Whose "sense of place"? A political ecology of amenity development and conservation practice in Central Oregon

Patrick T. Hurley, Ph.D. Assistant Professor, Environmental Studies Program, Ursinus College, PO Box 1000, Collegeville, PA. Email: phurley@ursinus.edu

Introduction

Much attention has been paid to urbanization within the United States in recent years, particularly to concerns about the impact of sprawl (unplanned or uncontrolled commercial and residential growth) on the environment and its role in creating a "placelessness" or "geography of nowhere" (e.g., Kunstler 1993, Duany et al. 2000). Indeed, concerns about the general process of urbanization now extend to diverse urban spaces and the myriad ways that residential development reworks local ecologies (see e.g., DeStefano and DeGraaf 2003, Theobald 2004, Johnson and Klemens 2005), including habitat loss, fragmentation, alteration, and declines in the species that require specific characteristics associated with these habitats (Noss and Cooperider 1994, DeStefano and DeGraaf 2003, Randolph 2004). In response to these concerns, a number of new development approaches have emerged, often grouped under the heading of "new urbanism" (McCann 1995, Zimmerman 2001, Till 2001, Randolph 2004), that feature a range of design features that are intended to minimize impacts on the environment (Arendt 1996, Randolph 2004, Bjelland et al. 2006).

But what role do sense of place and amenity migration play in the efforts to create alternative residential development in the urbanization process in the American West? In the spirit of work by Bjelland and co-authors (2006) who studied "the production of suburban alternatives" within the context of Minneapolis, this chapter explores the way that the developers draw sense of place to create new residential developments. Using literature in political ecology, I focus on the relationship among amenity migration, trends in environmental management in the urbanization process, and the use of sense of place by individual developers to create amenities in residential developments. The chapter examines projects from Deschutes and Wasco counties in Central Oregon that highlight the intersection of regional social-economic processes and the ways that these fuse with sense of place to produce development alternatives that (re)commodify landscapes in particular ways. In doing so, I highlight the need for sense of place researchers to engage with and examine processes of urbanization and the diverse place meanings that are produced (and potentially contested) within diverse residential developments.

Toward a Political Ecology of Sense of Place and Environmental Management in the Urbanizing American West

Political ecology is an emerging field that examines "linkages between social systems and ecological systems" (Berkes 2004: 624), by combining "the concerns of ecology with a broadly defined political economy" (Blaikie and Brookfield 1987: 17). This integrative concern emphasizes the need to understand the dialectical relationship between society and the social-political complexity of changing human-environment interactions (Paulson et al. 2003). In studying the environment, political ecologists generally understand the environment as biophysical phenomena associated with the planet Earth "together with human knowledge and practice" (Paulson et al. 2003: 205). In this way, the environment is not merely something "out there" and separate from humans, but instead is something of which humans are inherently a part

and about which humans accrue knowledge through different modes of interaction. Likewise, political ecology acknowledges that biophysical environments are produced through *politics* or "the practices and processes through which power, in its multiple forms, is wielded and negotiated" and that "politics are related in various ways to social relations of production and decision-making about resource use… [T]hese are exercised in diverse arenas, on multiple scales, and infused with cultural knowledge and value." From this perspective, political ecology views the actions of individuals as *conditioned responses* to scalar processes that range from the local to the global.

Environmental management practices have long been at the heart of political ecological inquiry (see e.g., Peluso 1992; Neumann 1998, 2004; Goldman 2004). A key feature of this research lies in explicating the logics that determine what counts as nature and what constitutes appropriate environmental management. According to Zimmerer (2000, see also 2006), a key feature of global environmental management today is the proliferation of "nature-society" hybrids, which represent the proliferation of new schemes, including a pervasive use of land-use zones and associated practices that "contain in space" specific human practices (e.g., hunting, farming, housing). While Zimmerer's discussion focuses primarily on the conservation of biodiversity in the developing world, these insights reveal the complexity of emerging environmental management practices, including human-dominated landscapes, that are "for the management of biogeophysical impacts and the *expansion of markets*" (page 359). Zimmerer links the production of these "nature-society hybrids" to processes of globalization-nationalization and privatization-commodification, which rest on particular constructions of environmental scarcity and sensitivity and the need for private enterprise to value these resources efficiently.

To date, however, little work in political ecology on environmental management has engaged with sense of place or explicitly explored the way sense of place might reveal the diversity of "nature-society hybrids" in a particular region (Walker 2006). One exception is the work of Maureen Reed (2007 a, b), who I draw on here. Reed (2007a) examines two different rural areas in western Canada, where efforts to form biosphere reserves result in what she describes as "uneven environmental management." In comparing the formation of these reserves, Reed discusses the role that diverse social actors play in constructing particular environments as worthy of protection and constructing particular forms of management as appropriate. While forestry goals and management in the British Columbia case are being reworked by broad array of activists, scientists, First Nation groups, and governmental officials, lake and wildlife management in the Alberta case is dominated by land trusts and local and government neglect. Reed's work demonstrates the different configurations that result in Alberta and British Columbia. These configurations highlight both the tensions that emerge between the civic sector and private forms of environmental management, including by national land trusts, and their links to the processes of globalization-nationalization and privatization-commodification described by Zimmerer (2000).

By taking a comparative perspective, Reed further reveals the need to pay attention to the role that regional processes play in shaping the "formal and informal institutional arrangements" that characterize environmental management of a given area. These processes include property exchanges associated with changing regional economies and demographics, the ways these changes influence the valuation of land (i.e. differing forms of commodification and ways of marketing nature), the rules and norms that govern formal planning and land-use decision

making, and reterritorialization or the social process through which rules are established that govern natural resource access, use, and production. Thus, the research of political ecologists generally and observations by Reed specifically raise questions about the role that "sense of place" and environmental management play in reconfiguring residential development and urbanization in particular areas.

"Sense of Place" and Environmental Management

Studies focusing on "sense of place" have often sought to better understand the meanings and attachment people place on their environments, including satisfaction with where people live and the perceptions people have about environmental quality and degradation (Kaltenborn 1998, Williams and Stewart 1998). First, sense of place scholars have demonstrated the role that both biophysical environments and political contestation play in changing these meanings and perceptions (Stedman 2003, Larsen 2004, Johnson et al 2008), including recognition of the importance that sense of place plays in land use decisionmaking (Stewart 2008). Second, from a place-based perspective, researchers have shown that meanings are multi-layered and complex, with different meanings for the same location open to efforts by individuals or groups "to manipulate and market" their own set (Cheng et al. 2003). Finally, Cheng and coauthors (2003) recognize the need to move beyond studies anchored in a narrow environmentalist-industry duality, particularly as they relate to issues associated with the management of the environment.

Examinations of the politics associated with changing place meanings and management stress the role that power and access to capital play in creating particular meanings for a place among the communities that inhabit particular locations (e.g., Harner 2001). This approach resonates well with political ecological understandings of environmental change and management, because it makes explicit the relationship between power, including flows of capital, and the ways that what counts as appropriate uses of the environment derive from the ability to shape the meanings attached to particular places (Blakie and Brookfield 1987, Robbins 2004). Drawing on insights from political ecology, Johnson and coauthors (2008) demonstrate the importance that ideas of ecological integrity and the importance of conserving globally important ecosystems play in forging new place meanings for long-term residents in a given location. Their findings suggest that processes of in-migration and urbanization, the efforts to protect particular natures by specific groups associated with different sides of this process, and the actions of individuals and groups collectively to market their meanings are indeed important to the formation of specific place meanings and efforts to shape new urbanization patterns.

