreased since the retrospective assessment, and the low *Leadership* and *social cohesiveness* ratings affirm the perception that the community has not been successful at managing growth.

Summary

Table 4 summarizes the results for the 10 case-study communities on their resilience score and the net increase in construct ratings between the retrospective and current workshops, in order of their resilience ranking. It shows a clear trend toward increased resilience that is related to larger net increases of construct ratings: a total of zero net increases in construct ratings characterizes the five case-study communities with the lower CRI scores, while a total of +16 net increases of construct ratings resulted for the other five with the higher CRI scores.

Table 4. Community Resilience Scores, Rankings and Net Change in Construct Ratings for Five Least Resilient Case-Study Communities.

<u>TOWN</u>	<u>Resilience Score</u>	<u>Resilience Rank</u>	<u>Resilience Class</u>	<u>Net Change in Construct Ratings</u>
driggs	350.67	53	Mod. Low	-2
whitefish	354.46	60	Mod. Low	1
burns	396.04	130	Mod. High	-6
pomeroy	398.94	137	Mod. High	1
mattawa	403.73	149	Mod. High	6
TOTAL NET CHANGE				0

Table 4. Community Resilience Scores, Rankings and Net Change in Construct Ratings for Five Most Resilient Case-Study Communities.

<u>TOWN</u>	<u>Resilience Score</u>	<u>Resilience Rank</u>	<u>Resilience Class</u>	<u>Net Change in Construct Ratings</u>
kellogg	425.30	175	High	8
riggins	428.60	178	High	-2
joseph	432.66	181	High	4
salmon	437.94	186	High	0
baker	457.18	191	High	6
TOTAL NET CHANGE				+16

Of the ten “significant change” communities examined with in-depth case studies, half were among those currently in the high resilience class, while another three were classified as moderately high in resilience; only two were rated much lower, in the moderately low resilience class. In five of the eight communities with relatively high resilience scores, a majority of construct ratings increased, and in one other (Salmon), the already comparatively high construct ratings were stable. Only in Burns did the scores of a large majority of constructs decrease. However, as noted above, the construct ratings for Burns from the retrospective assessment were comparatively high, and it was ranked lowest (eighth) of the eight relatively high resilience communities. Driggs, Riggins and Whitefish, the other case-study towns with relatively fewer increases in construct scores, are all towns characterized by significant amenity-based population growth.

A significant finding of the survey of the 198 communities was that towns that have experienced greater change in the past will be more able to manage change in the future. An analysis of variance was conducted of the ratings of the perceived amount of change in a community since 1990 (on a scale from 1 -- no change -- to 7 -- a great deal of change -- from the current assessment workshop) based on the community’s resilience class. The results were highly statistically significant ($F\text{-ratio} = 10.25, p < 0.00$), with the low resilience communities reporting a mean of 3.5 for the rating of the amount of change since 1990, while the mean rating for high resilience communities was a significantly higher 4.7. A conclusion from these results is that experiencing major change in the past can help prepare a community to better adapt to change in the future. The results of the analysis of change in the ten case-study communities since 1990 also affirm this conclusion. They were selected specifically because they were reported to have undergone major changes, and the mean rating of change since 1990 for these communities was

5.1, well above the mean rating for low resilience communities of 3.5. Also, the majority (60.8%) of changes in the ratings for the constructs between the two independent panels of participants in the both the retrospective and current assessment workshops were increases as had been theorized. This finding supports the hypothesis that conditions for many of the community constructs had improved for many of communities.

Additional research is needed that more fully examines the CRI. Research specifically designed to validate the CRI would be useful, especially for providing insights into shortcomings or problems identified in the case studies.

CONCLUSIONS

Time and resources constrained the ability of the community assessment team to carry out the entire research plan, and not all of the research questions posed for the case studies addressed. The ten case-study communities are clearly all different, both in terms of the needs of the community and the financial and human resources available to meet those needs, and other than broad statements about them may be misleading. There are, however, some general observations that can be made about the communities and how they have responded to change.

The model of community change theorized that different types of events, such as internal versus external events, occur in a community, and it is possible that different kinds of events could result in different response processes on the part of the community. In general, participants in the retrospective assessment workshop did not distinguish between the ways events or changes originated. These changes were often characterized by long-time residents as having originated outside the community.-- for example, in the case of Burns, Oregon, and Riggins and Salmon, Idaho, the federal government; in the case of Kellogg, Idaho, a large minerals corporation. In cases where the federal government was viewed as being responsible, a great deal of animosity toward and mistrust of the government were expressed. In the cases where citizens identified that global economics or inadequate mill equipment were responsible, less animosity was expressed toward the corporate entities. Regardless of the source, the changes were generally viewed by retrospective workshop participants as negative for the community. It should be noted that these views were not expressed as strongly by key informants in the current community assessments. In addition, it was often the accumulated impacts of a number of events, rather than a single event, that was viewed as the problem.

