



Municipal Research & Services Center of Washington

What to Do About Rural Sprawl?

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What is Rural Sprawl?

While "urban sprawl" and "suburban sprawl" steal the headlines, rural sprawl presents a thornier problem. Urban sprawl can be thought of as an inflating tire of growth. Suburban sprawl mimics some of urban sprawl, especially in commercial expansion along arterial highways, but also includes leapfrogging development that isolates parcels of farmland, forest land, and open space. Suburban sprawl also tends to separate residential districts from the commercial strip and office park districts, creating greater dependence on the automobile.

Rural sprawl takes two forms. The first is low-density residential development that is scattered outside of villages, suburbs, and smaller cities. The second type of rural sprawl is commercial strip development along arterial highways leading into and out of villages, suburbs, and smaller cities.

What Problems Does Rural Sprawl Create?

Rural sprawl creates a host of planning challenges. Rural residential sprawl usually occurs away from existing central sewer and water. Homeowners rely on on-site septic systems and on wells for water. Often, these systems are not properly sited or not properly maintained. For example, a 1998 study in the Indiana reported that between 25 and 70 percent of the on-site septic systems in the state were failing.ⁱ

When septic systems fail in large numbers, sewer and water lines must be extended into the countryside, often a mile or more. Public sewer is priced according to average cost pricing. This means that when sewer lines are extended, there is a strong incentive to encourage additional hook-ups along the line. So when a sewer line is extended a mile or more, development pressure increases along the line. This usually results in a sprawling pattern, like a hub and spoke from a village to the countryside.

The spread-out rural residents are completely auto-dependent and are often long-range commuters. This puts greater demands on existing roads and increases the demand for more and better roads. The greater traffic also results in the burning of more fossil fuels, producing more air pollution.

Rural residents also have added to the national trend of Americans consuming more land per person for a residence. The demand for 2- to 10-acre house lots has driven up land prices in rural fringe areas beyond what a farmer or forester can afford to pay. Moreover, as land prices rise, farmers and foresters are more likely to sell their land for house lots. This in turn causes a greater fragmenting of the land base, making it more difficult for remaining farmers and foresters to assemble land to rent. Rented land is especially important for commercial farming. Nationwide, about 40 percent of farmland is rented.ⁱⁱ

Newcomers to the countryside often have little understanding of the business of farming or forestry. The conflicts between farmers and non-farm neighbors are well-known. Neighbors typically complain about farm odors, noise, dust, crop sprays, and slow moving farm machinery on local roads. Farmers point to crop theft, vandalism, trash dumping, and dogs and children trespassing and harassing livestock. In forested areas, the increase in residents bring a greater likelihood of fire. In short, farming and forestry are industrial uses. They should be kept as separate as possible from rural residential development.

In September, 1998 the Iowa Supreme Court declared the Iowa Right-to-Farm law unconstitutional.ⁱⁱⁱ In February, 1999, the U.S. Supreme Court refused to hear the case on appeal, thus letting the ruling stand. The Iowa Supreme Court found that the law took away the right of non-farm neighbors to sue under the nuisance doctrine, and offered those neighbors no compensation under the 5th Amendment. Forty-nine states have a right-to-farm law, and those laws are certain to be challenged in the coming years. Farmers will be put on the defensive; and the legal costs of defending the farm could be high.

The irony here is that many farmers have resisted land use controls claiming that the controls were a "taking" of their private property rights. Now, courts may rule that farm operations are taking the rights of neighbors to enjoy their own property. Again, the bottom line is that farms and non-farm neighbors should be separated as much as possible.

What Are the Causes of Rural Sprawl?

There are several factors that combine to create rural sprawl. Sprawl doesn't just happen. It is the result of thousands of individual decisions that are made within a framework of local government land controls and local, state, and federal tax policies and spending programs.

- Individual Tastes and Preferences
- Federal Mortgage Interest Deduction
- Weak Local Planning and Zoning
- State Subdivision Control Acts
- State and Federal Highway Programs
- Population Growth

Many people perceive the countryside as a safer, cleaner, cheaper, and more rewarding place to live, compared to the congestion, crime, and high property taxes of cities and the monotony and rising taxes of the suburbs. At the same time, a house has become the major investment vehicle for many families. The strategy is to:

- a) buy as much house as possible;
- b) maximize the federal mortgage interest deduction;
- c) build up equity in the house while paying off the mortgage; and
- d) buy or build a house in the countryside where the appreciation potential is high.