Restless Landscapes and the Role of Design in "Quest(s) for Authentic Place"[1]

Among the new features of urbanization associated with what Bjelland and coauthors (2006) call the "quest for authentic place" are a number of "conservation design" principles. First, site plans alter the layout of lots (pattern of development) to avoid areas that are deemed to have conservation value—sensitive environmental resources (e.g., biodiversity, natural habitats, wetlands, riparian areas), natural resources (e.g., agricultural land, timberlands, grazing lands), or recreational opportunities (Arendt 1996, Bjelland et al. 2006). Second, developers may limit lot sizes to maximize open space. Third, projects often but not always cluster lots together to further increase the size and contiguity of open space. Fourth, prohibitions on future development are

[1] See Bjelland et al. 2006.

placed on areas designated as open space or commons. These prohibitions may be in the form of deed restrictions, through conservation easements held by a local government or land trust, or sale of the land to a land trust or government agency. Fifth, homeowner bylaws may encourage a range of ecologically appropriate interactions by residents, both within conserved areas and on their own property (Arendt 1996, Theobald et al. 1997). Taken together, these design features are intended to address a diversity of environmental management goals, reflecting the particular place meanings attached to specific features of the landscape.

A number of urban scholars have been critical of these so-called "innovations" in the residential development process, dissecting the ways that these features of "new urbanism," are recasting biophysical environments as spaces in need of environmental (Zimmerman 2001), reworking urban forms (McCann 1995, Bjelland et al 2006), and are attempting to address social problems through spatial prescriptions (Veninga 2004). For these scholars, the development project that has come to be known as "new urbanism" derives from a profound sense of "placelessness" that came to dominate suburban forms of development and associated problems, such as social exclusion according to economic class (McCann 1995, Zimmerman 2001, Veninga 2004). Collectively, these authors challenge the ability of alternative forms of development to appropriately challenge this trend, given the tendency for these projects to emerge within highly segmented real estate markets and cater to relatively affluent buyers. Veninga's research links the emergence of new urbanism in the Puget Sound region to the broader social and economic conditions that enable new spatial prescriptions to take advantage of niche markets, highlighting the ways that particular agents are constrained or enabled. Research by Bjelland and coauthors (2006) point to the role that local developers play in making new "niche products" a reality in the Minneapolis St. Paul region. Zimmerman (2001) argues that the use of nature in Illinois' "Prairie Crossing" represents the mobilization of nature in defense of the suburban dream, representing both a nostalgic defense of the Midwestern frontier and a poor model of sustainability. Similarly, in her research on the representation of nature in marketing associated with new urbanist projects, Till (2001) argues that design discursively and materially produces nature in ways that play on "Edenic myths" and rural idylls in a new form of "green politics". Taken together, these observations raise questions about the socio-economic inclusiveness of a new "green politics" that actively produces "nature-society" hybrids.

Amenity Migration and Development in the American West

Economic restructuring and the associated decline of natural resource-dependent communities in the American West has been a key feature in recent decades (Nelson 2001, Jackson and Kuhlken 2006, Travis 2007).[2] In place of economies built on extraction, real estate has become the economy of choice (see e.g, Walker and Fortmann 2003, Brogden and Greenberg 2003, Ghose 2004) and amenity migration has become an important factor in explaining population growth, particularly differences in growth among counties (Nelson 2006). High amenity counties in the American West are experiencing higher rates of growth than low amenity counties, with non-metropolitan areas characterized by much lower-density growth than in nearby metropolitan areas and higher densities in low amenity counties (Vias and Carruthers 2005, Nelson 2006). Moreover, only Nevada and Arizona exhibit patterns of increasing density (a measure of land-use efficiency) in areas characterized by amenity-migration. Likewise, Smutny (2002) has

[2] I note that a number of communities, particularly in parts of the Interior West, have experienced resource booms in recent years. These booms are tied to renewed investment in energy extraction.

described the ways that amenity-related residential development has led to uneven development among non-metropolitan areas of Idaho that were formerly characterized by natural resource production. Population growth in counties with the presence of public lands is often higher than local averages (Frentz et al 2004), with growth rates differing among counties with particular federal lands agencies. However, this trend is likely related to differences in amenities and not management priorities (Frentz et al 2004). Taken together, these results suggest that high amenity areas are not characterized by substantial patterns of high-density land development. Instead, they point to patterns of lower-density parcelization.

At the same time, research on amenity-migration has highlighted key differences in land management within counties, within communities and among landowners, and on individual parcels. First, work by Shumway and Otterstrom (2001) demonstrates that areas within the American West characterized by high levels of environmental amenities are increasingly sites of conflicts over environmental management. Second, Halseth (1998) has suggested that continuing development in the amenity landscapes of rural British Columbia have lead to the creation of communities within communities. Although focused largely on the emergence of different social communities dispersed across space but associated with proximity to particular amenities (e.g., lakeshores), this study raises questions about the extension of this phenomenon to the creation of entire new development projects. Third, Gosnell et al. (2006) document changes in landowner decision-making, as a more diverse cohort of landowners, including absentee landowners, make land-use decisions that focus on amenity or conservation values in addition to, and sometimes instead of, traditional production values. In many instances, changes in management at the county, community, and parcel level have led to land-use conflicts.

Drawing on political ecology, Walker and Fortmann (2003) locate the source of land-use conflicts in the American West in the cultural and economic changes that accompany amenity in-migration and that result from the competing rural capitalisms that result from these changes. Importantly, Walker and Fortmann argue that one set of rural capitalism emphasizes protecting the quality of natural landscapes through planning and development-related decisions, precisely because these positively impact real estate values. Brogden and Greenberg (2003) empirically demonstrate the importance that amenity migration and changing place meanings have in reassigning resource access away from agricultural users and to environmental users. This process of reassignment occurs through property markets and new environmental management schemes.

Research Methodology and Geographic Context

Scholars of amenity migration in the American West, particularly those associated with study of the "new West" have tended to focus on the Inter-mountain West, eschewing the coastal Pacific states (see Walker and Fortmann 2003 and Walker et al. 2003 as examples of study within this part of the American West). While Oregon is sometimes viewed as different from the drier, interior parts of the region, this study focuses on Deschutes and Wasco counties (Figure 1), two Eastside counties that are largely characterized by "high desert" conditions and what Jackson and Kuhlken (2006) describes as an area containing "all-seasons recreational opportunities" (p. 172) and evincing patterns "of unanticipated development with the same characteristics of many intermountain communities" (p. 157).

