

*Communities Deal with Change* ..... 2  
*From Dependency to Resiliency* ..... 3  
*Perceptions and Reality* ..... 4  
*Collaborative Stewardship* ..... 5

# Science

FINDINGS

*"Science affects the way we think together."*  
Lewis Thomas

## RESILIENCY OF SMALL RURAL COMMUNITIES IN THE INTERIOR COLUMBIA BASIN



**A** Railroads opened up the basin to settlement by pioneers attracted by new economic opportunities, particularly in resource-extractive industries. They have been an integral part of historic boom-or-bust cycles throughout the basin.

### IN SUMMARY

*As part of the Interior Columbia Basin Ecosystem Management Project, 198 small communities were assessed for their ability to deal with change and the characteristics that contribute to this ability. Scientists conducted on-the-ground studies and had communities assess themselves.*

*The data revealed complex differences, patterns, and underlying relationships. Large populations and diverse economies contributed to resiliency. Other crucial factors include civic leadership, how well communities work together toward common goals, and the presence of amenities (the attractiveness of both the community itself and the surrounding region).*

*Thirty percent of the region's rural communities were identified as significant-change communities that are confronted with dramatic social and economic changes, including "timber" towns, and have begun to adapt to shifting populations and diversifying economies. Comparisons of perceptions and realities indicate that rural economies were more diversified than their citizen representatives thought. People's perceptions, however, may track factors other than employment such as values attached to certain lifestyles. Scientific information on resiliency of communities has application in land management policy and collaborative stewardship of public lands.*

*"A state without the means of some change is without the means of its own conservation."*

Edmund Burke 1727-1797

**A**n urban visitor motors into a tiny rural community somewhere in the interior Columbia basin, and figures he has finally reached the land that time forgot. Good grief, he says, nothing has changed here for the last hundred years. How quaint.

But suppose he delves beneath the still surface, suppose he tries to hear what this community thinks about its own history and future. He will find, of course, that change is the only constant. He also will find, as Samuel Johnson notes in a preface to an English dictionary, that change is not made without inconvenience, even from worse to better.

The question is, do such small rural communities have the means to adopt to change, the means of taking on the future with a view to their own conservation?



**A**  
The 145-million-acre area of the Interior Columbia Basin Ecosystem Management Project encompasses parts of seven states, and 72 million acres of public land managed by the Forest Service and BLM.

Not one of the 400 or so small rural communities (population less than 10,000) lying within the 145 million acres of the Interior Columbia Basin Ecosystem Management Project area has avoided the incon-

venience of change in the last century. Some have been directly in the path of the boom-and-bust economic hurricanes so typical of resource-based communities: from fur trading through mining to forestry. Others

quietly weather the departure of youth from agricultural areas to the cities, a phenomenon far older than this century, and more recently the rapid conversion of agricultural to residential land by "lifestyle-seekers."

## HOW WELL DO COMMUNITIES DEAL WITH CHANGE?

*"Scientists wanted to hear what communities thought of themselves: their attractiveness, cohesiveness, services, autonomy, economic diversity, resource dependency, community leadership, effectiveness of local government, and orientation to change."*

**A**s scientists with the Interior Columbia Basin Ecosystem Management Project discovered in several years of delving beneath the still surface of small rural communities, there are many responses to change, from denial to enthusiastic embrace. Likewise, there are many variations in capacity to cope with it.

To unveil the character of smaller communities, and look specifically at potential effects of public land management on them, social scientists took a two-pronged approach recommended by the FEMAT (Forest Ecosystem Management Assessment Team) after its 1993 work on the spotted owl forests west of the Cascade Range: conduct on-the-ground studies of the real situation of small communities across the region and have the communities assess themselves.

"We decided our work needed to have meaning for people, needed to be something more than broad-scale aggregations of state and county-level data," explains Stewart Allen, research social scientist with the PNW Research Station in Juneau who participated in the social investigations. "At the broad scale, it's very difficult to incorporate the values of individual communities; you miss the rich diversity. So we went after a level of detail and community involvement that was a pioneering effort in a project of this scope."