Regardless of the source or type of change, responses by the case study communities were fairly similar. Most of the organized responses by the communities involved some type of economic development: either attempts to bring in new industries, develop a new economic sector such as tourism, or maintain a traditional but struggling local industry. Most of the communities have come to view recreation and tourism development as a legitimate part of the local economy, but none want to become solely dependent on that sector of the economy. Communities obviously differed in the level of success they achieved through economic development efforts.

Another common response was the improvement or development of the local infrastructure of roads, utilities, and facilities. Updating the local infrastructure increased a community's attractiveness to new businesses and to tourists and recreationists, and it enhanced its quality of life for community residents. Many of the communities had engaged in some planning activities, but they had been only partially successful. Nonetheless, virtually all the communities felt that they were more prepared for the future than they had been previously. The consistency of these community responses suggests that, for the most part, communities did not respond differently to different types of change.

The case studies suggest two potential problems for the ability of small, rural communities to manage change in the future. The first involves the difficulty of a community maintaining a viable base of leaders. In many of the case-study communities, only a small, core group of active leaders was involved in community affairs, which is not that unusual for any situation or organization. However, in times of significant change in which a number of aspects of life in the community are being affected, the potential for leader burn-out is great. Retrospective workshop participants mentioned this potential, and it also became evident in the course of setting up the

retrospective workshops, when asking these people to participate. Since leadership is crucial to a community's ability to manage change, efforts are needed that keep it strong and active.

A second problem is the ability of communities to manage the growth that many of the case study communities were experiencing. While most of the communities noted that they had engaged in some planning, most said that more would be needed for the community to maintain the community qualities that local residents value the most. They also noted that the planning already carried out was not entirely successful. While planning activity is often viewed as an intrusion by government and counter to the emphasis on individuality found in most towns in the American West, it does provide a community with the opportunity to envision and work toward a new future. In the face of growth and an influx of new people and new ideas, planning that involves citizens may be the only way for a community to resolve differences in residents' desires. This fact was recognized by participants at both the retrospective and current assessment workshops.

The case study data suggest that active development of a community's leadership base and its pro-active implementation of plans for the future are not typical responses to change in small, rural communities. Perhaps the greatest concern expressed in the case studies was that the quality of life and other characteristics of the community had changed in a manner that the community was unable to control. Communities have changed in the past, and they will continue to do so in the future, and the desire by some rural communities to be left alone and remain as they have always been will become increasingly problematic. Active leadership, a willingness to give up some individual control for the good of the community, and perhaps some financial and technical assistance from the outside could aid small, rural communities to direct changes in ways that suit them best and help them realize a future that is desirable but feasible.

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APPENDIX A:
Initial Contact Instructions
and
Community Identification Form

Initial Contact Instructions

- A. Calls will be made to state economic development directors, to regional agricultural extension agents, and to national forest and BLM planners. It may be necessary in some cases to go down to a county economic development level. The first step will be to explain to these people what it is we are trying to do, and that we are interested in communities with populations ranging from 25 to 10,000.
- B. The following questions will then be posed to the various people contacted:
1. Can you provide a list of communities that, since 1980, have undergone significant change? What was the nature of the change? *[Please refer to form for the sequence of questions to follow for each community named]*
 2. Can you provide a list of communities that, since 1980, have been significantly impacted by some kind of change in natural resource policy or allocation? We're interested in any kind of change: decrease in timber harvest, change in water allocation, decrease in grazing permits, change in pesticide use, etc. What was the specific policy/allocation change? *[Please refer to form for the sequence of questions to follow for each community named.]*
 3. Can you provide a list of communities that, since 1980, have undergone some kind of significant economic change? We're interested mainly in shifts in jobs by sector or industry (but any other criteria they use may also be helpful). *[Please refer to form for the sequence of questions to follow for each community named]*

Community ID Form

Person Contacted _____ **From** _____

Phone Number _____

Community Name _____ **State** _____ **Size** _____

Type of Change (*circle one*) **Economic** **Natural Resource** **Other**
explain:

Cause of Change:

Population/Demographic Changes?