Research Methods

Study sites within the two counties were selected using two criteria. *First*, I identified potential sites through discussions with county land-use planners, local land trust personnel, developers who suggested other candidate projects, and through internet real estate searches. Because very few communities describe themselves using a "conservation development" moniker, I asked key informants whether there were any Planned Unit Developments[3] or residential communities/subdivisions in the county, which included either significant open space conservation features *or* that actively featured a project's conservation activities in marketing. *Second*, I attempted to find residential projects both within and outside of Urban Growth Boundaries, given that I both wanted to identify *and* capture a range of potential differences in project design and that Bjelland et al (2006) discovered these projects within expanding urban areas.

Once potential cases were identified, I reviewed project proposal documents, county planning documents associated with each case, marketing materials (i.e. real estate brochures and websites), and the governance documents (i.e. Contracts, Covenants, and Restrictions; Design Guidelines) for each of the communities. I created an inventory of their design features, conservation goals and features, and environmental management-related rules. I also interviewed current and former planning officials, project investors/developers, representatives from conservation organizations active in the two counties (e.g., activist and land-use watchdog groups as well as local land trusts holding easements), and a limited number or residents or landowners in the communities during two visits to the area, one in May 2006 and the second in May 2007. Residents and landowners were initially identified by developers or using the local phonebook and snowball sampling techniques were used to recruit additional respondents. In general, I was interested in understanding the ways in which various actors talked about specific projects, their design features, relationship to local development trends, and their role in addressing particular conservation issues in the area. Using Geographic Information Systems, I discuss the adjacency/proximity of these projects to "protected lands" such as public lands and significant properties located nearby that feature natural amenities and outdoor recreation opportunities.

Natural Amenity and Land-Use Change in Central Oregon's Deschutes and Wasco Counties

Deschutes and Wasco counties are located on the eastern slopes of the Cascade Mountains and contain or are adjacent to significant stretches of the Deschutes River, a significant tributary to the Columbia River that is renowned for its fly-fishing (Deschutes River Conservancy 2007). While Deschutes and Wasco counties share many natural amenities associated with communities experiencing rapid growth elsewhere, the two counties' experiences with development are quite different. Importantly, Deschutes County scores slightly higher on the USDA's natural amenity index (McGranahan 1999).[4] The rate of growth in the county appears to reflect this; Deschutes County is home to the City of Bend, Oregon's fastest growing metropolitan area since 2000 and one of the fastest growing metropolitan areas in the U.S. (U.S. Census Bureau 2007a). Bend's tremendous growth has been fueled, in large part, by its close proximity to the Mt. Bachelor ski

[3] Planned Unit Development refers projects that undergo alternative land-use review and often deviate from common land-use patterns. It is also the primary land-use decision-making mechanism through which projects with conservation design features have been proposed elsewhere (Bjelland et al. 2006)

[4] The USDA natural amenity index measures variables associated with an area's climate, topographic diversity, and the presence of public lands. For a fuller description, see McGranahan (1999).

area[5] and an abundance of sunny days (McGranahan 1999). In contrast, Wasco County also lies on the eastern flanks of Mt. Hood, but has considerably fewer hours of sunlight than Deschutes. Perhaps more importantly, Wasco County's major metropolitan area, The Dalles, and its outlying rural exception areas largely have been overshadowed by rapid amenity-related growth in, and around, the towns of Hood River and White Salmon (Washington), which sit across the Columbia River from one another and have been a revered site of windsurfers the world round.[6] Thus, the county has seen much lower population growth (U.S. Census Bureau 2007b) and, to date, a smaller influx of retirees and second home buyers.[7,8] Only recently has the northern part of the county begun to see the type of property acquisition that is characteristic of neighboring Hood River and Klickitat (Washington State) counties (Hood River and White Salmon respectively).[9] Its growth and level of development has yet to approach anything like that experienced by Deschutes County.[10,11]

Growth in the two counties takes place within the context of Oregon's well-known state mandated land-use planning system, a feature that distinguishes it from many other states in the American West and the U.S. Among the 17 states West of the 100th meridian, only California, Oregon, and Washington have some form of statewide or required land-use planning (Bollens 1992). According to this process, municipal and county plans are reviewed by Oregon's Department of Land Conservation and Development (Bollens 1992, DLCD 2007) to ensure their compliance with state regulations and that they adequately address, where appropriate, the state's 19 planning goals. Importantly, Oregon's system requires the identification of Urban Growth Boundaries (UGB), within which urban growth is supposed to be contained. Outside of the UGBs, counties are to identify and classify productive timber and agricultural lands. While specific rules differ from county to county, places identified as productive resource areas generally carry restrictions on development. An important exception are so-called "rural exception areas," which represent areas that experienced increased parcelization and/or low-density development prior to the creation of the system in 1973.

Land-use change histories in Deschutes and Wasco counties share important similarities, even if the scope of these changes is quite different. In many ways, the emergence of the Oregon land-use planning system was a response to rapid partitioning of rural parcels in the southwestern portion of the Deschutes County.[12] By the time the state had created the planning system, a large degree of rural subdivision had occurred, a fact that the system recognized through the creation of the so-called "rural exception areas."[13,14] In the years it would take Deschutes County to finalize a county-wide planning document, five-acre parcelization would come to dominate many rural parts of the county, both because five-acre minimums became the preferred mechanism by county planners to stop parcelization in the meantime and due to the high degree of demand to

[5] Interview A, Deschutes County 6-12-2006
[6] Interview B, Wasco County 5-31-2006
[7] Interview B, Wasco County 5-31-2006
[8] Interview C, Wasco County 5-31-2006
[9] Interview B, Wasco County 5-31-2006
[10] Interview B, Wasco County 5-31-2006
[11] Interview C, Wasco County 5-31-2006
[12] Interview A, Deschutes County 6-12-2006
[13] Interview A, Deschutes County 6-12-06
[14] Interview B, Wasco County 5-31-06

create parcels that could later still be sold for residential development.[15] Similarly, portions of northern Wasco County experienced pre-1973 parcelization and land speculation.[16,17] albeit to a much lesser extent than in Deschutes. These densities would largely determine development entitlements for future projects.

As Deschutes County's (Bend's) growth has continued to skyrocket, concern over the ability of agricultural and timber land-owners to maintain economically viable operations has grown. Likewise, conservation groups, such as the Deschutes Basin Land Trust and the Deschutes River Conservancy, among other statewide and national groups have expressed the need to expand efforts to: protect critical wildlife and natural habitat characteristic of high desert terrestrial habitats (e.g., sagebrush steppe, native grasslands, and Ponderosa pine forests); increase instream flows for fish in the Deschutes River and its tributaries; and to retain working forests and farms in the region (ODF 2006a, 2006b).[18] And although growth has been much less pervasive in Wasco County, the county's northern areas are home to limited-range habitats and tremendous wildflower diversity, within which much of the early rural parcelization took place.[19] Thus, concerns about the impacts of rural sprawl on Oregon white oak-Ponderosa pine woodlands have been focal points of discussion when it comes to the area's conservation and environmental management (OBP 1998, ODF 2006a).[20],[21] Increasingly, too, some residents are even worried about the implications rural residential growth might have for the northern county's cherry growers.[22] It is within these geographic, historical, and environmental management contexts that much recent rural land development in both Deschutes and Wasco has taken place.

