

A CASE FOR AN ENVIRONMENTAL REAL ESTATE MARKET

If environmental real estate is a contemporary market, real estate counselors need to recognize that supply and demand factors influence its value.

by Donald C. Wilson

As more and more lands with environmentally significant attributes (e.g., wetlands, shorelines, endangered species' habitats, etc.) transact for the purpose of conservation, a valuation question arises for real estate counselors: do these lands, related transactions and transactors constitute a market?

The Significance Of Asserting A Market

If conservation lands, related transactions and transactors do constitute a market, then counselors should be able to use comparable sales properly drawn from the market as valid indications of market value. If they do not constitute a market, counselors probably will continue to be asked by public agencies to appraise these rarely condemned lands by using condemnation valuation methodology, to ignore highly comparable sales involving public agencies and rely on sales of dissimilar properties bought for alternative uses in more traditional markets. In short, counselors will continue to be asked to ignore in their valuation of conservation lands the most probable use of many properties—conservation—and the most similar comparable sales—properties purchased for conservation.

Valuation of protected wetlands is an example. A counselor may be asked to rely on sales of lands with alternative uses involving private parties, rather than rely on relatively similar sales of wetlands involving public agencies. The potential for estimation error, because of reliance on dissimilar comparable sales, and ensuing transactor conflict is significant.

Public agencies encourage counselors to apply condemnation valuation methodology often because of policy. This policy has four apparent roots:

1. Public agencies have condemnation power; so even if they are not planning to use it, they apparently think they must follow condemnation valuation methods in case they change their minds and decide to condemn these properties.

2. The historic tendency of public agencies to use condemnation power to acquire other types of lands, particularly for transportation and utility right-of-ways, has created a habit of valuing other lands in this way.

3. Public agencies find standardization of appraisal approaches cheaper and easier to deal with; so they impose condemnation valuation across the board regardless of its appropriateness.

4. Bureaucratic inertia.

None of these is a particularly persuasive reason for continuing the policy, and all fly in the face of

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the fact that public agencies rarely condemn conservation lands. Experience suggests that most acquisitions of land for conservation purposes are made by negotiated purchase, with negotiations open to competition from other public agencies, land trusts, wildlife organizations and for-profit entities.¹ Further, many public agencies openly advocate negotiated purchases and frequently will delay a transaction indefinitely rather than incur the political and financial costs of condemnation. Finally, land owners frequently negotiate as if condemnation were an unlikely possibility.

Given these factors, public agencies' reliance on condemnation valuation methodology and their disregard for the use of significant, comparable sales involving public agencies is inconsistent with reality (public agencies tend to negotiate purchase rather than condemn), frequently unnecessary (it is based on policy not law) and likely prone to estimation error and transactor conflict (several buyers and sellers had litigated for decades over disagreements concerning the value of conservation properties).

Hence, the only valid reason for many public agencies to continue their policy is if the lands, transactions and transactors involved simply did not constitute a market. This article asserts the contrary: i.e., that these lands, transactions and transactors do constitute a market, that the basic condition for estimating market value—the existence of a market—is met and that comparable sales properly drawn from this market constitute valid indications of market value.

Environmentally Significant Land Defined

Environmentally significant land or conservation land are accurate terminologies for land that has environmentally significant attributes. The former term is advocated here, since conservation land (i.e., land protected as it is) is only one type of environmentally significant land. Other environmentally significant lands include those protected for rehabilitation purposes (e.g., a degraded wetland) or those protected for the introduction of significant environmental attributes (e.g., an upland graded and flooded to mitigate destruction of wetlands elsewhere).

Environmental Real Estate vs. Environmentally Significant Land

Environmentally significant land is a resource; real estate with environmentally significant attributes is space that has been delineated by man, relative to a fixed geography, to contain an activity for a period of time.² The activity may include conservation, rehabilitation or introduction of environmentally significant attributes. The period of time may be perpetuity or a designated number of years.

The distinction between land and real estate is significant because transactors do not value and transact for environmentally significant land; they value and transact for ownership interests in real estate encompassing environmentally significant attributes. These may be land, flyways over the land,

antiquities buried in the land, events that once happened on the land, etc. Interests may be full or partial. Environmental real estate therefore is selected as a suitable term for property rights to environmentally significant land.

