

Influence of Urban Immigrants on Outdoor Recreation and Land Use in Teton Valley

M. Nils Peterson
Angela G. Mertig
Jianguo Liu

EXECUTIVE SUMMARY: Reverse migration (urban to rural) to areas rich in outdoor recreation amenities has created a cultural phenomenon with serious implications for parks and recreation administration in the United States. The influx of ex-urban immigrants to rural areas creates unique challenges for parks and recreation managers. To understand and address these challenges managers need a detailed understanding of how ex-urban migrants change local socio-demographics and outdoor recreation demands. In this paper we use a case study in Teton Valley to address this need. Three hypotheses were tested related to the wildland urban interface: 1) ex-urban immigrants bring higher education levels, higher incomes, and more liberal political stances to their new communities; 2) ex-urban immigrants participate in more appreciative outdoor recreation activities (e.g., birding, hiking, camping) and fewer non-appreciative activities (e.g., hunting, fishing, all terrain vehicle [ATV] use) than natives and more rural immigrants; and 3) ex-urban immigrants threaten the ability to meet recreation demands by being more likely to build or buy their home in wildlands than natives or ex-rural immigrants. The survey results ($n = 416$, sampling error ± 4.8 percent), generally support these hypotheses. Ex-urban immigrants had significantly higher education levels than all other groups ($H = 36.17$, $p < 0.001$). Ex-urban and ex-town immigrants were nearly twice as likely to be Democrats (ex-urban = 36 percent, ex-town = 28 percent), and half as likely to be Republicans (ex-urban = 29 percent, ex-town = 29 percent), as natives and ex-rural immigrants (natives = 14 percent Democrat, 47 percent Republican; ex-rural = 14 percent Democrat, 43 percent Republican). Ex-urban migrants participated more in appreciative recreation (e.g., birding, hiking), and less in non-appreciative recreation (e.g., hunting, ATV use) than natives and immigrants with rural backgrounds. Ex-urban immigrants were almost twice as likely (37 percent) as other groups (ex-town immigrant = 21 percent, ex-rural immigrant = 21 percent, native = 18 percent) to build or buy a home in wildlands

that controlled access to outdoor recreation areas (e.g., adjacent to public land or rivers). These results suggest parks and recreation managers face an ironic challenge: ex-urban migration to the wildland urban interface represents increased political will for publicly funded efforts to preserve open space and protect access to recreation areas, and the greatest threat to those objectives. Managers have several tools available to protect open space and access to recreation areas in these contexts including zoning changes, land trusts, and transferable development rights.

KEYWORDS: development, environment, household, land use, migration, wildland urban interface

AUTHORS: M. Nils Peterson is with the Department of Forestry and Environmental Resources, North Carolina State University, Box 7646, Raleigh, NC 27695-7646, email: M.Nils.Peterson@gmail.com. Angela G. Mertig is with the Department of Sociology and Anthropology, Middle Tennessee State University. Jianguo Liu is with the Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife, Michigan State University.

Reverse migration (urban to rural) to non-metropolitan outdoor recreation areas has created a new cultural phenomenon with serious implications for parks and recreation administration in the United States. Prior to the 1970s most immigrants followed economic opportunity to urban centers (Beyers & Nelson, 2000; Carr, 2004; Zelinsky, 1971). This trend was reversed temporarily in the 1970s and most recently in the 1990s when rural population growth began consistently outpacing urban population growth (Johnson & Fuguitt, 2000; Shumway & Davis, 1996; Shumway & Otterstrom, 2001). During the 1990s reverse migration caused the greatest population increases in rural areas with high natural amenity value to potential residents (Johnson, 2003; Shumway & Davis, 1996; Smith & Krannich, 2000). Outdoor recreational opportunities, notably skiing (Rothman, 1998), and/or improved quality of life for raising families or similar social factors motivated migration to rural mountain areas, in particular (Graber, 1974; Starrs, 1995). Starrs (1995:279) labeled those seeking a better life “urban refugees” who flee negative aspects of the urban experience.

These rural, natural amenity-rich communities represent a rapidly growing (double-digit population growth over the last 15 years: Johnson, 2003; Jones, Fly, Talley, & Cordell, 2003; Radeloff, Hammer, Stewart, Fried, Holcomb, & McKeefry, 2005), but rarely considered, component of the wildland urban interface. Typically the wildland urban interface is defined as the area where houses on the border of urban areas intermingle with undeveloped wildland vegetation (Radeloff et al., 2005). This interface created by ex-urban immigrants spilling past current suburbs of urban areas (e.g., Atlanta, Chicago, and Denver) simply represents new suburbs. An alternative perspective, however, suggests large numbers of

ex-urban immigrants can create a wildland urban interface in wildlands (areas with previously undeveloped wildland vegetation) of any distance from the urban center. We consider the latter type of wildland urban interface a social interface, because the urban component reflects the cultural background of human residents rather than the built environment. This social wildland urban interface can emerge in areas reflecting more traditional connotations of "wildness" (e.g., within the Greater Yellowstone Ecosystem: Rasker & Hansen, 2000).