- . **population numbers (increase/decrease):**
- . **lifestyle:**
- . **occupation:**
- . **government workers:**
- . **other:**

Community Response (decline/maintain/growth):

Other Comments:

APPENDIX B:

Retrospective Assessment Workbook

Assessing Your Community In Retrospect

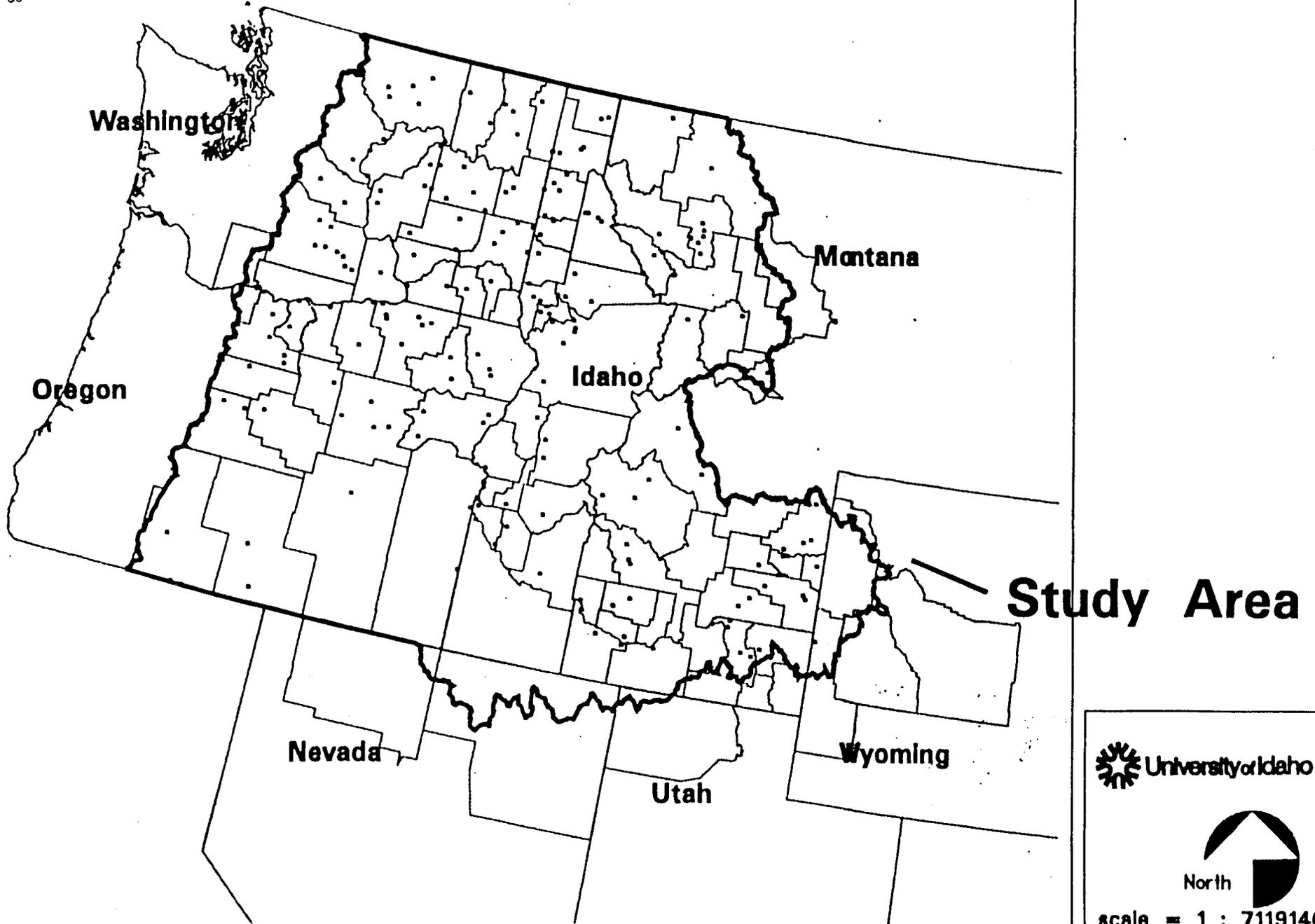


*A Workbook for Examining
the Characteristics of Kellogg
in 7 980, just prior to the
Bunker Hill closure*

Please complete this workbook ***before coming***
to the community workshop.

Eastside Ecosystem Management Project Communities to be Sampled in Study Area

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 University of Idaho



scale = 1 : 7119140

Dear Community Leader,

We are a group of university scientists who are conducting a study of small rural communities like yours in the Inland Northwest and Northern Rocky Mountain West that have undergone change. We have designed this workbook so that community leaders like you, who were active, can help us gain an accurate picture of the complexity of your community during these times of change.

This information will be used by federal and state land managers who are working on a region-wide project called the "Eastside Ecosystem Management Project." They are exploring strategies to guide future uses of our region's varied natural resources, from timber, grazing, and farming land to wildlife, recreation, and tourism (please see the enclosed map of the geographic range of the project).

*The ideas that you share with us in this workbook will help us describe to land managers the possible impacts of their activities on the people, economies, and communities in your region. Your **answers** are critical because your community is one **of a ten (10)** chosen out **of** the approximately 450 small rural communities in this broad region.*

The workbook should only take an hour or so to complete. Please complete it **before coming** to the community workshop. Each of the 12 sections focuses on information about particular aspects of your community, including:

- the character and quality of life in your community;
- the cohesiveness of your community and its ties to other communities;
- the economic diversity and resource-dependence of your community, and its ability to attract new business;
- the effectiveness and vision of your local government; and
- your community's ability to chart a course for the future.