Environmental Real Estate Defined

Environmental real estate is a space-time delineation (e.g., park days, wetland acres in perpetuity, etc.) relative to a fixed geography that has been delineated by humans to conserve, rehabilitate or introduce attributes of geographical, biological, ecological, archaeological or historical significance. It is a subset of real estate—not exclusive of it.

Further, environmental real estate is a spatial infrastructure much as transportation, sewers and utilities. Environmental real estate not only serves a basic function (providing the consuming public with the environment it is willing and able to pay for); it also shapes where and how society lives. As society once controlled and channeled development with transportation and utility infrastructure, it now may use environmental real estate.

The Case For An Environmental Real Estate Market

For environmental real estate, related transactions and transactors to constitute a contemporary real estate market, one would expect to find consistency with a basic definition of a market, distinguishable characteristics of supply and demand, market facilitation of pricing and supply and significant governmental regulation and subsidy.

Consistency With A Basic Definition Of A Market

"A market," Martin L. Bell says, "is composed of people, people with money, people with money wanting goods and services; and the basic opportunity in marketing is to provide these people with want-satisfying goods and services."³ People, it may be added, may act individually or through organizations to satisfy their wants.

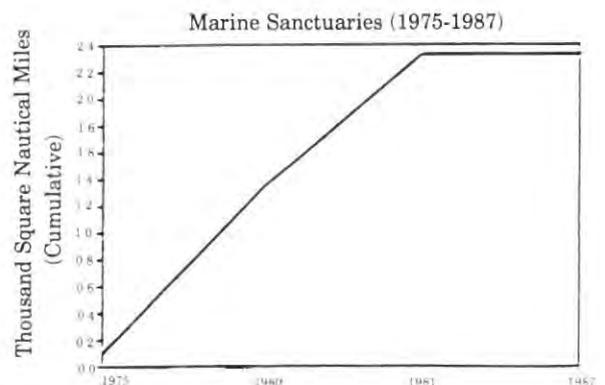
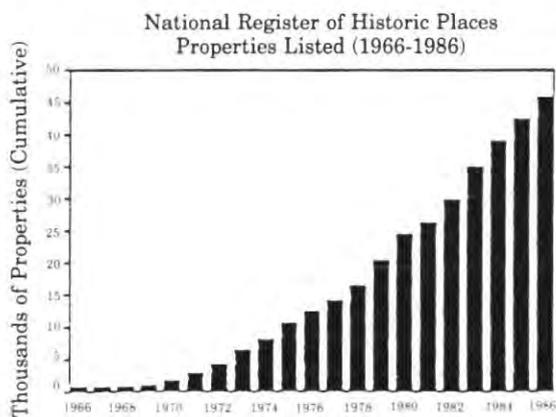
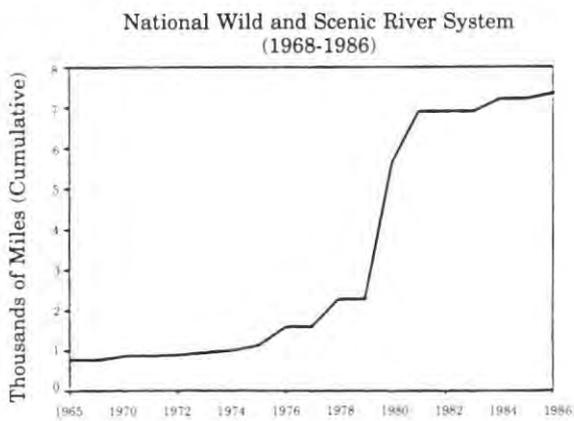
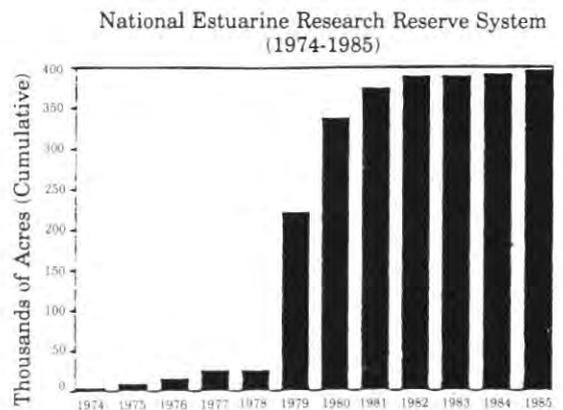
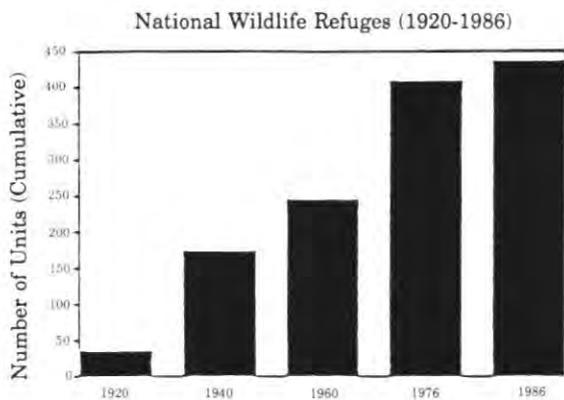
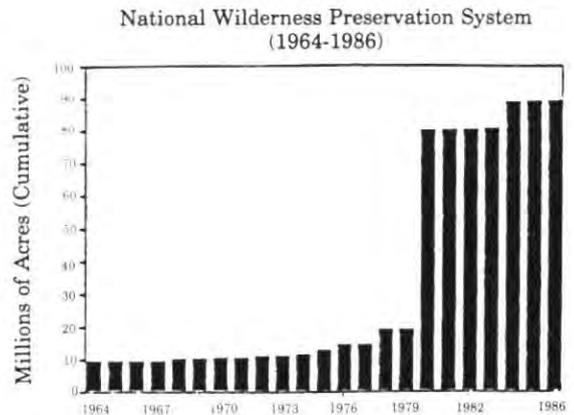
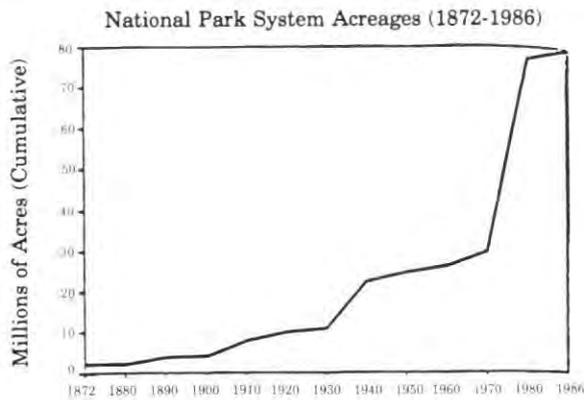
Looking at environmental real estate transactions in the United States through the lens of this very basic definition, yields a readily recognizable market. The market is citizens (people) with money acquiring the environmental real estate they want through public agencies (tax monies), private not-for-profit corporations (contributions and surpluses from operations) or directly (typically with user fees, occasionally with fee simple acquisition) in the space-time unit they want (e.g., a park day, an acre in perpetuity, etc.). Many segmentations of sub-markets also are possible.⁴

