

# Preface

Venture outward from the city, beyond the roar of automobiles and the rows of manicured suburban lawns, and you will find exurbia. It is a collage of housing types and residential densities (typically 1–40 acre parcels) located in what we once called the rural countryside. More than anything, exurbanization embodies the nation's affinity for open space and diverse natural amenities. Homes nestled in Arizona's Sonoran desert are as desirable as condominiums (seasonal homes) perched in the remote mountains of Idaho and Maine, or hobby farms and horse properties in Iowa, Texas, or Florida. The allure of nature largely explains the popularity of exurban living. About 37% of the country's population now lives in exurbia, and estimates indicate that a growing number of Americans will follow suit in the years ahead (Glennon and Kretser 2005; Theobald 2005).

It is widely understood that land development disrupts environmental systems. On the one hand, planners, landscape architects, and civil engineers work tirelessly to mitigate these impacts in urban areas. On the other hand, foresters, wildlife biologists, and range managers attempt to thwart the impact of developments that abut forest, park, and preserve boundaries. But exurban land is the “middle ground” that lies between cities and federal and state lands held in the public trust (Knight 2002). As such, exurbia is a unique blend of urban and rural that stands apart from cities and natural environments. For this reason alone, exurban land deserves special treatment.

Other reasons demonstrate the need to single out the environmental impacts of exurban land development. First, exurbanization fuels the conversion of productive farm and ranchland and promotes encroachment on near-pristine wildlands (forests, native grasslands, deserts). The loss of agricultural land is widely documented and has been targeted by farm and ranch conservationists (Merenlender et al. 2005; American Farmland Trust 2007). But the impacts of development in exurban wildlands have largely been neglected and gained a foothold in research agendas and policy arenas only in recent years. Thus, we know far less about the environmental impacts of exurban residential development.

Second, exurban lands are privately owned which means that, with the exception of a few federal policies (e.g., the Endangered Species Act), development regulations and approval fall on the shoulders of regional (county) planners and local elected officials – boards of supervisors or county commissioners. While planners

often (but not always) champion the environment, their ability to conserve exurban wildlands is limited by two factors. First, surveys of environmental planning programs find that faculty favor the teaching of environmental law, policy, and applied skills over natural science-based education (White and Mayo, 2004, 2005). This clearly varies by institution, but by and large, regional planners do not know enough about the science of land development beyond the metropolitan fringe. Second, the planning profession has long struggled with the absence of a well-defined “ethic” that guides the treatment of land (Beatley 1994). This is not to say that planners lack ethical guidelines. Quite the contrary; like all professions, planners are guided by a code of ethics and professional standards. Yet there is no philosophical or ideological basis – a land ethic – to inform land-use decisions.

Finally, from an environmental perspective, the private ownership of exurban land is troublesome in itself. Thompson (2004, p. 142) notes that “. . . more than 90 percent of threatened or endangered species rely on private land to some degree for their habitat.” He continues by indicating that “[t]he fragmentation of the landscape into millions of private lots has also had a devastating cumulative impact. . . and much of this destruction has taken place on private lands” (Thompson 2004, p. 143). Regretfully, private property owners and land developers are largely unaware of the ways in which exurbanization impacts wildland environments. This, coupled with the lack of science-based education among planners and civic leaders, signals the need for an approachable, science-based text on exurban land development.

*The Planner’s Guide to Natural Resource Conservation* responds to the environmental consequences of exurban land development in two ways. First, the book’s 13 chapters explain the environmental consequences of exurban land development. The aim is to provide a working, science-based understanding of ecological processes and the impacts of land development while avoiding the more technical material found in specialized journals and science textbooks. Contributors are all well-established environmental scientists and regional planners with years of teaching and research experience in the fields of zoology, ecology, conservation biology, restoration ecology, wildlife biology, hydrology, forestry, civil engineering, and regional planning. In sum, contributors open the door to the science of land development beyond the metropolitan fringe. Second, the book provides guidance on how to minimize the impacts of exurban land development. Contributors weigh in on land development schemes (i.e., scattered site versus clustered housing, road improvements, water catchment) and suggest ways to minimize or avoid ecological damage. Thus, the book describes ecological processes, explains how development infringes on them, then suggests ways to sidestep or mitigate potentially harmful outcomes.

The book is geared to a broad audience of land-use professionals and the public at large. Foremost, it supplements the educational needs of environmental and regional planners. Those working in allied land development professions – landscape architects, civil engineers, geologists, hydrologists, land managers – will find the book equally valuable because of its integrative and hands-on approach. The public at large has much to gain from the book as well. Civic leaders, elected

officials, environmental organizations, activists, and concerned citizens will find that the book complements their interest in conservation and wise land stewardship. In sum, the book has much to offer in the classroom, office, home, and in the field.

While the book leans heavily toward applied learning and practice, it also seeks to advance a land ethic that guides the use of privately owned exurban land. Like Aldo Leopold (1949), who urged adoption of a land ethic 60 years ago, we believe that ecology, which is embedded in Leopold's human-land community, is the building block for such an ethic. This is reflected in Leopold's comment, "...a land ethic changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such" (Leopold 1949, p. 204). The human-land community positions all biota on equal terms and downplays the perception of land as merely a commodity that yields value through "development." Leopold did not eschew the use of land for societal purposes. Rather, he understood that land was needed to support human populations but argued for an approach to land-use and resource exploitation that respects the aesthetic value of nature and the fragile balance of ecological systems (Newton 2006). His land ethic, and the human-land community in particular, embodies this perspective.

In the years since Leopold's seminal writings, scholars from numerous disciplines have debated the nuances and implications of the land ethic. Some have questioned whether a single or unified land ethic is viable (Norton 2000; Davidson 2007; Evanoff 2007), others have challenged it as an ecofascist ideology (Horn 2005), while still others attempt to place the land ethic within the sphere of environmental ethics and philosophy (Callicott 1989; Taylor 2001; Brennan 2007; Hadley 2007; Starkey 2007). More recent efforts draw upon Leopold's writings to build new perspectives on environmentalism, namely deep ecology, ecofeminism, and radical environmentalism (Salleh 1995; Sessions 1995; Banerjee and Bell 2007; Vanderheiden 2008). This book does not weigh in on these debates, although we acknowledge their importance in shaping environmental thought and consciousness. Instead, we seek to promote the land ethic by providing a solid yet approachable understanding of ecology as it applies to the exurban realm. We acknowledge that education alone is not enough to alter perspectives and the treatment of land. Nevertheless, we are also aware that a fundamental knowledge of how and why land development affects exurban lands is pivotal to understanding and promoting Leopold's land ethic. The book is written with this spirit in mind.

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