Whose sense of place? Amenity Developers and Environmental Management in the Alternative Residential Developments of Central Oregon

> *[T]he term subdivision risks loading the discourse that 'oh, they're gonna put subdivisions on farmland and that kind of thing,' we call this a preservation ranch, and that's much more to me, we're preserving the ranch by putting occasional residents on ranch, non-farm properties…*[23]

I identified five projects in Deschutes and five in Wasco that matched the criteria for the research project described above (Table 1). The number of lots ranged from a low of five for one of the communities in Wasco County to 122 for the largest and most urban of the communities in Deschutes County. The average number of lots for Deschutes County developments was 60 and 13 for Wasco County. While most of the projects had been designed and built within the past two decades, one project had been undertaken in the 1970s in Wasco County. I note, however, that projects in both counties are at differing states of completion, with a couple less than 10 percent of the way to being fully built out. In both counties, all projects are designed to attract buyers seeking single-family homes. Besides their overall size, it was also clear from interviews with

[15] Interview A, Deschutes County 6-12-06
[16] Interview C, Wasco County 5-31-2006
[17] Interview B, Wasco County 5-31-06
[18] Interview D, Deschutes County 6-9-06
[19] Interview B, Wasco County 5-31-06
[20] Interview E, Wasco County, 6-15-06
[21] Interview F, Wasco County 5-30-06
[22] Interview G, Wasco County 6-8-06
[23] Interview R, Phone Interview, 2-27-2007

both planners and developers in the two counties that the Deschutes' projects differ rather dramatically in terms of price.[24,25]

While the use of conservation design principles is not widespread in the case study areas, [26,27] a range of specific elements, often in combination, was found (Table 2). Only three communities—two in Deschutes and one in Wasco—employed the full complement of features described above. Still, a number of interesting patterns associated with the use of conservation design within the two counties are apparent. Examples were found both inside and outside of UGBs. Deschutes County has a greater number of these projects, which given the greater degree of development in the county is not surprising. Within Wasco County, the use of open space preservation, clustering, or the creation of environmental governance is a predominant feature of residential development proposed in the past decade.[28] Results suggests that design elements are most commonly related to place meanings that value native species and biodiversity protection, such as restrictions on or guidelines for particular planting practices, in projects that do not rely on clustering houses, or even reducing lot sizes, as part of their efforts to facilitate management of the environment in their projects. Indeed, one Wasco County project is designed using large-lots but its bylaws reveal a strong emphasis on managing these parcels in ways that protect the area's native flora and fauna. The same is true for a Deschutes project that is found within the Urban Growth Boundary and places strict review procedures on plantings. Despite these similarities, these projects suggest important differences in the pathways that give rise to sense of place and particular forms of environmental management, namely the role of the developer.

Whose development?

> *We wouldn't need land-use planners if every developer lived in the developments they did.*[29]

The residential projects in Deschutes and Wasco counties that feature conservation design practices challenge attempts to paint developers in broad-brushed strokes, reflecting a range of individuals from diverse backgrounds. Only one of the ten projects was undertaken by a large developer—a former timber company—and even this project represents an "environmentally sensitive real estate development" whose bylaws provide strict guidance on appropriate land management activities, including native species plantings (see above). Indeed, a recurrent theme among the projects in both counties was the active role that amenity in-migrants—not development companies—played in creating these alternative residential projects. Six of the eleven projects are associated with in-migrants who participated in the land purchase, helped design the project layout and features, and oversaw implementation of the project. [30,31,32,33,34] Of

[24] Interview A, Deschutes County 6-12-2006
[25] Interview C, Wasco County 5-31-2006
[26] Interview A, Deschutes County 6-12-2006
[27] Interview K, Phone interview, 9-8-06
[28] Interview B, Wasco County 5-31-06
[29] Interview B, Wasco County 5-31-2006
[30] Interview R, Phone Interview, 2-27-2007
[31] Interview A, Deschutes County 6-12-06
[32] Interview C, Wasco County 5-31-2006
[33] Interview L, Wasco County 6-14-2006
[34] Interview O, Deschutes County 6-9-2006

these, two were built by individuals with extensive development experience elsewhere. Four of the projects are home to those in-migrants today: another was until the individual became too old to live unassisted in the home. Likewise, one of the in-migrant developers is responsible for two projects. A seventh project is home to the "developer," but this project features parcelization of family land to create second homes for friends and other potential buyers.

In the Wasco County case described in the section above, a reluctant local environmentalist entered the picture, to act as developer and produce a different landscape outcome. Having learned the lesson that "developers are the enemy" at an early age, this individual purchased the property by leveraging his life savings. In creating a new project, complete with a strict set of ecological bylaws, this developer ensured that a special part of northern Wasco County's oak-pine woodlands would not be "destroyed' by the 21 home sites and equestrian-oriented project approach that had been proposed twice for this part of the County. Despite declaring his intentions to create a conservation-oriented project, the project faced opposition from local conservation groups. This story as well as the trends from the two counties paints a picture of individual developers that are literally creating their ideal community in which to live (or retire), drawing important links to amenity-related in-migration that extends beyond potential buyers.

For some planners, paying attention to place and the local environmental contexts that imbue these places with meaning meant that these developments were different in key ways. A former county planner went so far as to suggest that when a "landowner comes in and creates the community that they're going to retire in, they're already looking to do all the things that we try to do by ordinance and they wind up doing it through the HOA, covenants, lease back options, all these other tools that we can't really regulate very readily…"[35] Interestingly, however, the land trusts initially were hesitant to get involved with a number of the development projects, precisely because they did not want to be seen as facilitating the development of landscapes with important ecological and conservation values.[36,37] Once the projects were approved by county officials, though, they were less concerned and saw their participation as important to ensuring the protection of ecological meanings associated with these places

Which rural amenity?

> *We didn't create a little Hollywood set, you know. This [ranch] is the real deal. And people recognize that and appreciate that, they see the work that's going on and they don't have to get involved with it, but they have there, looking across green pastures, cows in the field, and you know they like that."*[38]

In nearly all of the cases, residential development has taken place on lands that were historically used for agricultural or extractive uses. In each case, the surrounding landscape, including spectacular views of geologic features and characteristic vegetation of the local area, is a key dimension in the marketing of ownership opportunities. In Wasco County, historic land uses included grazing or ranching, while one property also had been managed for irrigated agriculture. Four of the five developments are found within a narrow band of Oregon white oak-dominated woodlands that are interspersed with Douglas-fir and Ponderosa pine trees and in

[35] Interview B, Wasco County 5-31-2006
[36] Interview P, Deschutes County 6-9-2006
[37] Interview F, Wasco County 5-30-2006
[38] Interview O, Deschutes County 6-9-2006

close proximity to the area's prominent cherry orchards. In three of these, the sloping hillsides, which feature small-scale rock escarpments, that were once home to roaming herds of cattle, now contain lots that provide intermittent views of one of two Cascade peaks—Mt. Hood in Oregon and Mt. Adams in Washington—as well as occasional views of the Columbia River. In a few instances, a homeowner may have a view of all three. By contrast, Deschutes County projects are primarily found on former timber and ranching lands. Views of the High Cascade peaks, including Mt. Bachelor and the Three Sisters, are common to many properties. All of the projects lie within the transition zone from Ponderosa pine forest to Central Oregon's characteristic western juniper woodlands and high desert shrub.