Distinguishable Characteristics Of Supply

Supply in a regulatory context may be designated (expressly protected by statute or policy) or undesignated (not expressly protected, but likely to be if traditional development were proposed). Properties outside of these classifications may be actually or potentially significant, but they may not be put to such use; therefore, they may be distinguished as tertiary.

Exhibit I

Selected Trends in Environmental Real Estate Acquisition



Source: Council on Environmental Quality: Environmental Trends 1989.

Designated inventory has grown significantly since the late 1960s, as the escalation in acquisitions of real estate by public agencies suggests and the proliferation of conservation land trusts implies (see Exhibit 1). Undesignated inventory is dynamic; it loses acreage to designation but gains acreage as society continues to develop and pollute and, in turn, create new categories of land that need protection.

Supply in a regulatory context also may be distinguished as real estate-specific (a specific parcel like Yellowstone Park is protected) or attribute-specific (attributes like endangered species' habitats or ecosystems are protected wherever they may be found and so, in effect, is the real estate they occupy).

Supply may be distinguished further by classes of attributes: geographic, hydrologic, biologic, archaeological or historic types. Each of these classes has many subclasses. The biologic class, for example, includes species and ecosystems; the hydrologic includes oceans, lakes, rivers, streams, waterfalls, groundwater, etc. Within the geographic class are mountain ranges, canyons, buttes, etc.; within the archaeological class are ancient burial grounds, ruins, etc. The historic class includes battlegrounds, the birthplaces of famous persons, etc..