The result is a strong demand for "McMansions" on 2- to 10-acre lots. This pattern is made possible by weak local planning and zoning and some state subdivision control acts. The standard for zoning in many rural areas is one- and two-acre minimum lot sizes. This allows for considerable residential development, assuming that the ground will perc for on-site septic systems and that well water is readily available. Many newcomers to the countryside want their own septic and well systems and do not want to pay monthly utility bills. Also, local zoning typically does not limit the number of curb cuts along country roads. It is not uncommon to have a plethora of curb cuts along a country road, despite the traffic danger of limited sight-distance.

There are a number of states with subdivision control acts that effectively encourage the creation of large residential lots in the countryside. For example:

- 1) Ohio and Tennessee exempt new lots of more than 5 acres from subdivision review;
- 2) Vermont's Act 250 exempts new lots of greater than 10 acres from on-site septic system tests for location and type of septic system;
- 3) Colorado exempts lots of greater than 35 acres. That is one reason why Colorado has been losing farm and ranch land at a rate of 90,000 acres a year;^{iv}
- 4) Michigan's Subdivision Control Act allows divisions on parcels less than 20 acres, 5 divisions on parcels between 20 and 30 acres, 7 divisions on parcels between 40 and 50 acres, 11 divisions on parcels between 80 and 90 acres, and 16 divisions on parcels between 160 and 200 acres. For parcels over 20 acres, two additional lots may be created if a road is put in. (See Figures 1-4).

ISTEA and TEA-21 have been hailed by planners because of the regional participation by MPOs, a welcome departure from the old "one size fits all" federal approach to transportation planning. Also, more transportation money has become available for mass transit and bike and pedestrian-oriented projects. But most of the federal transportation money will continue to be spent on roads. The more roads, the more dispersed the settlement patterns are likely to become.

The more roads, ironically, will make telecommuting easier. People will be able to live farther from work and commute to the office a few days a week. Already, there are an estimated 10 million telecommuters in the United States.^v

Population growth will be a major factor in rural sprawl over the next several decades. The U.S. Census Bureau predicts there will be 393 million Americans in 2050, up from about 270 million today.^{vi} Perhaps equally important is the possibility of population shifts away from cities and suburbs to the countryside.

Potential Solutions to Rural Sprawl

Prior to a discussion about solving rural sprawl, I must point out that there are "compensation laws" in 25 states. Though the laws vary somewhat, they generally require a government to pay a private landowner if government regulations reduce the value of the property beyond a certain percentage (e.g. 5%, 10%). States with these laws will be hampered in their attempts to curb rural sprawl.

Solutions to rural sprawl must come in an integrated set of techniques. No one technique will suffice. These techniques must combine financial incentives with regulation, including:

- A Comprehensive Plan
- Agricultural, Forest, and Rural Residential Zones
- Subdivision Regulations
- Capital Improvements Plans
- UGB/VGBs
- Property Tax Incentives
- Purchase and Transfer of Development Rights

Solutions to rural sprawl must mesh with a county or regional comprehensive planning process. The comprehensive plan provides an inventory of land resources, projected population growth, and a vision of how to accommodate that population. The comprehensive plan is the legal foundation for the zoning ordinance, especially through the future land use map.

Zoning is a key ingredient in regulating rural sprawl. Places that have experienced some success in limiting rural sprawl use agricultural zoning of 20 acre or greater minimum lot sizes or fixed area ratio of one building lot of a maximum of two acres for every 25 or 50 acres. Timber zoning in Oregon at 80 and 160 minimum lot sizes has largely been effective, too. A more contentious problem arises in those places where commercial farming and forestry are fading and the land has low natural resource

production capacity. In these places, rural residential zones may be appropriate. Oregon has set up 250,000 acres in rural residential zones in the Willamette Valley alone. These zones carry 3- to 5-acre minimum lot sizes. The balance to be struck is to allow some rural residential development without sacrificing good quality land and without accommodating so many rural residents that sprawl develops.

It is important to recognize that "rural cluster" or "open space zoning" is not a solution to rural sprawl. In fact, many cluster developments in the countryside can simply create "clustered sprawl." Cluster developments may leave some land open, but the clusters are often based on fairly high densities, such as one dwelling per two acres. Fifty houses on 100 acres with 30 acres open still puts 150 or more new dwellers in the countryside. These developments are auto-dependent and the residents can bring on conflicts with farming or forestry neighbors as discussed above. In short, cluster development is a suburban style that will hasten the conversion of rural areas to suburbs.

State subdivision control acts should follow the California model in which any subdivision must go through a planning staff review to make sure that each lot will have adequate services.

