Response to "Environmental Regulations and the Housing Market: A Review of the Literature" by Katherine A. Kiel

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Professor Katherine Kiel's article is a good survey of the relatively thin academic literature on this subject. The literature focuses chiefly on the costs of the land inputs to housing development. The studies attempt to link environmental regulations with changes in the supply of available land and hence to changes in costs. Studies try to measure changes in per-acre land costs, changes in house sale prices, or foregone amenity values from housing units not built in restricted areas. Interestingly, the collected studies do not address affordable housing separately from other segments of the housing markets examined.

Summarizing the literature, the article says that the following effects can be observed:

- Prices go *up* because developable land is scarcer.
- Prices *stay the same* because environmental compliance costs are capitalized into land costs.
- Prices go *down* because of lower developable densities on environmentally restricted land.
- Prices go *up* because of demand for the environmental amenities created by restrictions (Boyle and Kiel, 2001).

In short, outcomes vary. While the studies cited primarily examine supply, the effects of environmental regulation on housing affordability depend substantially on issues of *demand*.

Many of the studies have been of areas of high demand for housing (coastal California and Florida, Dallas, Houston, waterfront property in Maryland, New Jersey). The leading studies examine high-growth states, expanding metro areas, and coastal zones. Here changes in environmental regulation do affect prices at the margin. Of course, these high-demand areas also are those areas where housing affordability is most at issue. Many environmental regulations, however, apply in different kinds of markets, and the effects on affordability are not always the same.

For example, the same wetland regulations limit development in vernal pool complexes in Orange County, California, and in rural Nebraska prairie pothole areas.[1] The effect on affordability of housing costs, however, can differ profoundly. Such effects may be negligible or nonexistent in Nebraska because of the availability of other developable land but substantial in the high-demand, low-availability-of-land situation in Orange County. On the other hand, in a high-cost, high-demand market, the incremental contribution of environmental regulation to higher costs may be so minor compared with other factors driving cost increases that the effect on the affordable segment of the market is minimal. Thus, context matters.

Three kinds of land-related costs are related to environmental regulation, with differing effects on housing development and availability.

1. Land scarcity (affected by regulations dealing with wetlands, coastal zone protection, flood plain and hazard protection, and habitat, among others).
2. Site preparation (affected by regulations dealing with storm water controls, erosion and sediment, and assessment for hazardous substances, among others).
3. Operating costs (affected by regulations dealing with water and sewer, storm water management, and solid waste management requirements, among others).

These costs have different impacts on affordability in different places. In situations in which impacts occur, we need to focus on identifying *offsets* that can address the affordability issue itself.

For example, where environmental restrictions reduce the amount of land available for development, and this reduction threatens to reduce the availability of affordable housing, offsetting these effects by changing legal subdivision and other requirements that affect housing density is feasible. The same number of housing units can be produced on less land if the relevant zoning and subdivision requirements are adjusted to allow higher density and smaller parcel size. We already see these kinds of offsets for environmental purposes in a variety of settings. They occur in the context of private land trusts for ranchers in the western United States, where cluster development enables the protection of large open space areas for ranching (and habitat and other values) (Muto, 1999). They also occur publicly in connection with agricultural zoning and other rules that provide for clustering of development and smaller parcel sizes (sometimes setting small maximum parcel sizes).[2] Transferable development rights programs also provide a version of this offset approach: schemes endeavoring to maintain, or even increase, the developable land supply even as land availability is constrained by environmental protection limitations.[3]

Merely identifying environmental measures as a contributor to land costs or limitations in land availability is not the end of the inquiry. Local governments have the opportunity to offset adverse effects by using their land use powers to adjust the land supply and rules of development. Where environmental regulations reduce the potential availability of affordable housing in a constrained market, land use authority can be exercised to offset these effects through adjustments to density or other targeted provisions. Even where environmental regulation is largely federally or state-administered, local governments can take action to address affordability by using local land use powers.

Increasingly, local governments are also becoming the locus of environmental regulation as well as land use.[4] They are responsible for storm water regulation in most states, for sediment and erosion control, and for solid waste planning and management. In many states, local governments are responsible for stream buffer and flood plain protection and for implementation of coastal conservation. Many western counties are now preparing

Habitat Conservation Plans under the federal Endangered Species Act[5] to guide their future development in the context of species protection obligations (Cohn and Lerner, 2003). Many states have delegated implementation functions to local governments, as with wetland programs in Massachusetts. Thus, we are beginning to see a confluence of authority for environmental protection and land use regulation in the same level of government (Nolon, 2003; McElfish, 2004). Although in the early 1970s some anticipated that the federal government would hold this authority, local governments have stepped forward as repositories of jurisdiction over density of land development and the rules of development. Thus, local governments can address the cost issues where they exist by using their land use powers and creating offsetting policies.

We also need to pay attention to environmental regulations and affordability effects in already developed areas, such as cities, inner-ring suburbs, and older towns. Environmental regulations can affect affordability in these areas by affecting operating costs and living expenses for owners. For example, older water and sewer systems may need significant upgrades to comply with environmental regulations but are supported by a declining (and poorer) population of ratepayers. Where retrofitting systems to deal with combined sewer overflows, sanitary sewer overflows, drinking water compliance, or storm water management results in higher costs, offsetting local policies may be needed to preserve or improve affordability. These may include targeting of federal and state grant funding, rate buy-downs, and other policies meant to offset the cycle of abandonment and disinvestments (McElfish and Casey-Lefkowitz, 2001).

So what is the bottom line on this Earth Day 2004?[6] The U.S. Department of Housing and Urban Development research agenda needs to examine *offsets* to deal with cases in which a connection exists between environmental regulation and housing affordability. This positive research approach is desirable for the following three reasons

1. It recognizes that consistent environmental regulations do not bite the same way everywhere and that effects on affordability (where they occur) are quite local.
2. It transforms the discussion from how to do away with environmental regulations to how to avoid undesirable secondary effects.
3. It considers environment and land use together, breaking down the artificial distinction that treats these as two separate subjects with no commonality of interest or beneficiaries.

Affordable housing is properly considered a key function of public policy, as is environmental protection. Finding win-win opportunities is both possible and essential.

Author

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Notes

1. 33 CFR Part 320-330; 40 CFR Part 230.

2. Calvert County, Maryland, requires cluster development for residential communities in rural areas. Within the Rural District, building lots within designated Farm Communities and Resource Preservation Districts must be grouped onto no more than 20 percent of the site. Within designated Rural Communities, building lots must be grouped onto no more than 50 percent of the site. In areas zoned as Residential (R-1, R-2) that are outside of town centers, building lots must be grouped onto no more than 50 percent of the site. Open spaces created by approved cluster development must

be protected by legal arrangements such as covenants "to assure the preservation and continued maintenance of the open space for its intended purposes in perpetuity." Calvert County Zoning Regulation 5-1.03.

3. For example, N.Y. Envtl. Conserv. Law. §57-0121 (Long Island Pine Barrens).

4. Professor John Nolon of Pace University School of Law has argued that this indicates the advent of a new era of "local environmental law." John R. Nolon, *New Ground: The Advent of Local Environmental Law* (Washington, DC: Environmental Law Institute, 2003).

5. 16 U.S.C. 1531–1544.

6. The U.S. Department of Housing and Urban Development's Research Conference on Regulatory Barriers to Affordable Housing was held on April 22, 2004, which was Earth Day 2004.

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