The influx of ex-urban immigrants into historically rural outdoor recreation areas (i.e., socially defined wildland urban interfaces) creates unique challenges for managers of parks and recreation areas by fracturing communities and introducing incompatible recreation preferences (Fuguitt, 1995; Gude, Hansen, Rasker, & Maxwell, 2006; Wilkins, Hays, Kubenka, Steinbach, Grant, Gonzalez, & Kjelland, 2003). Local conflicts over land use in such areas spawned the culture clash (Price & Clay, 1980), gangplank (Smith & Krannich, 2000), cultural infusion (Blahna, 1990), and new voices (Fortmann & Kusel, 1990) explanations for land-use conflict in rural areas experiencing natural amenity-related immigration. The culture clash explanation suggests deep-rooted cultural differences have led to conflicts between longer-term residents and recent ex-urban migrants. The gangplank hypothesis suggests after ex-urban immigrants gain access to their rural refuge they are more eager to pull up the gangplank and prevent further development than longer-term residents. Finally cultural infusion and new voices perspectives suggest ex-urban migrants share environmental values with many longer-term residents and instigate conflict primarily by bringing their superior education, income, and political strategies to bear on development issues.

Managers in socially defined wildland urban interfaces require a detailed understanding of the publics constituting these rapidly developing communities. The information needed by managers is diverse but includes: 1) demographic attributes of ex-urban immigrants and how they compare to residents from rural backgrounds, 2) how changing demographics influence recreation needs and demands, and 3) how activities of ex-urban immigrants will impact ability to meet recreation demands in the future. The majority of reverse migration and outdoor recreation studies do not address these questions specifically because they use aggregate data and a regional perspective (Cordell, Betz, & Green, 2002; Dillman, 1979; Floyd, McGuire, Shinew, & Noe, 1994; Fuguitt & Beale, 1996; Fulton, Fuguitt, & Gibson, 1997; Nelson & Beyers, 1998; Shumway & Davis, 1996). National level research, however, suggests urban versus rural differences explain significant differences in outdoor recreation demands rivaling those explained by ethnicity, nationality, and region of residence (Cordell et al., 2002). Presumably, ex-urban migrants bring the socio-demographic factors associated with differing rural and urban recreation preferences (e.g., education, income, political affiliation, and environmental attitudes) with them to socially defined wildland urban interfaces when they immigrate (Jones et al., 2003).

Deductive use of regional studies suggests ex-urban migrants in socially defined wildland urban interfaces will have higher education, higher income, and more liberal political stances. This in turn suggests they will demand more appreciative

outdoor recreation opportunities (e.g., birding, hiking, camping) and fewer non-appreciative opportunities (e.g., hunting, fishing, all terrain vehicle [ATV] use) than natives and more rural immigrants (Cordell et al., 2002; Tarrant & Green, 1999). Since ex-urban migrants moved specifically for natural amenities, they may also be more likely to choose a home in wildland areas than natives or ex-rural immigrants (Ghose, 2004; Gude et al., 2006).

We begin addressing the information needs of parks and recreation managers in socially defined wildland urban interfaces with a case study in Teton Valley, a rural area surrounded by recreation areas and parklands that has been inundated by long distance migrants from urban centers. In this paper three hypotheses were tested related to migration into the wildland urban interface: H1: ex-urban immigrants bring higher education levels, higher incomes, and more liberal political stances to their new communities; H2: ex-urban immigrants demand more appreciative outdoor recreation opportunities (e.g., birding, hiking, camping) and fewer non-appreciative opportunities (e.g., hunting, fishing, ATV use) than natives and more rural immigrants; and H3: ex-urban immigrants are more likely to build or buy their homes in wildlands than natives or ex-rural immigrants.

Study Area

Teton Valley includes Teton County, Idaho and a piece of Teton County, Wyoming, west of the Teton Mountain Range. Teton Valley provides an ideal laboratory to study the wildland urban interface because immigration related to outdoor recreation (e.g., expansion of the local ski hill) made Teton County the fastest growing county in Idaho, the fourth fastest growing state, during the 1990s (3,439 to 5,999, a 74-percent increase). Since 2000, publicity in *Men's Journal* (2002; "The 50 best places to live," Teton Valley was voted best all around), *National Geographic Adventure* (2001; 10 summer sports meccas), and *Ski Magazine* probably helped fuel a 33-percent jump in population to almost 8,000 when we conducted this study. The social changes associated with this influx of ex-urban residents motivated by natural amenities and outdoor recreation opportunities has piqued the interest of wildlife scientists (Peterson, Mertig, & Liu, 2006) geographers (Beyers & Nelson, 2000) and sociologists (Smith & Krannich, 2000). The 1990s immigrants were more secular, younger, less likely to have moved from nearby locations (i.e., from Idaho, Montana, Utah, or Wyoming), and more likely to be college graduates than longer term residents (Peterson et al., 2006; Smith & Krannich, 2000).