Note: Certain types of environmental real estate supply (e.g., pristine lands or endangered species' habitats) can be destroyed and lost permanently (sometimes called the effect of irreversibility). However, much polluted environmental real estate supply can be rehabilitated, and many environmentally significant attributes may be introduced at new locations.⁵

While a full quantitative accounting of the environmental real estate supply is beyond the scope of this article, partial figures hint at its magnitude: forests under Forest Service management equal 140 million acres;⁶ privately owned wetlands potentially subject to regulatory protection total 70.3 million acres;⁷ the National Park System holds 79 million acres;⁸ the National Wilderness Preservation System holds 79 million acres;⁹ National Wildlife Refuges have 90 million acres;¹⁰ wild and scenic rivers extend 7,363 miles;¹¹ marine sanctuaries cover 2,200 square nautical miles;¹² the National Estuarine Research Reserve System has approximately 390,000 acres;¹³ and the National Historic Register has nearly 47,000 places.¹⁴ Excluding the rivers, marine and estuarine reserves, which may or may not have disposable property rights, and historic places for which acreage was unavailable, a partial inventory of federally protected environmental real estate totals a staggering 458.3 million acres or approximately 20% of the surface area of the United States. If the habitats of endangered species, and lesser holdings of the Bureau of Reclamations, Bureau of Land Management, etc., were tallied, the figure might increase dramatically. States own another 154 million acres of real estate. Assuming a protection ratio similar to that of the federal government (.44),¹⁵ state-owned environmental real estate may be as high as 67.8 million acres.

A distinguishable supply of environmental real estate clearly exists. The supply is massive; it is

increasing in size; and it is segmented into attribute and use types by regulations that result in designated, undesignated and tertiary markets. Ownership, although heavily concentrated in agencies of the federal government, is divided among many public and private sector entities. Of course, the federal government is a significant landowner in more traditional real estate markets as well.

Distinguishable Characteristics Of Demand

Demand may be distinguished as an individual need (e.g., user fees for experiencing parks) or the collective need of society expressed through acquisitions by public agencies, land trusts, wildlife organizations and, to a lesser degree, for-profit corporations and individuals. These demand sources buy, trade and, in the case of public agencies, land trusts and wildlife organizations, accept donations. Demand tends to move ownership of environmental real estate not only from the private to the public sector but also among public agencies (interagency transfers), land trusts and wildlife organizations.

Demand may be distinguished by the intended use of property. Generic categories of use include experiencing environmental real estate, preserving land for a highest and best use to be determined later, conserving land to maintain the environment or exploiting specific resources such as oil, timber, gold, etc..¹⁶

Demand may be distinguished further by the intended users of property, i.e., individual users (hikers), collective users (the government) and future users.

Individual demand for use of environmental real estate has escalated rapidly. In 1965, approximately 100 million visitors experienced the national parks. By 1986, the number of visitors increased to approximately 350 million. Collective demand appears to be increasing also,¹⁷ although comprehensive figures of the dollars spent by the government for acquisition of environmental real estate are not available. The recent defeat of the Big Green initiative in California and the Environmental Quality Bond Act in New York do suggest, however, a limit to the public's willingness to subsidize the protection of environmental real estate. Because these proposals involved unprecedented sums of money and, in the case of Big Green, controversial collateral political issues, it is unclear whether voters are losing interest in environmental protection, are alienated by collateral political issues or simply want governments to spend less.

Specific public sector organizations that acquire environmental real estate include federal agencies (primarily the National Park Service, the Fish and Wildlife Service and the Forest Service), public agencies of the 50 states (one or more acquiring departments per state), and thousands of regional districts, counties and municipalities. Private sector organizations include over 900 conservation land trusts operating across the United States, which own approximately 2.7 million acres in 48 states,¹⁸ certain wildlife and wilderness organizations and philanthropic foundations. An undetermined, but

probably less significant number of private individuals and corporations also participate.

Tracking the monies spent on environmental real estate is a topic for another article, but a few random observations may provide some perspective. According to Craig D. Hungerford, a consultant specializing in environmentally significant lands: \$3.6 billion of the Federal Land and Water Conservation Fund has been expended since 1964; California appropriated \$770 million for environmental real estate in 1989; the Nature Conservancy budgeted \$29.6 million for acquisitions of environmental real estate in 1987; and the Trust for Public Land had conveyances of lands totally \$362 million in market value for the 15-year period prior to 1990.¹⁹ Rhode Island (a \$147 million budget) and Dade County Florida (a \$100 million budget) also are appropriating significant monies for parks and open space acquisitions, as is Michigan, which allocates approximately \$100 million per year for such acquisitions. The state of Florida recently appropriated \$3 billion dollars for acquisitions of environmental real estate over the next ten years.