Please answer our questions as carefully and thoroughly as you can. When reflecting upon your community's characteristics, **please think about your community in relation to other rural communities in the region during the same time period.** We will meet with you and five to seven other community leaders to share information and explore the diversity of opinions about what your community was like **back** then. Please be sure to complete this workbook **before** you come to the group meeting.

Thank you for completing the workbook for us! You can be assured that your answers will not be associated with your name, and they will be kept strictly confidential. If you have any questions at all, please feel free to contact us at the numbers listed below.

Please write the name of your community here: _____
(town) (state)

Questions? Please call one of the following individuals	Work	Home
Chuck Harris	(208) 385-7911	(208) 382-9194
Jean Haley	(208) 385-5846	(208) 382-4336
Chris Wall	(208) 385-5846	(208) 382-3453

Section 1. COMMUNITY CHARACTER IN 1980

In this section, we would like you to express your feelings and perceptions about what your community's attractiveness and/or character **were** like in 1980, just prior to the closing of Bunker Hill. Community attractiveness is a combination of many things that are often highly subjective (ranging from your community's visual appearance to the places outside your community that contribute to its attractiveness). In the first part of this section, we would like to reflect upon the attractiveness of your community itself – that is, those things found Inside your community that make it attractive or unattractive. In the second part, we would like you to reflect upon those things outside your **community** that contribute to or detract from your community's attractiveness.

A. The Attractiveness of Your Community Itself in 1980

1. "Special places" is a term we are using to describe settings, areas or locations in your community that have special meanings for people. The meanings of areas may derive from their history, or the times you have spent there with family or friends, or because of a connection to work, or because they are **particularly** unique or scenic, or they arouse special feelings or emotions in you – or they may have **special** meaning to you for some other reason. What are the places in your community that were particularly important or special to you in **1980**? Where were they, and why were they special? (Please describe these places, and write why or how they were special to you; if there were none, simply write "None.")

NAME/DESCRIPTION
OF SPECIAL PLACE

LOCATION

WHY WAS IT SPECIAL?

2. How attractive do you feel the downtown area of your community was in 1980? (*Circle one number*)

EXTREME LACK
OF CHARACTER: 1 2 3 4 5 6 7
Unattractive

EXTREME ABUNDANCE
OF CHARACTER:
Attractive

3. Back then, how attractive do you feel your community's residential neighborhoods were?
(*Circle one number.*)

EXTREMELY
UNATTRACTIVE 1 2 3 4 5 6 7
NEIGHBORHOODS

EXTREMELY
ATTRACTIVE
NEIGHBORHOODS

4. Keeping in mind your previous responses, how **attractive** do you feel your community was overall compared to other **small rural communities** in the region in **1980**? (*Circle one number.*)

EXTREMELY UNATTRACTIVE 1 2 3 4 5 6 7 EXTREMELY ATTRACTIVE

B. The Attractiveness of the Region Outside Your Community in 1980

1. Please list the three most important places that you used in **1980** that were outside of your community's town limits (within 100 miles). You might have used the places for recreation activities or work, as a place to escape to when you wanted to get away, as a special place to take a **friend**, as a special place to be alone, as a special place to shop or eat out, or as a place that you used for any other purpose you feel is special.

NAME OF PLACE (Location)

WHY WAS IT SPECIAL?

2. Back then, how important do you feel the scenery outside your **community** was to the overall character of your community? (*Circle one number.*)

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

3. Back then, how abundant would you say special places (that is, places that are special to you) were that were outside your community (within 100 miles)? (*Circle one number.*)

NOT AT ALL ABUNDANT 1 2 3 4 5 6 7 EXTREMELY ABUNDANT

4. Back then, how important were nearby (within 100 miles) outdoor recreation opportunities to the overall character of your community? (*Circle one number.*)

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

5. Back then, how important were nearby (within 100 miles) designated wilderness areas, national parks, wild and scenic rivers, or other kinds of high-quality natural environments to the overall character of your community? (*Circle one number.*)

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

6. Back then, how important do you feel the history and traditional customs and culture of your region were to your community's overall character? (*Circle one number.*)

EXTREMELY UNIMPORTANT 1 2 3 4 5 6 7 EXTREMELY IMPORTANT

7. Back then, how unique do you feel your region (within 100 miles) was in terms of special qualities and travel attractions, such as its historical heritage, theme parks, etc.? (*Circle one number.*)

EXTREMELY COMMON: 1 2 3 4 5 6 7 EXTREMELY UNIQUE:
 No unique, special features Outstandingly special, unique features

