

Rural Communities in the Interior Columbia Basin How Resilient *Are* They?

An assessment of rural communities in inland Northwest forests, completed for the Interior Columbia Basin Ecosystem Management Project, reveals that although their populations and economic base are changing, many towns are less dependent on natural resources than their citizens believe.

Economic diversification is one measure of resilience to change, and towns whose leaders are preparing for future change have the best chance of expanding opportunities for their residents.

By Charles C. Harris, William J. McLaughlin, and Greg Brown

A Forest Service timber specialist guides citizens through the Red Plague timber sale, which was designed to restore forest health on the Deschutes National Forest by removing diseased and insect-ridden trees. Employment in traditional industries such as timber and agriculture has long been the mainstay of many rural towns, but declining timber revenues and an infusion of new residents have now forced such communities to diversify their economies.

Peer-Reviewed



Thomas J. Iraci, USDA Forest Service

The management of natural resources in the Pacific Northwest has undergone major changes in recent decades. Of particular note is the planning process for the region's coastal "spotted owl forests" west of the Cascades. It began with President Clinton's 1993 forest summit meeting, continued with the scientific assessment and environmental impact statement prepared by the Forest Ecosystem Management Assessment Team (FEMAT), and concluded with the administration's selection and implementation of ecosystem management as the main strategy for managing the region's forest resources.

Other changes have since affected management of the Pacific Northwest's natural resources, including dramatic decreases in the amount of timber offered, sold, and harvested on national forests since the late 1980s (Farnham and Mohai 1995), recent court and administrative appeals that have catalyzed change in the Forest Service (Jones and Taylor 1995), shifts in Forest Service program priorities through the budget and congressional appro-

priations process (Farnham 1995), increased Forest Service activities focusing on noncommodity resource management (Farnham et al. 1995), and the perception of Forest Service interest groups that the agency is emphasizing noncommodity forest uses (Jones and Mohai 1995).

A major concern of resource managers, industries, and local residents is the impacts of those changes on small rural communities. The Interior Columbia Basin Ecosystem Management Project (ICBEMP), a multiagency effort led by the Forest Service, was initiated in 1993 to assess the natural resources and socioeconomic conditions in the Interior and Upper Columbia basins—an area that includes central and eastern Washington and Oregon, all of Idaho, western Montana, and several counties in western Wyoming. Part of the ICBEMP assessment focused on the situations of the people who live in the ecosystem and use its resources; as social science researchers, we began our work on this rural community assessment in 1994.

Data Collection

Our research built on the study of Westside communities in the 1993 *Report of the Forest Ecosystem Management Assessment Team* (FEMAT 1993). Because of time constraints, the Westside assessment of communities was limited to a survey of extension agents, who provided information on the communities they were familiar with, and two workshops with government employees and extension agents. The results indicated that communities with a high "capacity to adapt" tended to be more populous, and communities less able to adapt tended 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."

For the ICBEMP, we followed two recommendations of the Westside team (e.g., FEMAT 1993; Krannich et al. 1994): that an on-the-ground study of the situation of rural communities across the region be made, and that these communities assess themselves. Accordingly, we conducted a *community self-assessment study* that examined a random sample of half of the region's 387 rural communities. (Small rural communities in the region were defined as incorporated towns with fewer than 10,000 people; our sample ranged from 20 to 9,585.) For each of the 198 small towns sampled, we organized a focus group of six to eight opinion leaders—knowledgeable, active residents identified by fellow citizens as best representing specified categories of interests, specialties, and perspectives, including local government, education, health and human services, and business. Before meeting, participants completed self-assessment workbooks, and then facilitators helped each focus group synthesize the information. The workbooks yielded the perceptions and insights of 1,350 community residents.