Scientists including Allen, Steve McCool, and Jim Burchfield (University of Montana) selected 198 of the small communities to study in detail. The assessment team was seeking to understand community resiliency-how well-equipped a community is to deal with change, and what characteristics contribute to this ability.

They wanted to hear what communities thought of themselves in terms of attractiveness, cohesiveness, services, autonomy, economic diversity, resource dependence, community leadership, effectiveness of local government, and orientation to change. They organized a focus group of six to eight people for each community. Before the group meetings, individual participants completed community assessment workbooks, then facilitators helped each focus

group evaluate its collective information.

Scientists also analyzed secondary data such as census numbers, state population projections, and county income and employment figures. Employment profiles were developed for over 400 of the small communities, information not usually available at this scale. These data were then available to compare economic realities with residents' perceptions of their current conditions.

"There have been few assessments on this scale, with this large a database, this many

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Cindy Miner, Communications Director  
clminer/r6pnw@fs.fed.us

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communities, and this many participants. 1,350 community residents in all," says Chuck Harris, a professor in the College of Forestry, Wildlife and Range Sciences at the University of Idaho, and the researcher who directed the rural community assessment. "We were gratified to find that this process really did distinguish communities, considering and retaining the uniqueness of each one. The focus group synthesis seemed to really hone the information down to essentials."

Community uniqueness on one occasion included hostile residents in army fatigues attending a focus group and wanting to know exactly what the "outsiders" were in town to do. "I think those particular folks were disarmed by the complete openness of our process and the genuine neutrality of



## MANAGEMENT IMPLICATIONS



- Patterns of community resiliency have significant implications for management of public lands. For example, supplying a steady flow of outputs such as timber may not provide long-term resiliency for currently resource-dependent communities.
- Community-scale information provides insights into the complexity and uniqueness of rural communities, taking into account human factors as well as economic capital.
- Collaborative stewardship of public lands allows land managers to act within their Congressional mandates while encouraging communities and agencies to engage actively in planning their futures and capitalizing on mutually identified opportunities.

our fact-finding questions," Harris recalls. "Overall, it's been gratifying to watch a number of communities take on the plan-

ning and visioning process simply as a result of our getting them started on thinking about it."

## FROM DEPENDENCY TO RESILIENCY: NO SINGLE PATH

**T**he data have revealed a complex world of differences, patterns, and underlying relationships, and some have defied conventional wisdom.

We hear much, for example, about the timber towns that have suffered under cutbacks in harvest from Federal lands. How are they doing now? Well, some of them have learned valuable lessons from the hard experience of mill closures and reopenings and layoffs, and have worked successfully on attracting a broader economic base to town to bolster their ailing timber sectors. We hear just as much about towns with new money pouring into them since they have been discovered by the lifestyle and recreation folks. Aren't they thriving now? Well, some of them are floundering badly under costs of development and infrastructure, conflicting community values, and lack of planning.

So what is it that makes one community more or less able to move confidently into the future? At the center of it all, according to Allen, Harris, and their colleagues, lies the simple truth that there is no single pathway to achieving community resiliency.

Large population and diverse economies are typically a winning combination, Allen points out, but other factors can be crucial. These include civic leadership—the quality of community leadership and attitude toward change; social cohesion—how well community members work together toward common goals; and the presence of ameni-

ties—the attractiveness of both the community itself and the surrounding region.

Based on residents' perceptions about these factors, researchers developed a community resiliency index, to indicate a town's ability to manage change and adapt to it in positive, constructive ways.

They hesitate to generalize about the kinds of towns that are resilient, but some commonalities do emerge. Towns generally sorted themselves into three patterns of resiliency, according to Allen. The largest grouping was in fact the group with the highest scores on all the factors contributing to resiliency. It seems small rural communities are perhaps more resilient and ready for change than outside visitors might guess. "These communities, some of which are defined as timber-dependent, are less at risk from changes in outputs that may accompany the beginning of ecosystem management on Forest Service and BLM lands in the basin," he says.