8. Keeping in mind all the answers in this section dealing with the attractiveness of your **community's** region, how attractive do you feel your region *was* at that time? (*Circle one number.*)

EXTREMELY UNATTRACTIVE REGION 1 2 3 4 5 6 7 EXTREMELY ATTRACTIVE REGION

C. Community Attachment in 1980

1. To what extent did you feel at home *in your community* in 1980? (*Circle one number.*)

NOT AT ALL 1 2 3 4 5 6 7 A GREAT DEAL

2. Back then, if you had had to move away from your community, how sorry or pleased would you have been to leave? (*Circle one number.*)

EXTREMELY SORRY 1 2 3 4 5 6 7 EXTREMELY PLEASED

3. Keeping in mind all of the answers you have given in this section about the special places in your community and region, how attached did you feel to your community back then?

EXTREMELY UNATTACHED:

Some other community 1 2 3 4 5 6 7
 could have easily
 substituted for this one.

EXTREMELY ATTACHED

This community was like a
 part of me.

Section 2. COMMUNITY COHESIVENESS IN 1980

The cohesiveness of a community refers to the degree to which the residents of a community work together to get things done. It is essentially the “sense of community” that is held by residents. This section asks questions about the cohesiveness of your community and how much people identified with and were committed to the community in 1980.

1. What were the different kinds of people and/or groups that made your community diverse in 1980?

2. Back then, how often did people work together to get things done in your community? (*Circle one number.*)

SELDOM IF AT ALL 1 2 3 4 5 6 7 VERY OFTEN

3. Back then, how supportive of one another were people who lived in your community? (*Circle one number.*)

EXTREMELY NONSUPPORTIVE 1 2 3 4 5 6 7 EXTREMELY SUPPORTIVE

4. Back then, how committed were residents to your community? (*Circle one number.*)

EXTREMELY UNCOMMITTED 1 2 3 4 5 6 7 EXTREMELY COMMITTED

5. Back then, how similar were the beliefs and values in your community? (*Circle one number.*)

EXTREMELY DIFFERENT 1 2 3 4 5 6 7 EXTREMELY SIMILAR

6. Back then, how strongly did residents identify with your community? (*Circle one* number.)

WEAKLY IDENTIFY 1 2 3 4 5 6 7 STRONGLY IDENTIFY

7. Which of the following best describes your town's sense of community at that time? (*Circle only one.*)

- a. By and large, most of us in the community held similar values and were usually in agreement.
- b. We **were** a community of diverse values, but we had learned how to work out our differences.
- c. We were a very diverse community, and generally there was no real agreement among us.

8. Keeping in mind all of the answers that you have given in this section of the workbook dealing with your community, please rate the overall cohesiveness of your community back then.

(*Circle one number.*)

EXTREMELY WEAK SENSE OF COMMUNITY 1 2 3 4 5 6 7 EXTREMELY STRONG SENSE OF COMMUNITY

Section 3. COMMUNITY SERVICES IN 1980

Community services – those services provided by both government and the private sector – can make an important contribution to a community's livability and desirability. Please provide the following information about the services found in your community in 1980.

1. How adequate were the following services in your community back then? Please indicate whether the service was found inside or outside your community, and then rate its adequacy back then. (Note — if the service was located outside your community, please estimate the number of miles you had to travel from your community to reach that service.) If you had No *Experience* with this service, just circle the "NE" rating category. (*Check one box and circle one number per item.*)

SERVICE (ESTIMATED # OF MILES FROM COMMUNITY)

a. Doctor	EXTREMELY							EXTREMELY
<input type="checkbox"/> Inside	INADEQUATE							ADEQUATE
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
b. Hospital	EXTREMELY							EXTREMELY
<input type="checkbox"/> Inside	INADEQUATE							ADEQUATE
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE
c. Other health service	EXTREMELY							EXTREMELY
<input type="checkbox"/> Inside	INADEQUATE							ADEQUATE
<input type="checkbox"/> Outside _____(miles)	1	2	3	4	5	6	7	NE

Community Services (continued)

d. Elementary School	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
e. High school	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
f. Bank	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
g. Food shopping	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
h. Other stores (drug, department, clothing, etc.)	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
i. Museums & cultural facilities	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
j. Church	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
k. Sports & recreation facilities (pools, fields, gyms, etc.)	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
l. Police	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
m. Fire protection	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
n. College or university	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	1	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								
o. Library	EXTREMELY INADEQUATE						EXTREMELY ADEQUATE	
<input type="checkbox"/> Inside	8	2	3	4	5	6	7	NE
<input type="checkbox"/> Outside _____(miles)								

2. Keeping in mind all the answers in this section about services in your community, back then, how did you feel about the overall adequacy of services and facilities in your community? (*Circle* one number.)