Marketing materials, including websites, for the project are quite diverse. Importantly, only one of the Wasco County projects has an actual website, which is related more to the full-time endeavors of its developer than it is specifically geared toward the development. All of the projects within Deschutes County maintain websites, which serve both as gateways to information for existing landowners and opportunities to market to potential buyers. These sites vividly depict the sense of place constructions behind individual projects, with panoramic pictures that highlight the rugged Central Oregon landscape and majestic mountain views. They also feature various types of recreation and describe the area's wildlife, plants, and to differing degrees, dimensions of ecological stewardship or conservation. One site includes a rustic storybook theme. The site features both photos and site maps that play on iconic imagery of the "Old West," including individuals on horseback wearing cowboy hats, and invites potential buyers to surround themselves with "a real Central Oregon ranch." The same site, however, features pictures of an older individual fishing with what appears to be a grandson. Another project website makes its efforts at developing in "harmony with the land" more explicit, intoning that the priority is not to fill the "place with homes" but to give people "a sense of place."

These discursive constructions, however, mark more than rhetorical reconfigurations of the landscape. For all but one of the projects in Wasco County, residential development has resulted in new land-uses. Where once cattle roamed, now only residents and wildlife wander the hillsides. In one community, the barbed wire that used to demarcate grazing lands has been made into a piece of place-based environmental art. In Deschutes County, however, there is continuity with past place meanings but subtle changes in the management of these environment. In part, this continuity results from the institutional imposition of strict agricultural zoning limits by Deschutes County that are in keeping with the state's planning system. But in both cases, the developers have used these constraints to market a set of place meanings that both commodify the landscapes in new ways and that generate environmental benefits. Using historic water rights, two of these projects include agricultural activities on portions of the conserved open space. One project maintains an active cattle ranch on irrigated grazing lands, while the other produces hay on irrigated fields (Figure 3). The latter has introduced a small vineyard to the property, in keeping with the project's architectural theme. In both cases, these communities have invested in new irrigation measures that allow them to conserve water usage and through local conservation groups provide additional water for instream uses, such as salmonid conservation. Despite its proximity to one of the region's premier fly fishing rivers, a Deschutes County project has installed a constructed trout stream, complete with meanders, a pool-riffle configuration, and native riparian vegetation. All of the communities feature walking trails for the use of the community, but in all but one of these, there is no access for the public. One of

these projects includes horse trails that link to several thousand areas of land owned by the Bureau of Land Management.

Adjacency or close proximity to protected lands is a common feature of these developments. Three of the five projects in Wasco County are within close proximity of the Columbia Gorge National Scenic Area, including significant areas of land managed by the U.S. Forest Service and nature preserves owned by The Nature Conservancy. All of the Wasco projects include open space or commons that are protected from future development and which contain walking trails. One of the five projects donated a conservation easement to a regional land trust for protection of riparian forest habitats. Three of the developments in Deschutes County are adjacent to existing public lands: a city park, a prominent state park known for its spectacular geology, and lands managed by the Bureau of Land Management. A fourth lies in close proximity to an area "resort development," which affords quick access to golfing opportunities. In fact, all of the Deschutes communities lie within an easy 10 mile drive of a course.

Whose Environment, What Kinds of Management?

Projects in the study area feature a wide array of environmental management regimes, including involvement by local governments, regional land trusts, and the U.S. Forest Service to protect and manage common areas. Land trust activities have included riparian habitat improvements in at least two of the projects, one in Deschutes and one in Wasco, while a local government developed trails through another property that allowed community access to an adjacent park. But more often than not, the common areas of a project are owned and managed by the project's Homeowners Association. At least one homeowner's association organizes regular work parties, including applying for and receiving funds from the State of Oregon to help with tree thinning to improve wildlife habitat and minimize fire danger. In two others, it is clear that landowners must abide by strict landscaping and planting guidelines, with one project emphasizing the "careful restoration of plants and rocks" in disturbed construction sites. In the same project, landscaping in areas surrounding the home is limited to a list of approved native plants, while interior courtyards may include selected non-native but noninvasive species.

Interviews with residents and landowners in these communities revealed the attraction that both biophysical environments and developer commitments to environmental protection played in their decision to buy into the project. While dramatic views of the region's signature mountains, other unique geologic formations or ecosystems, and rivers clearly helped bolster their decisions, residents spoke about the environmental management features *within* their respective communities as a strong influence in their decisions. Residents in non-agriculturally oriented projects value the respect for native vegetation that is placed in community bylaws, placing importance on the ways that native vegetation reduces the consumption of water and provides habitat for local wildlife. These residents spoke about the wildlife they saw in their yards and the sense that their communities tread lightly on the landscape. Meanwhile, those residents living in projects featuring agriculture enjoy the "oases in the desert" that result from the irrigated fields.

This institutional picture, however, potentially misses the fine-scale dynamic associated with landowner activities, which may or may not accord directly with the link between "sense of place" and appropriate forms of management set up by the developer. In one Wasco project, a new resident negotiated with the developer to install a new fruit orchard (Figure 4). Another resident in a development in Deschutes was planting a small apple orchard on his property. In

both of these cases, these uses are consistent with the meanings these residents place on a cultural landscape that is tied to the agricultural history of the region. But in a Wasco County project noted for its strict ecological covenants and focus on improving wildlife habitat, efforts by a few residents to change the rules to allow horses evaporated when it became clear that any formal proposition would lose in a community vote. In this case, the majority of residents appeared to see horses as inappropriate, given the meanings they associated with the areas oak woodlands. This situation points to the ways that the meanings associated with a particular place in a specific project may come into conflict with divergent meanings.

Indeed, not all residents hold views that necessarily match either the discursive or material commitments to place intended by developers. A few residents recognized their purchase into the project as merely a good property investment or the opportunity to live in a beautiful spot, and not specifically as exhibiting a particular commitment to place-based management. More often, though, this mismatch is tied to competing meanings and what constitutes appropriate environmental commitments in that special place. For example, some residents suggest that the commitment to environmental protection within their communities could be stronger. In one case, residents in a Deschutes County project spoke about the emphasis placed on housing aesthetics in their community's bylaws and the barrier this presented to the installation of solar panels. In another case, a resident living in a Wasco County project was frustrated by the lack of awareness among neighbors and the developer-resident about oak management and invasive species. While this resident organized regular parties of fellow residents to remove some of these exotics, discussions about improving oak habitat through active thinning were met with resistance by the developer-resident. In this case, the conflict could be traced to differing meanings over forests, forest change, and untouched nature.