Organizations active in the environmental real estate market may acquire properties individually or in alliance with others. Alliances may take the form of interim buyer/end buyer (a land trust buys property and resells it to a public agency), cofinancier (various organizations pool funds) or adjoining purchases (individual organizations buy individual parcels of a protected area).

In conclusion, a distinguishable demand in environmental real estate exists. The demand is large, increasing and varied in source, like many real estate markets. Unlike most real estate markets, the demand for environmental real estate is extraordinarily concentrated in the public sector. However, public sector demand dominates other accepted real estate markets (e.g., elderly and low-income housing).

Facilitation Of Pricing

A contemporary real estate market acts as a pricing mechanism, i.e., it is a means for people with money and want and people with goods to agree on a price in a transaction. In a market, transactors allow their individual notions of the worth of a good to be influenced by a consensus on price which has been formed on the basis of a number of recent transactions and offers for similar goods—in a spatial context or market area.

From the perspective of markets as pricing mechanisms, transactors of environmental real estate routinely consider what has been paid and offered for other environmental real estate when making their transaction decisions. Hence, transactors of environmental real estate exhibit behavior that is typical of transactors in other contemporary real estate markets.

Facilitation Of Supply

A contemporary real estate market facilitates supply, i.e., it varies production of supply according to scarcity (due to increased demand or perceived decrease in unprotected supply), as demand increases

(which tends to stimulate supply) or decreases (which discourages supply), assuming a constant cost of production, as one example.

From the perspective of a market as a supply facilitator, one finds significant evidence that the supply of environmental real estate (protected attributes of the environment) has increased significantly since the late 1960s. In the last 30 years, demand for environmental real estate has increased, along with environmentalism's surge,²⁰ in popularity (see Exhibit 1) and the perception by influential elements of society that pollution and development have reduced the amount of unprotected environmental real estate to undesirable levels.

Presence Of Government Regulation And Subsidy

Considerable governmental regulation and subsidy are typical of most contemporary real estate markets. Regulation and subsidy are used by society to produce a desired supply of real estate at desired locations and prices under the assumption that unregulated real estate markets will fail to do so within acceptable time frames.

Environmental real estate-related transactions and transactors are significantly shaped by regulation that prevents alternative development, which may otherwise outbid environmental real estate uses. They also are affected by government subsidy for the acquisition and use of property as environmental real estate. Governmental regulation and subsidy of the market for environmental real estate is analogous to governmental regulation and subsidy of low-income housing markets: i.e., without regulation, neither market would produce the desired supply at desired prices in desired locations; therefore, the government intervenes to foster, locate, shape and stimulate the markets.

Implications Of Recognizing An Environmental Real Estate Market

The body of environmental real estate transactions fits the definition of a market and exhibits the characteristics of a contemporary real estate market. It follows, therefore, that a comparable sales properly drawn from the environmental real estate market constitute valid indications of market value.

Several significant implications beyond admissibility of comparable sales also flow from recognition of an environmental real estate market. They are:

1. Environmental real estate probably will be increasingly viewed by society as a monetized environmental property having significant market value; it will be viewed less as an aesthetic natural resource having marginal market value.
2. The market value of environmental real estate, at any given time, will depend significantly on supply and demand factors in the market as they are perceived by transactors.
3. As society allocates more money to the conservation of environmental real estate, society can expect market mechanisms to increase supply and/or raise prices.

4. When supply is not consistent with demand, price inflation may be expected.
5. As with other monetized real estate assets in markets with stable to increasing demand, environmental real estate can expect development (i.e., the systematic application of skills and capital by organizations to increase revenues and/or market value) and speculation (i.e., opportunistic exploitation of supply/demand relationships by investors).

Implications 2, 3, 4 and 5 are subjects for further research because, collectively, they suggest a real estate asset that is well-suited to valuation, development, underwriting and management by traditional real estate principles of appraisal, enterprise science finance and investment.

Summary

Increasing acquisitions of environmentally significant lands, in particular, negotiated purchases involving public agencies, raise a valuation question: do they constitute a market? Assuming they do, properly drawn sales of environmental real estate involving public agencies should be valid indices of market value. Further, public agencies' policy of encouraging the use of condemnation valuation methodology should be stopped, unless public agencies intend to condemn and sellers acknowledge that the possibility of condemnation will alter significantly their negotiations.