EXTREMELY INADEQUATE 1 2 3 4 5 6 7 EXTREMELY ADEQUATE

Section 4. COMMUNITY AUTONOMY IN 1980

Community autonomy is the degree to which a community is linked or not linked – economically, socially, and physically – to neighboring communities and to the region as a whole. Please answer the following questions about the degree of autonomy that your community possessed in 1980.

1. Please list up to three communities with which your community **had the** strongest connections in 1980, and state the reasons why your community’s residents came from or went to the other communities.

<u>Community</u>	<u>Reasons Why People Came/Went</u>
1	_____
2	_____

2. Back then, how much social interaction (for example, visiting friends/relatives, attending events, attending group meetings) did your community have with neighboring communities? - (*Circle* one number.)

PEW SOCIAL ACTIVITIES WITH NEIGHBORING TOWNS 1 2 3 4 5 6 7 MANY SOCIAL ACTIVITIES WITH NEIGHBORING TOWNS

3. Back then, to what extent did your community residents shop inside your community? (*Circle* one number.)

DID VERY LITTLE SHOPPING IN OUR COMMUNITY 1 2 3 4 5 6 7 DID MOST SHOPPING IN OUR COMMUNITY

4. Back then, how many community residents were able to work inside your community? (*Circle* one number.)

MOST RESIDENTS WORKED OUTSIDE OUR COMMUNITY 1 2 3 4 5 6 7 MOST RESIDENTS WORKED INSIDE OUR COMMUNITY

5. Which of the following statements do you think best describes the autonomy of your community at that time? (Circle one *number*)

- a. My community was very dependent on other communities.
- b. My community depended on other communities for some things, but it stood alone and was independent on other things.
- c. My community stood alone and functioned pretty independently of other communities.

6. Keeping in mind the answers you have given above, how autonomous was your community at that time? (Circle one *number*.)

NOT AT ALL

AUTONOMOUS:

Very linked and
dependent on

surrounding communities

1

2

3

4

5

6

7

EXTREMELY

AUTONOMOUS:

Community stood alone

Section 5. ECONOMIC DIVERSITY IN 1980

The mix of the types of industries and employment opportunities within a community helps describe that community's economic diversity. Please provide the following information about the economy of your community in 1980.

1. Please list the five most important businesses, industry types, or government institutions in order of importance to the local economy (#1 is most important, and so on) in 1980. In making your determination, consider payroll amounts, numbers of employees, and overall impact on your community's economy.

1. _____

2. _____

3. _____

5. _____

2. Back then, how many different types of businesses (for example, agriculture, timber, mining, retail stores, etc.) were present in the economy of your community? (Circle *one number*)

ONLY A FEW TYPES OF BUSINESSES 1 2 3 4 5 6 7 A GREAT MANY TYPES OF BUSINESSES

3. Back then, did most of the work force in your community work for the government or for the private sector? (Circle *one number*.)

MAINLY PRIVATE SECTOR EMPLOYMENT 1 2 3 4 5 6 7 MAINLY PUBLIC SECTOR EMPLOYMENT

4. Which of the following statements best describes your business **community** at that time? (Circle *one letter*.)

- a. Mostly small businesses with few employees.
- b. Mostly large businesses with many employees.
- c. A pretty even mixture of both small and large businesses.

5. Which of the following statements best characterizes your community's economy at that time? (Circle *one letter*.)

- a. Our economy was mainly centered around the growing, gathering, or harvesting of raw materials (for example, agricultural crops or **logging** or mining).
- b. Our economy was mainly centered around adding value to or processing raw materials (for example, a lumber mill, a food processing plant, a manufacturing facility).
- c. Our economy was mainly centered around retail stores and/or tourism services.
- d. Our economy was mainly centered around government jobs.
- e. Our economy was too diverse to be described by any one of the above.

6. Keeping in mind the answers you have provided in this section of the workbook, back then, what did you think about the overall economic diversity of your community, compared to other small rural communities in the region at the same time? (Circle *one number*.)

EXTREMELY UNDIVERSIFIED 1 2 3 4 5 6 7 EXTREMELY DIVERSIFIED 1

Section 6. RESOURCE DEPENDENCE IN 1980

The economies of some communities are highly dependent upon natural resources (water, soil, vegetation, fish, minerals, wildlife, scenery) **from the lands that surround them**. These lands are often owned by private individuals or organizations, or they are managed by one or more government agencies. The extent to which a community depends upon the natural resources around it is often referred to as a community's resource dependence.

1. Please identify what you believe to have been your community's level of dependence on the businesses/industries listed below in 1980, ranging from 1 (extremely independent) to 7 (extremely dependent). If the type of business/industry listed below was completely absent in your community in 1980, circle the NA category for *Not Applicable*. (Circle one response per item.)