Discussion and Conclusions

When using a political ecology framework to examine the relationship of "sense of place" to amenity migration, evolving environmental management practice, trends in urbanization, and the creation of amenities in residential developments in the Central Oregon context, a number of dimensions are apparent. First, access to capital, both by developers and residents, are key to forming a sense of place within a given project. For developers, this capital is critical in establishing the place meanings that result in particular forms of environmental management and ultimately the natural amenities that are marketed to potential buyers. For residents, the proliferation of residential projects that seek to manage the environmental meanings (and environments) in particular ways mean that those with sufficient money have a greater number of choices within the real estate market. Buyers can both consume the amenities that result from the resulting place meanings and purchase a set of management practices that ostensibly will protect these. I do not want to argue that this process is not without social or ecological consequences, nor do I want to argue that access to housing opportunities in these projects is not marked by considerations of economic exclusion. Many of the landowners and residents with whom I spoke came from other parts of Oregon and the American West. For a few, this Central Oregon property was one of at least two they maintained. Indeed, many of these projects, but not all, represent unaffordable housing choices for those living in the respective counties. Rather, the goal of this study is to better understand the interaction of complex social-political and economic processes with place meanings and the environmental management configurations that

emerge to support these. This approach helps to reveal the unevenness of environmental management features in areas experiencing amenity-related urbanization.

Second, these decisions take place within the wider context of regional changes. From the spectrum of projects represented here, it is clear that differing ideas about landscape qualities, place of meanings, and environmental management play out among competing rural capitalisms, but not necessarily in the straightforward way described by Walker and Fortmann (2003). Very few, if any of these projects are the result of national, or even regional, developers. Instead, many of them are produced by developers (working with an investment partner or group of investors) from nearby areas, and sometimes relying on *very* personal financing efforts (e.g., personal savings), but more often turning to local or regional financing sources. This is not to say that the capital involved is not global, as it most likely is, but to emphasize that circuits of global capital are simultaneously being reworked by "local" actors. Using these funds, these developers create something that differs from the historical patterns that abut their projects.

Third, in the process, these actors discursively *and* materially reconfigure landscapes, construct (new) place meanings, and alter resource uses through new design features and associated environmental management practices. These practices contain particular uses, such as agriculture or habitat, within specific spaces, thereby creating a set of place meanings that produce amenities and (re)commodify landscapes. Here, it is instructive to note the positionality and motivations of individual developers and their attempts to create alternatives to wider practices in their communities. While it's clear that different developments rely on sense of place, including drawing on very particular landscape features and land-use histories, this does not indicate that these individuals are developers in what might be described as a traditional sense of the word. Indeed, many of the developers interviewed here are in-migrants whose presence is directly tied to the process of amenity migration. These individuals comprise what might be best described as amenity developers, owing both to their links to the social and economic changes that drew them to these locations and to their active role in producing specific amenities that reinforce this process.

Fourth, amenity developers see different place meanings and act based on diverse motivations. For one amenity developer, the project was the last resort to make things right on the landscape, seeking to prevent what would have been for him the materialization of inappropriate and inauthentic place meanings. So, too, at least one of the projects represents an opportunity for a long-time developer to do things differently. This perspective illuminates the creation of idealized places for individuals affiliated with (and likely distrustful of) the "typical" development process. For others, the discourse of conservation design may represent the path of least resistance, providing the niche product that allows a project to "pencil out" in economically rewarding ways or that minimizes the institutional barriers created by county planning.

Fifth, this research highlights the role institutions play in mediating the valuation of landscapes that occur in processes of property exchange. While planning processes create some constraints on the types of place meanings that can be constructed, land trusts, despite their wariness, facilitate the reinforcement of place meanings that blend agriculture and conservation. That these two dimensions represent material changes to the landscape is not insignificant, providing an agricultural amenity that maintains continuity with the history of these places, while providing protection for the aesthetic and recreational amenities that are flowing rivers.

Finally, in keeping with Cheng's (2003) observation that place connections are often diverse, nuanced, and multi-layered, this study marks a beginning in efforts to tease apart the ways that place meanings are produced by developers *and* the amenity migrants who purchase properties in their developments. For example, the literature on design in "new urbanism" focuses largely on the developer, neglecting to examine the different ways that residents may challenge particular environmental management features. This study suggests that although developers rely on particular place meanings to attract amenity buyers, these residents may contest those meanings and challenge the management practices that maintain sense of place. This is an area warranting further study. A similar focus on sense of place might reveal important distinctions among environmental management strategies by landowners in conventional residential developments.

Works Cited

Arendt, R. 1996. Conservation design for subdivisions: A practical guide to creating open space networks. Washington, DC: Island Press.

Berkes, F. 2004. Rethinking community-based conservation. *Conservation Biology* 18(3): 621-630.

Bjelland, M., L. Cowger, and L. Barajas. 2006. The quest for authentic place-Production of suburban alternatives. *Urban Geography* 27(3):253-270

Blaikie, P. and H. Brookfield. 1987. Land degradation and society. New York, NY: Metheun & Co.

Bollens, S. 1992. State Growth Management: Intergovernmental Frameworks and Policy Objectives. *Journal of the American Planning Association* 58(4): 454-466

Brogden, M. and J. Greenberg. 2003. The fight for the West. *Human Organization* 62(3): 289-290

Cheng, A., L. Kruger, and S. Daniels. 2003. "Place" as an integrating concept in natural resource politics: Propositions for a social science research agenda. *Society and Natural Resources* 16:87-104.

Deschutes River Conservancy. 2007. History. Online at: http://www.deschutesrc.org/About_Us/History/default.aspx. Last accessed March 30, 2007.

DeStefano, S. and R.M. DeGraaf. 2003. "Exploring the ecology of suburban wildlife." *Frontiers in Ecology and the Environment* 1(2): 95-101.

Department of Land Conservation and Development. 2007. Statewide planning goals. Online at http://www.lcd.state.or.us/LCD/goals.shtml#Statewide_Planning_Goals. Last accessed April 30, 2009

Duany , A. E. Plater-Zyberk, and J. Speck. 2000. Suburban nation: The rise of sprawl and the decline of the American dream. New York , NY: North Point Press.

Frentz, I.C., F.L. Farmer, J.M. Guldin, and K.G. Smith. 2004. Public lands and population growth. *Society and Natural Resources* 17:57-68.

Ghose, R. 2004. Big sky or big sprawl? Rural gentrification and the changing cultural landscape of Missoula, Montana. *Urban Geography* 25(6): 528-549.

Goldman, M. 2004. Ecogovernmentality and other transformational practices of a "green" World Bank. Pages 166-192 *in* Peet, R. and M. Watts (editors). *Liberation Ecologies: Environment, development and social movements*. 2nd Edition. New York, NY: Routledge Press.

Gosnell, H., J. Haggerty, and W. Travis. 2006. Ranchland ownership change in the greater Yellowstone Ecosystem, 1990-2001. *Society and Natural Resources* 19:743-758

Halseth, G. 1998. *Cottage country in transition: A social geography of change and contention in the rural-recreational countryside*. Kingston, ON: McGill-Queen's University Press.

Harner , J. 2001. Place identity and copper mining in Sonora, Mexico. *Annals of the Association of American Geographers* 91:660-680.

Jackson, P. and R. Kulken 2006. A rediscovered frontier: Land use and resource issues in the New West. Lanham, MD: Rowman & Littlefield

Johnson, C., A. Halfacre, and P. Hurley. 2008. Resistant place identities in rural Charleston County, South Carolina: Cultural, environmental, and racial politics in the Sewee to Santee area. *Research in Human Ecology* 16(1): 1-16.

Johnson, E. and M. Klemens, Eds. 2005. *Nature in Fragments: The legacy of sprawl*. New York, NY: Columbia University Press.