Method

An in-person interview protocol was used to collect demographics, information about recreation practices, and spatially explicit settlement data. A representative sample ($n = 550$) of telephone listings from Survey Sampling, Incorporated (Fairfield, Connecticut) was purchased. Residents of Victor, Idaho (within the study area; $n = 23$), and Lansing, Michigan ($n = 18$) pre-tested the questionnaire. Attempts to visit each respondent were undertaken during four time intervals, morning and evening on a weekday and on a weekend day, before resorting to telephone contact

(July–August, 2004). Initial contact was made by phone when the visits failed or an address could not be located.

Four binary variables (native, ex-rural immigrant, ex-town immigrant, and ex-urban immigrant [coded 0 or 1]) were created to capture where respondents were from using a series of questions. First we asked respondents, “Have you lived all your life in Teton County?” If they answered “Yes,” we coded them as natives. If they answered “No,” we asked, “Where did you move from?” Subsequently, U.S. Census data was used to determine the population of their origin city at the date they emigrated. Respondents moving from communities with populations < 5,000 were coded as ex-rural immigrants, because their origin community was similar in size to Teton Valley. Respondents moving from cities with 5,000-100,000 were coded as ex-town immigrants, and respondents moving from areas with > 100,000 residents were coded as ex-urban immigrants.

Standard survey questions were used to collect demographic information about respondents from each group (e.g., age, gender, political affiliation: Dillman, 2000). We categorized education as a seven-category variable (1 = less than high school to 7 = graduate or professional degree), and previous year’s annual income as a nine-category variable (1 = < 14,999 to 9 = ≥ 200,000). Outdoor recreation practices of respondents were assessed by asking, “About how often in a typical year do you participate in: 1) bird watching, 2) hiking, 3) camping, 4) boating 5) fishing, 6) hunting, and 7) riding ATVs?” Responses ranged from frequently to never (4 = frequently, 3 = sometimes, 2 = rarely, 1 = never). We assessed motivation for living in Teton Valley by asking, “What are the main reasons you live here?” followed by “What is the most important reason?”

Landmarks (e.g., tree lines, creek beds, notable buildings) and homestead attributes (e.g., lawn shape, roof type, house shape, topography, driveway shape and type) were used to locate and mark the location of each respondent’s house on a digital aerial photograph in ArcView 3.2 (Environmental Systems Research Institute, Redlands, California). Imagery resolution was fine enough to locate the actual interview households. The impact a household had on recreation (open space, river access, fish and game habitat) was determined by classifying land cover into three categories: 1) within a current town (town), 2) in an agricultural field (agriculture [typically seed potato, barley, alfalfa, or grazing]), or 3) wildland (in riparian, wetland, or hillside areas).

Homes built inside town areas required little new infrastructure (e.g., roads, sewer lines, power lines), and caused minimal fragmentation of open space or natural land cover. These homes could be connected to existing sewers, roads, and power lines. Homes in agriculture areas, however, often required road construction and power line construction, and always required either extension of sewer lines or, more likely, installation of septic systems. Homes in wildlands required the same infrastructure expansion as homes in agricultural areas, but also caused natural land cover loss (minimally the house’s footprint) and reduced access to recreation areas (e.g., rivers, U.S. Forest Service lands). Homes in wildlands limited recreation access because, with few exceptions (e.g., a baseball diamond), recreational land with public access in Teton Valley is in riparian, wetland, or hillside areas. While

all surveyed households in riparian and wetland areas shared property boundaries with a public recreation area (i.e., a river or stream), several homes in hillside areas were not directly adjacent to public lands (Forest Service or Bureau of Land Management). These homes, however, were subdivided from larger parcels that were adjacent to public recreation lands. Homes in wildlands also threaten recreation access by polluting critical trout habitat (see <http://www.tetonwater.org>; Idaho Fish & Game, 2005), or destroying/fragmenting critical elk (*Cervus elaphus*) and mule deer (*Odocoileus hemionus*) winter range (low elevation hillsides and south facing slopes [Kie & Czech, 2000; Skovlin, 1982]).