Capital improvements programs have not been widely used in rural areas. The programs spell out what infrastructure will be supplied where and when, and how the infrastructure will be financed. In recent years, many sewer and water extensions have been privately financed.

This private infrastructure should comply with the public CIP. This is one way to limit arterial commercial sprawl.

A combination of the CIP and zoning is the Urban Growth Boundary and its smaller relative, the Village Growth Boundary. Both types of boundaries require cooperation among jurisdictions to identify land use needs over the next 20 years and to draw a limit to the extension of public services, especially sewer and water lines. The boundaries promote a more compact style of development that is cheaper to service and minimizes "expanding tire" type of sprawl.

An urban or village growth boundary strategy will work only if there is restrictive zoning in the countryside. If the countryside is zoned in 2-acre lots, a large amount of residential development will simply leapfrog over the boundary and spread through the hinterlands. Financial incentives can be combined with zoning to encourage farm and forestry operators to remain in business. Financial incentives are strictly voluntary.

Preferential farm property tax programs exist in every state. The shortcoming of these programs is that most have minimal eligibility requirements, and the size of the tax break often is small compared to what a developer can offer. Three states—Oregon, Nebraska, and Wisconsin—link preferential farm property taxation to agricultural zoning. This helps to protect the public interest in the preferential taxation, and not simply reduce a landowner's holding costs while waiting for the land to ripen in value for development. The preferential taxation should be extended to commercial farm and forestry operations, not to subsidize the lifestyle of hobby farmers and rural homeowners.

The purchase and transfer of development rights hold some promise for protecting farming and forestry areas, and for directing growth away from these areas. To date, 15 states and dozens of counties have active PDR programs and have preserved over 520,000 acres at

a cost of about \$1 billion.^{vii} In 1996, the federal government authorized \$35 million in grants to states and localities for PDR acquisitions. In November of 1998, voters in 31 states passed \$7.5 billion in spending measures to preserve farmland and open space and to invest in "smart growth". Leading the way, voters in New Jersey approved \$1 billion for land preservation projects over the next ten years.

The purchase of development rights can help create parts of growth boundaries (see Figure 5) and can strengthen zoning by stabilizing the land base. Although there will not be enough money to preserve the entire countryside, and although many landowners will choose not to participate, PDR programs are here to stay and their popularity is growing.

TDRs have enjoyed far less success than PDRs, but the opportunity to transfer development potential from the countryside to developing areas is intuitively attractive. The popularity of TDRs will likely increase as well. TDRs have the advantage of requiring some fairly sound planning in order for them to work, as in the case of Montgomery County, Maryland.

Conclusion

Rural sprawl is a planning challenge that will not go away any time soon. In many parts of the United States, rural sprawl will become more pronounced and will eventually lead to sprawling suburban-type settlements.

The impacts of rural sprawl must be examined in terms of the cumulative impact over time. Initially, a house here and a house there does not seem to place a large burden on the environment or local services; nor does it appear to cause major conflicts with farming or forestry neighbors. But over time, the scatter of houses can add up to sewage disposal and water quality problems, along with conflicts between farm and forestry operators and rural newcomers.

A common question I am asked when I make presentations is, "How do you keep people from moving out to the countryside onto one, two, five, and ten acres lots?"

This is a valid question. The answer is that there needs to be a public policy vision backed by tax, spending, and regulatory programs that discourages people from living in the countryside.

This is not far-fetched. At a recent conference on Smart Growth, a fellow-presenter smiled at me and said me, "You know government created the incentives for sprawl which means that government can create the incentives to curb sprawl."^{viii}

The answer to the question about keeping people from moving to the countryside is: "How far do you want to go with public policy to make that happen?"

Footnotes

ⁱ Indiana Dept. of Agriculture. The Hoosier Farmland Preservation Task Force Final Report, 1999, p. 21.

ⁱⁱ Daniels and Bowers, *Holding Our Ground: Protecting America's Farms and Farmland*, Washington D.C.: Island Press, 1997, p. 11.

ⁱⁱⁱ Iowa Supreme Court, No. 192/96-2276, September 23, 1998. Bormann and Bormann and McGuire and McGuire vs. Board of Supervisors in and for Kossuth County, Iowa.

^{iv} Daniels and Bowers, p. 1.

^v Daniels, Tom. *When City and Country Collide: Managing growth in the Metropolitan Fringe*. Washington D.C.: Island Press, 1999, p. 11.

^{vi} Daniels, p. 265.

^{vii} Remarks by Bob Wagner, American Farmland Trust PDR Conference, Loudonville, OH, March 29, 1999.

^{viii} John Lippman, March 3, 1999, Albany, NY.