We also analyzed secondary data on the total population of 387 rural communities in the region, including 1990 US census data and 1992–94 state population projections. Finally, data on the current economic conditions of all 472 towns and cities in the five-state region were assessed with an *economic profiling*

study: county income and employment data were collected and updated to 1995, and the employment data were then disaggregated to the community level (e.g., Robison and Peterson 1995; Robison 1997) to determine the percentages of each community's workforce employed in 22 economic sectors. (See Harris 1996 for a detailed discussion of the assessment's methodology.)

Research Findings

Small rural communities in the region are changing. A large majority (70 percent) of the region's rural communities reported a moderate to high degree of change since 1990, as indicated by focus groups' ratings of their towns. In the 1990s the populations of rural communities in the region saw increases ranging from an average 3 percent growth in Montana to an average 12 percent in Wyoming. Overall, most rural towns in the region (86 percent) had grown since 1990. In a representative survey of all residents of Chelan County, Washington, for example, 68 percent reported that growth and population increases were the most important changes in their communities (Krull and Harris in press). Other important changes included the conversion of agricultural lands to residential and commercial development (reported by 32 percent), an increase in retail stores (26 percent), increased traffic (23 percent), and increased crime (22 percent). A majority of these respondents, more than 55 percent, were somewhat to extremely concerned about the overall changes in their community.

Of all the region's rural communities, 145 (37 percent) were identified

as *significant change communities*, and a survey of changes in these towns indicated that residents perceived major population growth (or decline), with its attendant social and land-use impacts, to be as critical as any recent changes in resource management.

Rural economies are complex, and citizens' perceptions vary in accuracy.

When total employment was broken out by economic sector, a complex picture of the economy of the Columbia River Basin emerged. The actual extent of industrial sectors' contribution to rural economies, indicated by the proportion of workers, showed the relative importance of resource-based sectors (This analysis was based solely on employment profiles, not on economic-impact modeling. Accordingly, it did not break out indirect and induced job impacts generated by employment in so-called basic industries, or ones that export goods or services in exchange for dollars from outside the community.)

In eight industries, average percentages of employment exceeded 5 percent (*table 1*). Significantly, the economic diversification of small communities is apparent in the ranking of the tourism and recreation sector, which was one of the top three employers. Moreover, 62 percent of the jobs in the average rural community were in the service sector. Government was an important employer; that sector accounted for an average 21 percent of all jobs.

Large and small towns differed in their proportions of workers in traditional basic industries like agriculture and food processing, timber harvesting and processing, and manufacturing. In the largest towns (more than 3,000 in

Table 1. Percentage of total employment across all rural communities in the region, by industrial sector, in 1995.

Industry	Type of sector	Percentage of total employment
Agriculture	Basic industry and processing	20.1%
State and local government	Service	15.9
Tourism and recreation	Service	9.7
Retail trade (nontourism-related)	Service	9.1
Harvesting and manufacturing of wood and paper products	Basic industry and processing	6.4
Eating and drinking (nontourism-related)	Service	5.7
Federal government	Service	5.5
Medical and social services	Service	5.4



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The Kam Wah Chung store in John Day, Oregon, sold medicines and herbs to miners at the turn of the last century. Abandoned when the mining boom went bust, the store was well preserved in the arid climate. The Forest Service provided funds to help reopen the store as a museum in a project that supports economic diversification through heritage and natural resource tourism strategies.

population) an average 18 percent of workers were employed in basic industry, but in the smallest towns (fewer than 1,500 in population) that sector accounted for 34 percent of all jobs. This finding suggests that regionwide studies (like that conducted by the Wilderness Society in 1995) and county-level data can mask important differences in the conditions and characteristics of individual towns.

Along with data on actual employment, researchers used the community self-assessments to gather information on *perceptions* of focus group participants. A community was “perceived to be dependent” on a particular industry if that industry received a mean rating higher than the midpoint (four on a seven-point scale).