Town boundaries were delineated using 2004 zoning maps from each municipality (i.e., city limits). Respondent households were categorized within city limits as within a town unless they were also in a riparian zone. Households were categorized as within agricultural land when they were surrounded by agricultural fields, unless they also occurred in a wetland or riparian zone. Finally homes were categorized as wildland households when they occurred in wetlands and riparian zones on the valley floor and forest or rangeland areas on the hillsides bordering the valley. A 100m buffer around streams and rivers, identified using 2000 U.S. Census Bureau's TIGER\Line® datasets, was used to identify riparian zones. Wetlands were classified using the U.S. Fish and Wildlife Service's (2005) National Wetland Inventory. Pronounced vegetation zonation in this region (Bailey, 1995) made visual identification of forest and rangeland possible. Forest and rangeland were limited to hillsides bounding the valley, and did not overlap with agriculture or town areas.

All descriptive and inferential statistics were calculated using Statistica 6.1 (StatSoft, Tulsa, Oklahoma, USA). One-way analysis of variance (ANOVA) was applied to make comparisons between natives and immigrant groups. If ANOVA was significant, a Duncan's range test evaluated differences among means. When data did not meet critical assumptions (e.g., normality and equality of variance) chi-square tests of independence and Kruskal-Wallis tests were used for multiple comparisons of medians.

Results

A total of 416 household interviews were conducted, and the final compliance rate was 95 percent (sampling error \pm 4.8 percent). Of the 550 households in our original sample we were unable to contact respondents at 48 households, 20 households refused to provide an interview, and 66 contacts were incorrect (e.g., resident deceased or moved). The sample of respondents matched 2000 census data in terms of income (median annual family income = \$35,000–\$49,999), sex (46 percent female), and ethnicity (90 percent Anglo, six percent Hispanic). Forty percent held at least a four-year college degree, 30 percent had some form of vocational training, and five percent had less than high school graduation. Mean respondent age was 46. Most respondents were either natives ($n = 104$, 25 percent), ex-town immigrants ($n = 135$, 33 percent), or ex-urban immigrants ($n = 100$, 24 percent). Few immigrants moved from other rural areas ($n = 33$, eight percent). Age varied by group ($F = 9.67$, $p < 0.001$) with natives (Mean age = 51.41, SE = 1.53) and ex-rural immigrants (Mean

age = 51.22, SE = 2.73), being significantly older than ex-town immigrants (Mean age = 41.25, SE = 1.33), and ex-urban immigrants (Mean age = 45.51, SE = 1.54).

The results supported the hypotheses regarding education and political stances, but income did not differ between groups. Education varied by group ($H = 36.17$, $p < 0.001$). Ex-urban immigrants had significantly higher education levels than all other groups (Mean education = 5.26, SE = 0.18). Ex-rural immigrants (Mean education = 4.19, SE = 0.33) and natives (Mean education = 3.63, SE = 0.18) did not have significantly different education levels, but ex-town immigrants (Mean education = 4.35, SE = 0.16) had significantly higher education levels than natives. Political affiliation also varied by group ($\chi^2 = 16.71$, 6 df, $p < 0.05$). All groups had similar percentages of political independents (36–43 percent), but ex-urban and ex-town immigrants were nearly twice as likely to be Democrats (ex-urban = 36 percent, ex-town = 28 percent), and half as likely to be Republicans (ex-urban = 29 percent, ex-town = 29 percent), as natives and ex-rural immigrants (natives = 14 percent Democrat, 47 percent Republican; ex-rural = 14 percent Democrat, 43 percent Republican).

The results also support the hypothesis that ex-urban immigrants participate in appreciative outdoor recreation (e.g., birding, hiking, camping) more and non-appreciative outdoor recreation (e.g., hunting, fishing, ATV use) less than natives and more rural immigrants (Table 1). Immigrants moving from larger cities participated in appreciative recreation (e.g., birding, hiking, camping; Dunlap & Heffernan, 1975) more, and non-appreciative recreation less than natives or immigrants from smaller cities (e.g., hunting, ATV use; Table 1). The differences, however, were not significant for boating or fishing.