	EXTREMELY INDEPENDENT				EXTREMELY DEPENDENT				
	1	2	3	4	5	6	7		
Forest Products	1	2	3	4	5	6	7	NA	
Mining and Minerals	1	2	3	4	5	6	7	NA	
Grazing and Ranching	1	2	3	4	5	6	7	NA	
Farming and Agriculture	1	2	3	4	5	6	7	NA	
Outdoor Recreation/ Tourism	1	2	3	4	5	6	7	NA	
Commercial Fisheries/ Aquaculture	1	2	3	4	5	6	7	NA	
Other _____	1	2	3	4	5	6	7		

2. Keeping in mind the answers you have provided above, what do you feel was the overall dependence of your community on natural resources at that time? (Circle one number.)

EXTREMELY INDEPENDENT	1	2	3	4	5	6	7	EXTREMELY DEPENDENT
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Section 7. ATTRACTIVENESS FOR BUSINESS IN 1980

A community's economic development depends upon the **community's** business **climate**, including the availability of essential business services. Please answer the following questions about the opportunities for business that were present in your community in 1980.

1. Please list the positive things about your community that you think might have been attractive to new businesses in 1980.

2. Please list the negative things about your community that you think might have deterred businesses from opening in or coming to your community in 1980.

3. Considering both the positive and negative aspects of your community from a business perspective, how would you rate the overall attractiveness of your community for businesses at that time? (*Circle one number*)

EXTREMELY UNATTRACTIVE	1	2	3	4	5	6	7	EXTREMELY ATTRACTIVE
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7. Back then, how safe did you feel in your community? (*Circle one number:*)

EXTREMELY UNSAFE:								EXTREMELY SAFE:
Tense	1	2	3	4	5	6	7	Relaxed

8. Back then, how abundant were the social activities in your community? (*Circle one number:*)

FEW SOCIAL ACTIVITIES	1	2	3	4	5	6	7	MANY SOCIAL ACTIVITIES
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9. Back then, how interesting was your community to you? (*Circle one number.*)

EXTREMELY UNSTIMULATING, BORING	1	2	3	4	5	6	7	EXTREMELY STIMULATING, EXCITING
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10. Back then, to what extent did your community have social problems (for example, alcoholism, drugs, child or spouse abuse, school dropouts, etc.)? (*Circle one number.*)

MANY SOCIAL PROBLEMS	1	2	3	4	5	6	7	FEW SOCIAL PROBLEMS
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11. Which of the following statements best describes your community's **social** well being and quality of life at that time? (*Circle one number.*)

- Our community was safe, friendly and good place to live. Few rural communities could match the quality of life we were enjoying.
- Our community was not the best place to live for either health, safety, or **social** reasons. But even with our community's shortcomings, it still offered a reasonable quality of life when compared to other rural communities.
- Our community had serious social problems or lack of opportunities for enjoyment to the point where it could not have been described as offering good quality of life. Most other rural communities offered a better quality of life

12. Keeping in mind your answers dealing with your community's quality of life, what do you think the overall quality of life was for your community at that time? (*Circle one number.*)

EXTREMELY POOR QUALITY OF LIFE	1	2	3	4	5	6	7	EXTREMELY HIGH QUALITY OF LIFE
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Section 9. COMMUNITY LEADERSHIP IN 1980

1. Please list the most important nongovernmental clubs, organizations, or groups that were present and active in your community in 1980.

2. Community leadership can come from many different sources. To what extent do you feel the following sources contributed to leadership in your community back then? (*Circle one number per item.*)

<u>Leadership Source</u>	NO LEADERSHIP				VERY STRONG LEADERSHIP			
a. Elected officials	1	2	3	4	5	6	7	
b. Business community	1	2	3	4	5	6	7	
c. Government agencies (e.g., Soil Conservation Service, Forest Service)	1	2	3	4	5	6	7	
d. Non-government organizations (e.g., Labor Unions, Farm Bureau, Service clubs)	1	2	3	4	5	6	7	
e. Other Active Individuals	1	2	3	4	5	6	7	
f. Other (if any) _____	1	2	3	4	5	6	7	

3. How visionary were your community leaders back then?

OUR COMMUNITY LEADERS LACKED A VISION FOR THE FUTURE	1	2	3	4	5	6	7	OUR COMMUNITY LEADERS HAD A VERY CLEAR VISION FOR THE FUTURE
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4. How flexible and creative were your community leaders back then?