Kaltenborn, B.P. 1998. Effects of sense of place on responses to environmental impacts: A study among residents in Svalbard in the Norwegian high Arctic. *Applied Geography* 18: 169-189

Kunstler, H. 1993. Geography of nowhere: The rise and decline of America's man-made landscape. New York, NY: Touchstone Press.

Larsen, S., C. Sorensen, D. McDermott, J. Long, and C. Post. 2004. Place perception and social interaction on an exurban landscape in Central Colorado. *The Professional Geographer* 59(4): 421-433.

McCann, E. 1995. Neotraditional Developments: The Anatomy of a New Urban Form. *Urban Geography*, 16(3): 210-233

McGranahan, D. 1999. 1999 Natural amenities drive rural population change. USDA, Agricultural Economic Report No. 781, USDA Economic Research Service.

Nelson, P. 2001. Rural restructuring in the American West: land use, family and class discourses. *Journal of Rural Studies* 17:395-407

Nelson, P. 2006. Geographic perspectives on amenity migration across the USA: national-, regional-, and local-scale analysis. Pages 55-72 *in* Moss, L. (editor) 2006. The amenity migrants: Seeking and sustaining mountains and their cultures. Cambridge, MA: CABI.

Neumann, R. 1998. Imposing wilderness: Struggles over livelihood and nature preservation in Africa. Berkeley, CA: University of California Press.

Neumann, R. 2004. Nature-state territory: Toward a critical theorization of conservation enclosures. Pages 195-217 *in* Peet, R. and M. Watts (editors). *Liberation Ecologies: Environment, development and social movements*. 2nd Edition. New York, NY: Routledge Press.

Noss R. and A. Cooperrider.1994. Saving Nature's Legacy. Washington, DC: Island Press

Oregon Biodiversity Project. 1998. Oregon's Living Landscapes. Defenders of Wildlife: Portland, OR.

Oregon Department of Fish and Wildlife. 2006a. Oregon conservaton strategy, Ecoregions: East Cascades. Online: http://www.dfw.state.or.us/conservationstrategy/document_pdf/b-eco_ec.pdf. Last accessed April 6, 2007.

Oregon Department of Fish and Wildlife. 2006b. Oregon conservaton strategy, Ecoregions: Blue Mountains. Online: http://www.dfw.state.or.us/conservationstrategy/document_pdf/b-eco_bm.pdf. Last accessed: April 6, 2007.

Oregon Geospatial Data Clearinghouse. 2009. Spatial data library. Oregon Geospatial Enterprise Office. Available at http://gis.oregon.gov/DAS/EISPD/GEO/sdlibrary.shtml. Last accessed April 30, 2009.

Paulson, L., P. Gezon, and M. Watts. 2003. Locating the political in political ecology: An introduction. *Human Organization* 62(3): 205-217.

Peluso, N. 1992. Rich forests, poor people: Resource control and resistance in Java. Berkeley, CA: University of California Press

Randolph, J. 2004. Environmental land use and management. Washington, DC: Island Press.

Reed, M. 2007a. Uneven environmental management: A Canadian perspective. *Environmental Management* 39: 30-49

Reed, M. 2007b. Uneven environmental management: a Canadian comparative political ecology. *Environment and Planning A* 39: 320-338

Robbins, P. 2004. Political ecology: A critical introduction. Oxford, England: Blackwell Publishing.
Shumway, J. and S. Otterstrom 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
Smutny, G. 2002. Patterns of growth and change. *The Professional Geographer* 54(3):438-453.
Stedman, R. 2003. Is it really just a social construction? The contribution of the physical environment to sense of place. *Society and Natural Resources* 16:671-685
Stewart, W. 2008. Place meanings in stories of lived experience. In L. Kruger and T. Hall (Eds.) *Sense of Place Research for Natural Resource Management.* Washington, D.C.: USDA government publication.
Theobald, D. 2004. "Placing exurban land-use change in a human modification framework." *Frontiers in Ecology and the Environment* 3:139-144.
Theobald, D., J. Miller, and N.T. Hobbs. 1997. Estimating the cumulative effects of development on wildlife habitat. *Landscape and Urban Planning* 39:25-36.
Till, K. 2001. *New urbanism* and nature: Green marketing and the neotraditional community. *Urban Geography* 22 (3): 220-248.
Travis, W. 2007. New geographies of the American West. Washington, DC: Island Press.
U.S. Census Bureau. 2007a. Population finder: Deschutes County, OR. Online: http://factfinder.census.gov/servlet/SAFFPopulation?_event=Search&_name=deschutes+county&_state=04000US41&_county=deschutes+county&_cityTown=deschutes+county&_zip=&_sse=on&_lang=en&pctxt=fph. Last accessed: April 5, 2007.
U.S. Census Bureau. 2007b. Population finder: Wasco County, OR. Online: http://factfinder.census.gov/servlet/SAFFPopulation?_event=Search&geo_id=05000US41017&_geoContext=01000US%7C04000US41%7C05000US41017&_street=&_county=wasco+county&_cityTown=wasco+county&_state=04000US41&_zip=&_lang=en&_sse=on&ActiveGeoDiv=geoSelect&_useEV=&pctxt=fph&pgsl=050&_submenuId=population_0&ds_name=null&_ci_nbr=null&qr_name=null&reg=null%3Anull&_keyword=&_industry=. Last accessed: April 5, 2007.
Veninga, C. 2004. Spatial prescriptions and social realities: New urbanism and the production of Northwest Landing. *Urban Geography* 25(5):458-482.
Vias, A. and J. Carruthers. 2005. Regional development and land use change in the Rocky Mountain West, 1982-1997. *Growth and Change* 36(2): 244-272.
Walker, P. 2006. Political ecology: Where is the policy? *Progress in Human Geography* 30(3)*:382-395.*
Walker, P. and L. Fortmann. 2003. Whose landscape? A political ecology of the 'exurban' Sierra Nevada. *Cultural Geographies* 10:469-492
Walker, P. S. Marvin, and L. Fortmann. 2003.Landscape changes in Nevada County reflect social and ecological transitions. *California Agriculture* 57(4):115-121
Williams, D.R. and W. Stewart. 1998. Sense of place: An elusive concept that is finding a home in ecosystem management. *Journal of Forestry* 96: 18-23
Zimmerer, K. 2000. Reworking conservation geographies. *Annals of the Association of American Geographers*
Zimmerer, K. 2006. Globalization and new geographies of conservation. Chicago Press: Chicago, IL.