Finally, ex-urban immigrants were more likely to build or buy their home in wildlands than natives or ex-rural immigrants ($\chi^2 = 16.87$, 6 df, $p < 0.01$, Figure 1). Ex-urban immigrants were almost twice as likely (37 percent) as other groups (ex-town immigrant = 21 percent, ex-rural immigrant = 21 percent, native = 18 percent) to build, buy, or inherit (in the case of some natives) a home in wildland areas (Figure 1). Ex-urban immigrants were least likely to choose a household location within current city limits (ex-urban = 14 percent, ex-town = 30 percent, ex-rural = 18 percent, native = 24 percent). These differences related to significant differences in why groups chose the location of their home ($\chi^2 = 72.46$, 6 df, $p < 0.001$). Ex-urban immigrants chose their household location based primarily on outdoor recreation opportunities and other natural amenities (69 percent), and economic considerations (e.g., jobs, cost of living; 20 percent). Few (10 percent) ex-urban immigrants cited home or family ties as primary considerations in their household location decision. Conversely, natives cited home or family ties more often (56 percent) than recreational opportunities or natural amenities (32 percent) and rarely cited economic considerations (12 percent). Outdoor recreation opportunity and natural amenities were the primary considerations for household location decisions of ex-rural and ex-town immigrants (44 percent and 47 percent respectively), but ex-rural immigrants were equally concerned about family ties or home place (28 percent) and economic considerations (28 percent) while ex-town immigrants

were more concerned about economic considerations (35 percent) than family ties or home place (18 percent).

Table 1. Differences in recreation among native, ex-rural immigrant, ex-town immigrant, and ex-urban immigrant respondents in Teton Valley.

Upper case letters in the table's right column reflect significantly different groups identified by the Kruskal-Wallis test. If letters are different, there are significant differences (0.05 level of significance).

Recreation Type	Groups	Mean (SE)	Group
Birding			
H = 11.55 <i>p</i> = 0.009	Native	2.51 (0.116)	A
	Ex-Rural Immigrant	2.53 (0.201)	A
	Ex-Town Immigrant	2.84 (0.093)	AB
	Ex-Urban Immigrant	3.03 (0.093)	B
Hiking			
H = 35.32 <i>p</i> = 0.000	Native	2.60 (0.102)	A
	Ex-Rural Immigrant	2.93 (0.179)	AB
	Ex-Town Immigrant	3.17 (0.086)	B
	Ex-Urban Immigrant	3.40 (0.078)	B
Camping			
H = 12.65 <i>p</i> = 0.006	Native	2.80 (0.098)	A
	Ex-Rural Immigrant	3.03 (0.182)	AB
	Ex-Town Immigrant	3.22 (0.080)	B
	Ex-Urban Immigrant	3.11 (0.105)	AB
Hunting			
H = 15.24 <i>p</i> = 0.002	Native	2.34 (0.131)	A
	Ex-Rural Immigrant	2.09 (0.217)	AB
	Ex-Town Immigrant	2.10 (0.106)	AB
	Ex-Urban Immigrant	1.63 (0.100)	B
ATV use			
H = 24.98 <i>p</i> = 0.000	Native	2.80 (0.118)	A
	Ex-Rural Immigrant	2.16 (0.216)	AB
	Ex-Town Immigrant	2.16 (0.110)	B
	Ex-Urban Immigrant	1.94 (0.121)	B
Boating			
H = 5.06 <i>p</i> = 0.167	Native	2.28 (0.113)	
	Ex-Rural Immigrant	2.47 (0.180)	
	Ex-Town Immigrant	2.61 (0.099)	
	Ex-Urban Immigrant	2.47 (0.108)	
Fishing			
H = 4.81 <i>p</i> = 0.186	Native	2.61 (0.109)	
	Ex-Rural Immigrant	2.47 (0.206)	
	Ex-Town Immigrant	2.79 (0.100)	
	Ex-Urban Immigrant	2.48 (0.118)	

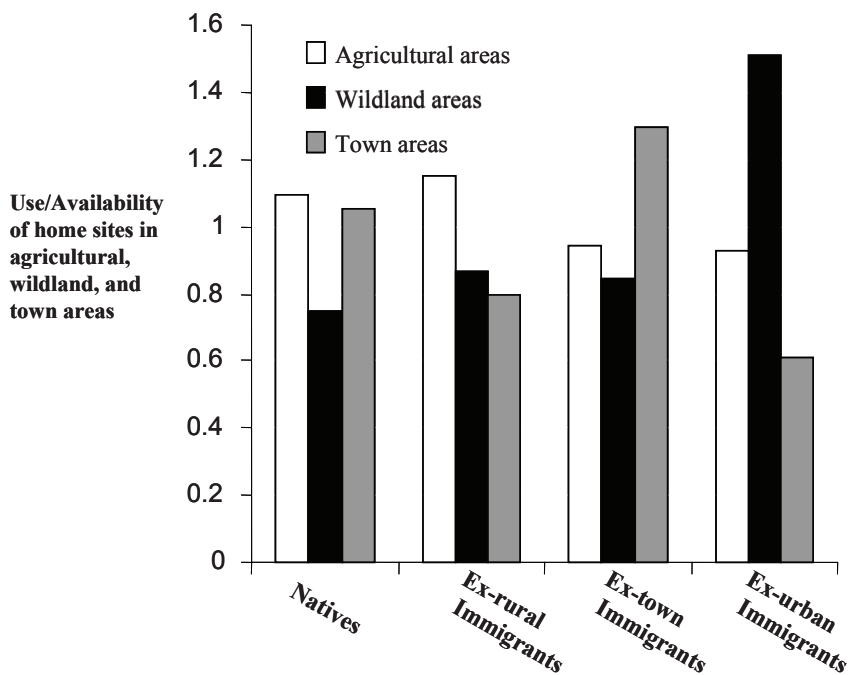


Figure 1. Relationship between where immigrants migrated from and the weighted percent of immigrants choosing to live in agricultural areas, wildland areas, and town areas