The perceptions of focus group participants of their local economies indicated that about 46 percent of all communities in the region could be labeled primarily farming communities, although many of these were also perceived to be dependent on forest products, tourism and recreation, and mining. Residents of another 10 percent of the communities reported themselves moderately highly to very highly dependent on agriculture. Only 8 percent perceived themselves as primarily ranching communities. About 24 percent of the region’s communities were perceived as primarily timber communities (many of

these, however, were also dependent on mining and recreation); in addition, fully two thirds of all the communities perceived themselves somewhat to highly dependent on forest products. Communities that perceived themselves as primarily tourism and recreation sites totaled 17 percent, and another 11 percent rated themselves highly to very highly dependent on tourism.

Citizens’ ratings of the extent to which resource-based industries were dominant did not always agree with actual employment data. We defined “dominant” as any sector that accounted for 10 percent or more of a community’s employment. Comparisons of perceptions and realities indicated that rural economies were more diversified than their citizen representatives thought. In 39 percent of the towns *perceived* as moderately to highly dependent on the timber industry, timber *actually* represented a comparatively small percentage of total employment. Similarly, for 58 percent of the towns *perceived* as moderately to highly dependent on agriculture, that industry *actually* employed a comparatively small number of workers.

Some small rural towns can adapt.

A community resilience index was developed as an indicator of a town’s ability to manage change and adapt to it in positive, constructive ways, based on an aggregate measure of residents’ perceptions of community characteristics and conditions—*aesthetic attractiveness, the proximity of outdoor amenities, the level of civic involvement, the effectiveness of community leaders, the diversity in the economy, and social cohesion among residents.* This index rated the 198 communities on the extent of their resilience: the higher the index, the greater the town’s resilience and the more vital the community. (The inclusion and relative importance of these characteristics in the index were based on empirical analysis. Significantly, the results of that analysis were mirrored by the results of in-depth case studies of 10 communities that already had changed significantly; for those communities, participants in

focus groups rated which characteristics and conditions enabled them to effectively respond to the changes they had experienced, and to what extent.)

Importantly, each small town is unique, and interpreting and understanding patterns in development and how a town adapts to change can be complicated. Generalizations about the kinds of towns that are resilient may not reflect individual situations and unique characteristics. Nonetheless, our research suggests that in general, small rural communities in the region tend to be more resilient than is commonly assumed. In particular, many rural towns perceived by their residents as timber communities are fairly resilient and healthy, especially compared with small ranching and farming communities. These timber towns are already changing as a result of their amenities, diversifying economies, and shifting populations. Our analysis indicates that there is no difference in the adaptability ratings between towns that are perceived as timber dominant and those that actually are. The community resilience index scores, indicating ability to adapt, are significantly higher for both than for other types of towns.

Not surprisingly, economically diverse communities with a variety of industries have changed the most and also have the highest community resilience index scores. Farming and ranching communities have changed the least and received the lowest scores. Interestingly, the rapid population growth of some towns dependent on tourism and recreation has caused significant change that results in comparatively lower levels of resiliency. Nonetheless, a large proportion of communities *perceived* as dominated by outdoor recreation and tourism (compared with other kinds of communities) still were rated relatively high in resilience.

The results of our research on community resilience support some findings of the 1993 FEMAT assessment of the Westside. The communities in the Interior Columbia Basin that we identified as being resilient tended to be larger in population, and communities having lower levels of resiliency had less developed infrastructures and less diverse economies and were more dependent on nearby communities—just as the FEMAT researchers con-

cluded for rural Westside towns. On the other hand, our findings do not support the FEMAT conclusion that less adaptable communities are necessarily ones whose economies are dependent on timber.

One important aspect of community resilience we examined was a community's *preparedness for the future*, which the self-assessment workbook defined as "the degree to which a community is looking toward the future and preparing for its future." How participants categorized their community's preparedness for the future was especially telling. More than a third (34 percent) of the communities had identified plans and implemented projects; another 39 percent had begun identifying future directions for the community but had yet to identify (much less take) any action. In 26.3 percent of the towns, citizens had engaged in little or no discussion about their communities' future. Although nearly 22 percent of the communities had decided they wanted to stay the same, a larger proportion—almost 39 percent—wanted to change. Of the 34 percent of communities that had already made plans and taken action, 90 percent had done so to achieve a desired future. In contrast, of the 26.3 percent whose citizens had not yet made plans or taken action, only 31 percent were willing to change to achieve a desired future; of these towns, 69 percent wanted to stay the same.