The second group contains an intermediate number of towns, with relatively low ratings on economic structure and diversity, but quite high ratings on civic leadership and amenity values. The third group contains the fewest communities, possesses the lowest level of resilience on all factors, and hence is most at risk, particularly from abrupt changes in public policy.

"Resiliency is key to how well a community can adapt to changes in the near future," says Allen. "The more strings you have to

your bow of resiliency, the more economic, environmental and social capital you have to buffer your community from negative effects of change, or to create the change from within the community."

One of those strings can be the cohesion and leadership, even the simple toughness, thrust upon communities already undergoing significant change, and 37 percent of the region's rural communities were identified as significant-change communities. According to Allen, towns already confronted with dramatic social and economic changes, such as so-called timber towns, have begun to adapt to shifting populations and diversifying economies.

"They have understood that to survive and thrive, their competitive advantages had to be recognized and applied. Less resilient communities can benefit from these successful case studies."

*"The more strings you have to your bow of resiliency, the more economic, environmental, and social capital you have to buffer your community from negative effects of change, or to create change from within..."*

## PERCEPTIONS AND REALITY

Harris noted a strong relation between the rate of perceived change and actual resiliency. He believes this reflects a conscious community decision to anticipate and ride the buffeting waves of social and economic change. Indeed, with the additional seeds planted by the assessment process, a growing number of towns is already moving along that path.

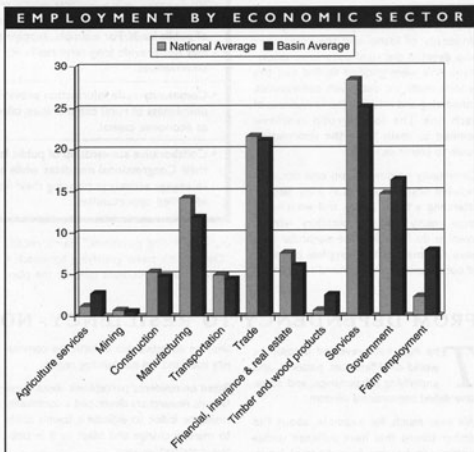
Recreation and tourism have contributed greatly to change across the basin, both as economic palliatives and as change agents in themselves. Communities differ in how they view the coming of outsiders. They may bring money with service jobs attached, but they also bring development costs and frequently quite different attitudes.

With all the possible variations, how accurately do communities view themselves? Generally, residents were reasonably accurate, although in some cases they tended to overestimate the importance of traditional, particularly resource-based, industries as sources of local employment.

"Comparisons of perceptions and realities indicated that rural economies were more diversified than their citizen representatives thought. For example, 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," explains Harris. The same was true in 58 percent of towns perceived to be dependent on agriculture. Old traditions and customs possibly die quite hard in the rural West, keeping alive perceptions no longer wedded to reality.

Allen notes, however, that people's perceptions may track factors other than percentage of employment, such as the value attached to a certain lifestyle, or an industry's social support and contribution to the community. And when it comes down to it, those perceptions are most often what public land managers have to deal with. The Forest Service and BLM comprise the front line when communities are looking for easy targets to blame for the major disruptions and anxieties of dramatic change.

One of the unresolved questions swirling around the socioeconomic data, Allen says, concerns the actual and perceived role of these agencies in providing community stability. Is it their responsibility to go



▲ 1995 figures show the relative employment contributions by selected economic sectors comparing the Nation with the basin, as a percentage of 1.5 million jobs. The basin generally relies more on wood products, government, farming, and agriculture services than other sections of the country.

beyond "simply" managing lands and resources, to playing a role in socioeconomic support!

"Past management thinking seems to have been: 'If we can provide a lot of jobs, usually via timber production, then that's a benefit.' But it's been a single-focus approach that in the end has been a disservice to these communities. Many of them became less resilient over time as a result of counting on a nonsustainable level of resource use," he says, "or a use that loses favor with the public as environmentalism becomes a broad-based public value."