(Use/Availability > 1 indicates preference for an area, Use/Availability < 1 indicates avoidance of an area).

Discussion

The results suggest ex-urban immigrants contribute substantially to the creation of socially defined wildland urban interfaces in regions geographically remote from major cities. Ex-urban migration to these wildland urban interfaces creates a dynamic social landscape for parks and recreation management. These immigrants also make parks and recreation management an issue of growing importance because they are more than twice as likely as natives to cite recreation or natural amenities as their primary reason for living in the area. Research in other areas suggests growing importance of outdoor recreation amenities in socially defined wildland-interfaces throughout the United States (Gude et al., 2006; Rasker & Hansen, 2000; Rothman, 1998; Shumway & Davis, 1996).

Although ex-urban immigrants did not have higher incomes than other groups, they did have higher education levels, and were more likely to be Democrats. Presumably these education and political affiliation differences allow new political strategies. More liberal political affiliations of ex-urban immigrants suggest greater

support for publicly funded efforts to preserve open space and protect recreation access, but potential for more conflict with primarily Republican natives and rural immigrants. These findings support the culture clash hypothesis (Price & Clay, 1980) for land-use conflict in rural areas experiencing natural amenity-related immigration by demonstrating strong political differences between immigrants and natives. Indeed, ex-urban immigrants generally participated in appreciative outdoor recreation activities (e.g., birding, hiking, camping) more, and non-appreciative activities (e.g., hunting, fishing, ATV use) less than natives and more rural immigrants. These differences set the stage for community conflict over management of recreation lands. During our study, efforts to limit ATV and sheep dog use (to protect interests of hikers and mountain bikers respectively) in public recreation areas provided impetus for such conflicts. While these divisions make conflict over recreation management likely, the aforementioned demographic changes makes a transition to appreciative forms of recreation more likely.

While declines in non-appreciative recreation may limit some types of environmental damage, such as that caused by ATV use, they can pose a unique threat to appreciative forms of recreation. For instance, steady declines in hunter recruitment, retention, and numbers (Enck, Decker, & Brown, 2000; Peterson, 2004; United States Department of the Interior, 2002) threaten public land managers' ability to manage wildlife, given the centrality of hunting as a management tool to control wildlife populations as well as to manage wildlife-related problems such as zoonotic diseases (e.g., Chronic Wasting Disease, Lyme disease; Peterson et al., 2006). Unchecked, zoonotic diseases can damage the aesthetic value of wildlife and even threaten human health. Declines in hunting also threaten the budgets of many state-level parks and wildlife departments.

Ex-urban immigrants create an ironic problem for parks and recreation managers by buying and building homes in wildland areas at the same time they support public efforts to protect open space, access to recreation areas, and environmental quality. This provides support for the gangplank hypothesis (see: Smith & Krannich, 2000). Land-use managers attempting to protect open space and public access to recreation should receive support from the ex-urban immigrants who chose their home locations based on a value for wildlands, but perceived political alliances between land managers and ex-urban immigrants may exacerbate local conflicts (Peterson, Peterson, Peterson, Lopez, & Silvy, 2002).

Managerial and Professional Implications

Managers hoping to protect open space and public access to recreation in the wildland urban interface have several options: promoting command and control wildland preservation policy (e.g., zoning to minimize development in wildland areas), supporting wildland preservation approaches that rely on market incentives (e.g., land trusts, conservation easements, transferable development rights [Merenlender, Huntsinger, Guthey, & Fairfax, 2004]), and changing the situational context to provide the amenities and social status traditionally associated with wildland homes for homes bought and built inside or near existing towns (Clayton & Brook, 2005). Possible approaches for changing the situational context include rede-

veloping existing in-town neighborhoods to incorporate natural amenity values, assisting planners and developers in the design of such neighborhoods, and educating ex-urban immigrants about the environmental impacts of households (Liu, Daily, Ehrlich, & Luck, 2003). The appropriate mix of these strategies, however, should be based on attributes of specific communities (e.g., property rights regimes, zoning laws, socio-demographics of residents).