OUR LEADERS WERE EXTREMELY INFLEXIBLE AND UNCREATIVE	1	2	3	4	5	6	7	OUR LEADERS WERE EXTREMELY FLEXIBLE AND CREATIVE
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5. Back then, how consistent were the opinions and values of your community leaders with your values and opinions? (*Circle one number.*)

EXTREMELY INCONSISTENT	1	2	3	4	5	6	7	EXTREMELY CONSISTENT
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5. Which of the following statements do you think best describes how your **community** government operated at that time? (*Circle one number*)

- a. Did pretty much what citizens wanted
- b. Did what some influential people wanted
- c. Did what it thought was best
- d. Didn't know what to do

6. Keeping in mind the answers above about your local government, how would you rate the overall effectiveness of your community government at that time? (*Circle one number.*)

EXTREMELY									EXTREMELY
INEFFECTIVE	1	2	3	4	5	6	7		EFFECTIVE

Section 11. COMMUNITY PREPAREDNESS FOR THE FUTURE IN 1980

Community preparedness for the future is the degree to which a community looks towards and prepares for its future.

1. List specific projects your community had at least begun to implement during the two years prior to 1980, either to stay the course it had always been on, or to set a new course for the future. (Please place a star next to the projects that you felt,back then, would take you in a new direction.)

2. What things were people talking about that still needed to be done at that time?

3. How much did your community change during this period?

NO
CHANGE 1 2 3 4 5 6 7 A GREAT DEAL
OF CHANGE

Please explain your answer:, _____

4. Back then how involved were your community leaders in thinking about whether your community desired to change or remain as it was? (*Circle one number.*)

EXTREMELY
UNINVOLVED 1 2 3 4 5 6 7 EXTREMELY
INVOLVED

5. Back then how involved were your community organizations in thinking about whether your community desired to change or remain as it was? (*Circle one number.*)

EXTREMELY
UNINVOLVED 1 2 3 4 5 6 7 EXTREMELY
INVOLVED

6. Back then how committed were community residents to making plans for the future, irrespective of whether the plans were for changing or remaining the same? (*Circle one number.*)

EXTREMELY
UNCOMMITTED 1 2 3 4 5 6 7 EXTREMELY
COMMITTED

7. Back then, how willing do you *think* your community *was* to change? (*Circle one number.*)

EXTREMELY UNWILLING	1	2	3	4	5	6	7	EXTREMELY WILLING
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8. Back then which of the following best describes your community's preparedness for the future?
(*Circle only one.*)

- a. We had plans and specific projects identified that would allow us to pretty much stay the way we were.
- b. We had plans and specific projects identified that would allow us to achieve our desired future; they included some change in our lifestyle.
- c. We had discussed and identified future directions for our community, but we had not identified concrete actions to take.
- d. We had not had much discussion within the community about our town's future, but we wanted to stay the way we were.
- e. We had not had much discussion within the community about our town's future, but we wanted to change to ensure we would be around in the future. .

9. Keeping in mind all of the answers that you have given in this section, how prepared for the future do you feel your community was back then? (*Circle one number.*)

TOTALLY UNPREPARED	1	2	3	4	5	6	7.	TOTALLY PREPARED
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10. Back then, what one thing were you most proud of in your community?

Section 12. A FEW QUESTIONS ABOUT YOURSELF

Finally, in this last section, we would like to learn a little bit about you.

1. Back then, where did you live in your community? (*Circle one letter.*)

- a. **IN TOWN.**
- b. OUTSIDE TOWN BUT WITHIN 5 MILES OF TOWN.
- c. BETWEEN 5 AND 10 MILES OF TOWN.
- d. MORE THAN 10 MILES FROM TOWN.

2. How long have you lived in this community? _____ Y E A R S

3. What is your age now? _____ YEARS

4. Are you: (*Please circle one*) MALE FEMALE

5. Back then, **which perspective** in your **community did** you **most closely represent?** (*If you represented more than one perspective, check the one category below that most strongly influences your perspective.*)

- _____ Elected **official**
- _____ Business community leader
- _____ Civic group leader
- _____ Environmental group leader
- _____ Educational leader
- _____ Retirement community leader
- _____ Health services leader
- _____ Other Community leader
- _____ Other _____

6. Back then, how would you have rated yourself politically? (*Circle one number.*)

LIBERAL 1 2 3 4 5 6. 7 CONSERVATIVE

7. 'Back then, what was your occupation? _____

8. Back then, what do you estimate your total pretax (gross) household income was? (*Check one category.*)

- _____ Less than \$5000
- _____ \$5000 to \$9,999
- _____ **\$10,000** to \$14,999
- _____ **\$15,000** to \$24,999
- _____ \$25,000 to \$34,999
- _____ \$35,000 to \$49,999
- _____ \$50,000 to \$74,999
- _____ **\$75,000** to \$99,999
- _____ \$100,000 or more

Back then, did you think your community would be the way it is now in **1995**?
Please explain why or why not.

Is there anything else you would like to tell us about your community and how **it was** back then?

THANK YOU!! Please bring your completed workbook to the community workshop.
We are looking forward to an interesting discussion about your community.