Harris cautions that, almost 50 years ago, the noted resource sociologist, Herbert Kaufman, defined community stability in timber towns as "orderly change." "Somehow in the ensuing decades the concept of stability transformed into the idea of preserving the status quo, of defying natural processes of change," he suggests.

*"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...."*

### WRITER'S PROFILE

Sally Duncan is a science communications planner and writer specializing in forest resource issues. She lives in Corvallis, Oregon.

## RESILIENCY INFORMATION CAN STRENGTHEN COLLABORATIVE STEWARDSHIP

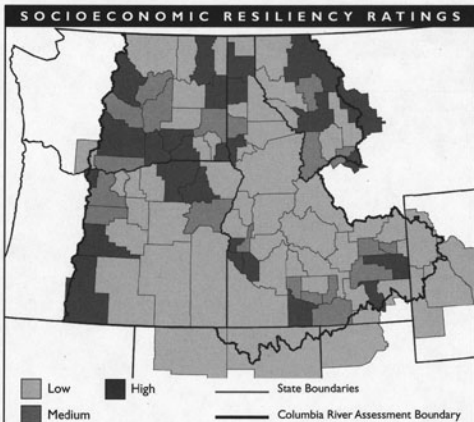
After spending several years examining the relationship between community health and public land management, social researchers concluded that collaborative stewardship through ecosystem management is an effective way for public land managers to proceed. "We believe that measuring community resiliency and its relationships to public land management may provide a strong information base for ecosystem management," says Allen.

Ecosystem management is a concept still not particularly clear in the minds of either rural or urban dwellers in the interior Columbia basin. But many rural residents are now coming to understand the idea of community resiliency, not least by having to strive for it daily.

Application of community resiliency data in land management is challenging. Allen posits several reasons. Integrating social information at this level of detail with large-scale ecosystem assessments is new and may cause discomfort among managers; a problem of scale magnified by the long-lived divorce between social and physical sciences. It may be the ongoing confusion over the community role of public agencies. "And unfortunately, it could be that we social scientists have not yet achieved an adequate integration of social and economic data," says Allen. "There is still some disagreement over how useful socioeconomic information is at the community scale."

The communities themselves have growing confidence in such data. Harris notes that there is plenty of talk among managers about how important it is to recognize the uniqueness of individual communities, "but we still keep doing the large aggregations of data in the so-called 'scientific' approach to assessment."

He thinks that significant research needs to examine the interface between policy and social science and that efforts to integrate socioeconomic and biophysical data need to be expanded. The risk in ignoring these connections is that the rural communities that participated will feel betrayed when the data for which they have contributed so much time and thought do not get fully integrated into proposed management scenarios.



Because most economic activity takes place in population centers, most people live in highly resilient areas. But many rural communities have fewer opportunities to diversify their economies, and thus lower socioeconomic resiliency.

Imagine, therefore, that the urban visitor has productively dug beneath the still surface before he motors away from the small rural community. He will be more aware that change, with all its inconven-

iences, is not only constant but rampant in the interior West. He will know that those communities facing it boldly have a greater chance of thriving. Time has not forgotten these communities at all.

### FOR FURTHER READING

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U.S. Department of Agriculture  
Pacific Northwest Research Station  
333 S.W. First Avenue  
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## SCIENTIST PROFILE



*STEWART ALLEN, a former research social scientist with the PNW Research Station in Juneau, has studied social science aspects of natural resource management for 18 years as a Forest Service employee, state employee, and consultant. His current studies include subsistence use of the Tongass National Forest, and public acceptability of alternative forest harvest practices in southeast*

*Alaska. He also is investigating how communities cope with changes in public land management, and methods of analyzing news media content to identify the benefits of forest management.*

U.S. Fish & Wildlife Service  
Division of Refuges  
1011 E. Tudor  
Anchorage, Alaska 99503  
(907) 785-3665

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