According to analysis, environmental real estate-related transactions and transactors constitute a contemporary real estate market because they are consistent with a basic market definition; they have identifiable supply and demand; they facilitate pricing and supply; and they are subject to significant governmental regulation and subsidy. Essentially, the environmental real estate market is people and organizations with money who price and facilitate the supply of property that will be used for conservation, rehabilitation and introduction of environmentally significant attributes according to people's wants but subject to governmental regulation and subsidy.

Recognition of an environmental real estate market brings with it several significant implications. Comparable sales properly drawn from the environmental real estate market should constitute valid indications of the market value of the real estate. There will be a tendency to view environmental real estate more as a monetized environmental asset with a significant market value that is subject to influences of supply and demand and less as an aesthetic natural asset with marginal market value.

Ultimately, a perceived scarcity of desired environmental real estate, plus increasing demand for it, likely will attract more governmental regulation, development and speculation to a market process aimed at supplying demand, attracting revenues and

enhancing market value. For society, public agencies, relevant decision-makers and real estate counselors to assess effectively planning, acquisition and valuation decisions, it is appropriate to recognize the environmental real estate market, admit appropriate comparable sales involving public agencies and sensitize participants in the market to the supply/demand factors that influence the value of environmental real estate.

NOTES

1. No statistics have been found to indicate the ratio of conservation lands acquired by condemnation vs. those acquired by negotiated purchase.
2. Graaskamp, James A. *Fundamentals of Real Estate Development* (Washington, DC: Urban Land Institute, 1981) 3.
3. Bell, Martin L. *Marketing Concepts and Strategies*, 3rd ed. (New York: Houghton Mifflin Company, 1979) 108.
4. One submarket might be citizens who acquire wetlands through public agencies in California. Another might be citizens who acquire large-area ecosystems through not-for-profit corporations in the Upper-Michigan peninsula. Another might be direct acquisitions by citizens of wilderness/grazing habitat near Yellowstone National Park, etc..
5. See an informative discussion of restoration in Berger, John J. (ed.) *Environmental Restoration: Science and Strategies for Restoring the Earth* (Washington, DC: Island Press, 1990).
6. Council on Environmental Equality and Interagency Committee on Environmental Trends. *Environmental Trends* (Washington, DC: U.S. Government Printing Office, 1989) 87.
7. *Ibid.*, 100.
8. *Ibid.*, 115.
9. *Ibid.*, 117.
10. *Ibid.*, 116.
11. *Ibid.*, 117.
12. *Ibid.*, 118.
13. *Ibid.*, 118.
14. *Ibid.*, 119.
15. 458.3 million protected acres divided by 720 million federally owned acres.
16. Wilson, Donald C. "Basic concepts of environmental real estate development," *Colloquium on Establishing Environmental Values in Land Appraisal* (Rapid City, South Dakota: Western States Land Commissioners Association, Summer 1989 Conference).
17. According to *Land Use Digest* (Washington, DC: The Urban Land Institute, Nov, 1989), land acquisition programs are on the rise nationwide, as state and local governments buy property and development rights to preserve open space, provide more parks and save farmland from urbanization. Private land trusts have been growing throughout the 1980s, but the entry by government agencies is relatively new. Interest in the Northeast has been intense, where states and localities have committed over \$1 billion in public funds to such programs, including Vermont's new \$3 million housing and land conservation program and Suffolk County, New York's \$300 million commitment to preserving watersheds. California's Proposition 70, a \$770 million land acquisition bond issue that was passed last year, includes \$63 million earmarked for the purchase of agricultural property rights. Libertyville Township, Illinois, has acquired more than 700 acres of land through an open space district. (California Planning and Development Report, Sept. 1989; Torf Filton Assoc., 1275 Sunnycrest Avenue, Ventura, CA 93003).
18. "Attractive land parcels gain a powerful ally," *Wall Street Journal*, May 28, 1991, Section B, p. 1.
19. Hungerford, Craig D. "Colloquium on establishing environmental values in land appraisal (Rapid City, South Dakota: Western States Land Commissioners Association, Summer 1989 Conference).
20. Other major surges of environmentalism (or conservation) occurred during the administration of Theodore Roosevelt and on the heels of the Dust Bowls of the 1930s.