Interestingly, analysis of communities categorized by these responses found a statistically significant difference ($p < 0.05$) in their community resilience index scores: towns whose citizens had identified plans and implemented projects to achieve a desired future had much higher resilience scores, on average, than towns whose citizens had hardly discussed their future or whose citizens had identified plans and projects that would allow them to stay the same. Communities that take action, these results suggest, have anticipated inevitable change and are trying to manage it. Communities wanting to hold off change and remain the same tend not to respond to the changes they face. Interestingly, case studies of 10 of the *significant change communities* determined that the more a community had experienced change

in the past, the more adaptive and resilient it was (Harris 1996).

For small rural communities, bigger may be better. A small town's size is the single best characteristic for predicting its current conditions and likely response to change. In general, those rural communities perceived as more vital, attractive, and healthy are the more populous ones: statistical analysis indicates that the larger a town, the more its residents perceived it as economically diverse, autonomous, and attractive to business; conversely, the smaller a town, the less vital, attractive, friendly, and attractive to business it was perceived. This finding concurs with community development literature (Howell and Bentley 1986; Lackey et al. 1987; Fendley and Christenson 1989): if members of the region's small rural communities want to "improve" their towns—all things being equal—they should work to attract new industries and expand the community's economic base, which can then result in an increased population.

Significantly, the findings of both the self-assessment study and the community economic profiles suggest that the impacts of such improvement extend beyond the economic aspects of community development to its social elements. Larger rural communities typically represent a more advanced stage of social and civic development than smaller ones. The signs of community vitality—active social groups and civic organizations, sound 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—reflect the benefits that towns with a critical mass of social capital and infrastructure are more likely to realize. The findings beg an interesting question for future research: at what size and level of community development do the social costs of further growth exceed the benefits?

Conclusions

Policy initiatives based on research results like those discussed here could help small communities cope with change. For example, policymakers could tailor programs according to different levels of

resiliency. Perhaps government funding should target those kinds of towns lowest in resilience—ranching and farming communities. Or perhaps in the name of economic efficiency, government programs should target not communities that are in decline and losing their human capital—towns for which further investment may not yield commensurate results—but rather, communities that are at risk yet still have potential to turn things around.

Data from our assessment reaffirm that rural communities in the Columbia River Basin have always been changing. The idea of community stability is a myth that belies a variety of influences, including the volatility of markets for timber, mining and other traditional extractive industries; the actions of private companies in modernizing, closing, and reopening plants and periodically laying off or terminating workers; the decreased supply of timber from national forests; decreasing employment in resource 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. Our ongoing research in the region focuses on industry changes not related to public land management. We are finding that other influences on mill operations—financial investment, technological advantage, sound business management, the entrepreneurial will to survive—may be at least as important as the levels of federal timber supply typically blamed for mill closures.

In addition, results of the present research document the growing economic role of tourism and recreation in the region. More detailed information on this trend and its ramifications could be important for developing more effective land management and community development policies, as well as for revising forest management plans.

Residents who must deal with the realities and potentials of change must have objective and accurate information about the current situation. The results of the ICBEMP's rural community assessment suggest that although a town's economic structure and such characteristics as amenities can affect

its development, a major determinant of its resilience is the residents themselves—their willingness to realize their community's potential. Our research indicates that the most resilient communities are those whose residents have a clear vision of desired future conditions and have taken into account biophysical, social, and economic changes. These residents have the capabilities and motivation to plan, organize, and act. Once they have an accurate picture of their town's present and a keen, clear eye on the future, people can help create the future of their own communities.

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