These suggestions present formidable challenges in themselves and may seem outside the jurisdiction of parks and recreation managers, but that does not imply they are inappropriate or impossible strategies. Parks and recreation managers are citizens and have rights to influence every level of governance. Further, doing so is not without precedent. Conservation biologists and wildlife managers have stepped outside their traditional jurisdiction to successfully address the loss of wildlands, and access to them, using zoning, land trusts, conservation easements, and transferable development rights (Merenlender et al., 2004; Panayotou, 1994). While engaging in the public processes advocated here managers should consider the possibility that the voices of stakeholders with rural backgrounds will be muted or distorted by educational deficits, and avoid the appearance of political alliances with ex-urban immigrants. Managers should strive to maintain neutrality or employ neutral arbiters in public deliberations (Peterson et al., 2002).

While case-study research provides detailed understanding of local context, it relies on corroboration from other cases. Future research should address the extent to which our findings hold in other areas of the Intermountain West and United States. Additional studies should also address the extent to which unique socio-demographic attributes of ex-urban migrants change the political strategies used to control access to and future availability of outdoor recreation areas.

References

- Bailey, R. G. (1995). *Description of ecoregions of the United States*. Washington, DC: USDA Forest Service.
- Beyers, W. B., & Nelson, P. B. (2000). Contemporary development forces in the nonmetropolitan west: new insights from rapidly growing communities. *Journal of Rural Studies*, 16(4), 459-474.
- Blahna, D. J. (1990). Social bases for conflict in areas of reverse migration. In R. G. Lee, D. R. Field, & W. R. Burch (Eds.), *Community and forestry: Continuities and sociology of natural resources* (pp. 159-178). Boulder, CO: Westview Press.
- Carr, D. L. (2004). Proximate population factors and deforestation in tropical agricultural frontiers. *Population and Environment*, 25(6), 585-612.
- Clayton, S., & Brook, A. (2005). Can psychology help save the world? A model for conservation psychology. *Analyses of Social Issues and Public Policy*, 5(1), 87-102.
- Cordell, H. K., Betz, C. J., & Green, G. T. (2002). Recreation and the environment as Cultural dimensions in contemporary American society. *Leisure Sciences*, 24(1), 13-41.
- Dillman, D. A. (1979). Residential Preferences, Quality of Life, and the Population Turnaround. *American Journal of Agricultural Economics*, 61(5), 960-966.

- Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method*. New York: Wiley.
- Dunlap, R. E., & Heffernan, R. B. (1975). Outdoor recreation and environmental concern: an empirical examination. *Rural Sociology*, *40*, 18-30.
- Enck, J. W., Decker, D. J., & Brown, T. L. (2000). Status of hunter recruitment and retention in the United States. *Wildlife Society Bulletin*, *28*(4), 817-824.
- Floyd, M. F., McGuire, F. A., Shinew, K. J., & Noe, F. P. (1994). Race, Class, and Leisure Activity Preferences: Marginality and Ethnicity Revisited. *Journal of Leisure Research*, *26*(2), 158-173.
- Fortmann, L., & Kusel, J. (1990). New voices, old beliefs: forest environmentalism among new and long-standing rural residents. *Rural Sociology*, *55*, 214-232.
- Fuguitt, G. V. (1995). Population change in nonmetropolitan America. In E. N. Castle (Ed.), *The changing American countryside: Rural people and places* (pp. 77-102). Lawrence, USA: University Press of Kansas.
- Fuguitt, G. V., & Beale, C. L. (1996). Recent trends in nonmetropolitan migration: Toward a new turnaround? *Growth and Change*, *27*(2), 156-174.
- Fulton, J. A., Fuguitt, G. V., & Gibson, R. M. (1997). Recent changes in metropolitan-nonmetropolitan migration streams. *Rural Sociology*, *62*(3), 363-384.
- Ghose, R. (2004). Big sky or big sprawl? Rural gentrification and the changing cultural landscape of Missoula, Montana. *Urban Geography*, *25*(6), 528-549.
- Graber, E. E. (1974). Newcomers and oldtimers: growth and change in a mountain town. *Rural Sociology*, *39*(504-513).
- Gude, P. H., Hansen, A. J., Rasker, R., & Maxwell, B. (2006). Rates and drivers of rural residential development in the Greater Yellowstone. *Landscape and Urban Planning*, *77*(1-2), 131-151.
- Idaho Fish & Game. (2005). Teton River trout population depressed, but improving. *Upper Snake Region annual fisheries newsletter*, *1*(1), 1-6.
- Johnson, K. M. (2003). Unpredictable Directions of Population Growth and Migration. In D. L. Brown & L. Swanson (Eds.), *Challenges for rural America in the 21st century* (pp. 19-31). University Park, PA: Pennsylvania State University Press.
- Johnson, K. M., & Fuguitt, G. V. (2000). Continuity and change in rural migration patterns, 1950-1995. *Rural Sociology*, *65*(1), 27-49.
- Jones, R. E., Fly, J. M., Talley, J., & Cordell, H. K. (2003). Green migration into rural America: The new frontier of environmentalism? *Society & Natural Resources*, *16*(3), 221-238.
- Kie, J. G., & Czech, B. (2000). Mule and black-tailed deer. In S. Demarais & P. R. Krousman (Eds.), *Ecology and management of large mammals in North America*. Upper Saddle River, NJ: Prentice Hall.
- Liu, J. G., Daily, G. C., Ehrlich, P. R., & Luck, G. W. (2003). Effects of household dynamics on resource consumption and biodiversity. *Nature*, *421*(6922), 530-533.
- Merenlender, A. M., Huntsinger, L., Guthey, G., & Fairfax, S. K. (2004). Land trusts and conservation easements: Who is conserving what for whom? *Conservation Biology*, *18*(1), 65-75.