Zimmerman, J. 2001. The "nature" of urbanism on the new urbanist frontier: Sustainable development, or defense of the suburban dream. *Urban Geography*. 22(3): 249-267

Table 1. Development Context and Environmental Management Goals

County/ Community	Interface Type	Development Phase	Dwelling Units	Developer Type	Environmental Management Goals	Adjacency/ Proximity* to Protected lands)
Deschutes						
Project D1	Exurban	Completed	43	Individual	Resource production Habitat protection Wildlife protection	Adj BLM Prox State Park
Project D2	Urban fringe	Completed	123	Resource Company	Habitat protection Scenic/rural quality	Prox State Park
Project D3	Exurban	Completed	50	Individual	Resource production Habitat protection Scenic/rural quality	Adj State Park
Project D4	Urban	Completed	66	Unknown	Scenic/rural quality Habitat protection	Adj Count Park
Project D5	Exurban*	Completed	21	Individual	Historic preservation Scenic/rural quality	None
Wasco						
Project W1	Exurban	Completed	6	Individual	Habitat protection Scenic/rural quality	Prox TNC Prox USFS
Project W2	Urban fringe	Built Out	18	Joint venture	Scenic/rural quality	None
Project W3	Exurban	Built Out	18	Individual	Scenic/rural quality	Adj TNC Adj USFS
Project W4	Exurban	Completed	11	Individual	Habitat protection Scenic/rural quality	Adj TNC Prox USFS
Project W5	Rural	Completed	12	Individual	Resource production Wildlife protection Habitat protection	

Data for this table was compiled from multiple interview and print sources (To protect the identity of interviewees, the names of the projects have been changed). *within 1 mile radius.

Table 2. Conservation Design and Open space Management

County/ Community	Conservation Design elements	Open Space %	Open Space Use(s)	Open Space Ownership	Open Space Management
Deschutes					
Project D1	Altered layouts Limited lot size Clustered lots No future development Environmental rules	>50%	Agriculture Passive recreation Active recreation	HOA Land Trust	HOA with Manager Land Trust Private Resource Entity Land Trust
Project D2	Environmental rules	<25%	Passive recreation	HOA	HOA Government
Project D3	Altered layouts Limited lot size Clustered lots No future development Environmental rules	>50%	Agriculture Active recreation Passive recreation RC	HOA Land Trust	HOA Land Trust
Project D4	Altered layouts Clustered lots No future development	>50%	Passive recreation	Government Easement	Government
Project D5	Altered layouts No future development Environmental rules	>75%	Active recreation Passive recreation Agriculture	HOA	HOA with manager
Wasco					
Project W1	Altered layouts Limited lot size Clustered lots No future development Environmental rules	>50%	Passive recreation	HOA	HOA
Project W2	Altered layouts Limited lot size Clustered lots No future development	>50%	Passive recreation	HOA	HOA
Project W3	Limited lot size No future development	>50%	Active recreation Passive recreation	HOA	HOA
Project W4	Altered layouts No future development Environmental rules	<25%	Passive recreation Restricted Conservation	HOA Land Trust	HOA Land Trust
Project W5	Altered layouts Limited lot size No future development Environmental rules	>50%	Agriculture Passive recreation Active recreation	HOA	HOA

*Proximity = within 1 mile of the project's borders. Data for this table was compiled from multiple interview and print sources (To protect the identity of interviewees, the names of the projects have been changed).

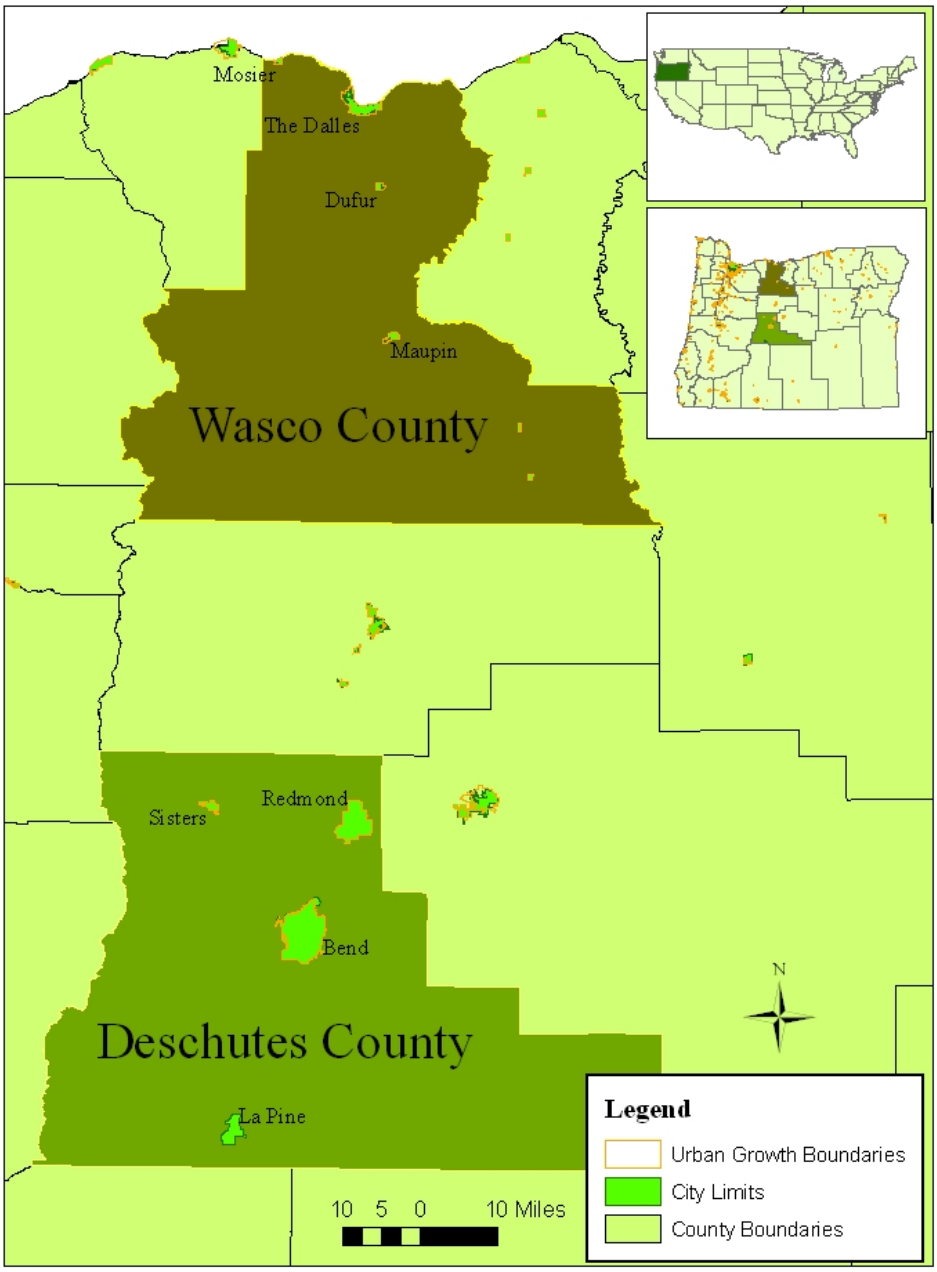

Figure 1. Map of study area, highlighting Deschutes and Wasco counties, in Central Oregon. The city limits of major cities in each county as well as their urban growth boundaries are also shown. To protect the identity of participants, individual locations are not shown. Source: Oregon Geospatial Data Clearinghouse (2009).

Figure 2. View of Mt. Adams across the Columbia River at dusk from the oak-studded hills of Wasco County.

Figure 3. An agriculture-based project in Deschutes County, with irrigation piping visible in the foreground and Mt. Jefferson in the background.

Figure 4. New orchard planted by a resident in one of the Wasco County residential projects.