- Nelson, P. B., & Beyers, W. B. (1998). Using economic base models to explain new trends in rural income. *Growth and Change*, 29(3), 295-318.
- Panayotou, T. (1994). Conservation of biodiversity and economic development: the concept of transferable development rights. *Environmental and Resource Economics*, 4(1), 91-110.
- Peterson, M. N. (2004). An approach for demonstrating the social legitimacy of hunting. *Wildlife Society Bulletin*, 32(2), 310-321.
- Peterson, M. N., Mertig, A. G., & Liu, J. G. (2006). Effects of zoonotic disease attributes on public attitudes towards wildlife management. *Journal of Wildlife Management*, 70(6), 1746-1753.
- Peterson, M. N., Peterson, T. R., Peterson, M. J., Lopez, R. R., & Silvy, N. J. (2002). Cultural conflict and the endangered Florida Key deer. *Journal of Wildlife Management*, 66(4), 947-968.
- Price, M. L., & Clay, D. C. (1980). Structural Disturbances in Rural Communities: Some Repercussions of the Migration Turnaround in Michigan. *Rural Sociology*, 45(4), 591-607.
- Radeloff, V. C., Hammer, R. B., Stewart, S. I., Fried, J. S., Holcomb, S. S., & McKeefry, J. F. (2005). The wildland urban interface in the United States. *Ecological Applications*, 15(3), 799-805.
- Rasker, R., & Hansen, A. J. (2000). Natural amenities and population growth in the Greater Yellowstone region. *Human Ecology Review*, 7, 30-40.
- Rothman, H. K. (1998). *Devil's bargains: Tourism in the 20th-century American West*. Lawrence, KS: University Press of Kansas.
- Shumway, J. M., & Davis, J. A. (1996). Nonmetropolitan population change in the Mountain West: 1910-1995. *Rural Sociology*, 61(3), 513-529.
- Shumway, J. M., & Otterstrom, S. M. (2001). Spatial patterns of migration and income change in the mountain West: The dominance of service-based, amenity-rich counties. *Professional Geographer*, 53(4), 492-502.
- Skovlin, J. M. (1982). Habitat requirement and evaluations. In J. W. Thomas & D. E. Toweill (Eds.), *Elk of North America: Ecology and management* (pp. 369-413). Harrisburg, PA: Wildlife Management Institute.
- Smith, M. D., & Krannich, R. S. (2000). "Culture clash" revisited: Newcomer and longer term residents' attitudes towards land use, development, and environmental issues in rural communities in the Rocky Mountain west. *Rural Sociology*, 65(3), 396-421.
- Starrs, P. F. (1995). Conflict and change on the landscapes of the arid American West. In E. M. Castle (Ed.), *The changing American countryside: Rural people and places* (pp. 271-285). Lawrence, KS: University Press of Kansas.
- Tarrant, M. A., & Green, G. T. (1999). Outdoor recreation and the predictive validity of environmental attitudes. *Leisure Sciences*, 21(1), 17-30.
- U.S. Fish and Wildlife Service. (2005). *National Wetlands Inventory Data 1979-1994*. St. Petersburg, FL.
- United States Department of the Interior. (2002). *2001 national survey of fishing, hunting, and wildlife-associated recreation*. Washington, DC: United States Government Printing Office.

- Wilkins, N., Hays, A., Kubenka, D., Steinbach, D., Grant, W., Gonzalez, E., E., & Kjelland, M. (2003). Texas rural lands: Trends and conservation implications for the 21st century. *Agricultural Communications, Texas A&M University System, College Station, USA*.
- Zelinsky, W. (1971). Hypothesis of Mobility Transition. *Geographical Review*, 61(2), 219-249.