

# The Costs of Sprawl, Revisted

*by Kevin Kasowski (1992)*

How much does sprawl cost? A 1992 study by the Center for Urban Studies at Rutgers University in New Jersey says sprawl is costing us a bundle. The Rutgers study pegged capital costs attributable to sprawl development patterns at \$1.3 billion over 20 years for roads, water, sewer and school facilities. Additional operating and maintenance costs of \$400 million annually were also linked to sprawl development. Capitalized at current borrowing rates, these annual O&M costs translate into an additional \$7-8 billion price tag for sprawl over 20 years.

The study was conducted by a team of 20 researchers and economists at the request of the New Jersey Legislature to evaluate economic impacts of the State Plan adopted in 1992, which advocates more compact patterns of development. The Rutgers study suggested if 500,000 new residents arrive in New Jersey in the next two decades, each house will cost \$12,000-\$15,000 more because of sprawl development than would be the case if development patterns were more compact. This finding supports earlier research in noting significant sprawl-related costs. In fact, some estimates are even higher.

In a 1989 monograph for the Urban Land Institute, James Frank, associate professor of urban and regional planning at Florida State, estimated a \$48,000 per house sprawl "premium" for providing services to a three unit per acre development located ten miles from central facilities and employment centers. By contrast, the same costs for a home in a 12-unit per acre development, located closer in, with an equal mix of townhouses, garden apartments and single family homes, would be 50% lower.

Development costs vary with lot sizes, distance to central facilities, proximity to existing development, community demographics, existing service capacity and the requirements of local codes and standards. Yet numerous studies dating back to 1955 all point toward a similar conclusion: sprawl is a significant

burden on both homebuyers and taxpayers.

### **Who Pays for Growth?**

Who pays for sprawl? While "on-site" development costs (e.g. sidewalks, sewer laterals, etc.) are passed on to buyers by developers as part of the price of a home, sprawl-related costs that are "off-site" (trunk sewers, water mains, schools, fire stations, treatment plants, widening roads, etc.) are another story. While some governments are now charging "impact fees" to developers for "hooking up" to this community infrastructure, it is frequently the case that the full costs of off-site infrastructure go unpaid, and, as a result, everybody pays -- indirectly.

"We haven't kept pace," says Jim Nicholas, professor of urban planning and an economist at the University of Florida. "Our roads, for example, are financed with fixed base assessments. That doesn't keep up with inflation, let alone with growth. Every time we grow, every time the inflation clock clicks, we get a bigger and bigger gap."

Nicholas notes, for instance, the average combined federal-state motor vehicle tax today is 29 cents. If this tax had been held constant for inflation over the years, it would now be 90 cents per gallon. The obvious result of this subsidy is heavy reliance on single-occupant vehicle commuting, which clogs roads and creates traffic tangles of frustrating proportions. "When you subsidize commuting, is it any wonder that people do it?" asks Nicholas.

Nicholas notes "the more you grow, the bigger the [fiscal] gap." The faster growing states -- California, Florida, for example -- were, not surprisingly, the first to be drawn into the current dilemmas of how to pay for growth. In fact, the tax revolts that began with Proposition 13 in California and continue to this day are, ironically, an indirect acknowledgment current patterns and rates of development are simply not sustainable. As federal subsidies for interstate highways, sewer works and other public infrastructure that made sprawl possible disappeared over the past two decades (without any apparent cut in federal taxes), the public was simply not willing to see those costs shifted onto state

and local government budgets. As a result, government's ability to cope with growth pressures is often paralyzed. "We have now effectively neutralized government's ability to raise money," says Nicholas.

### **A Question of Fairness**

To add to the complexity of the issue, the costs of sprawl are not evenly distributed. When new development occurs far from water or sewer treatment plants, or schools, for example, it creates higher incremental or "marginal" costs for adding new sewer or water system capacity or for operating school bus service. By contrast, the marginal cost of new development closer to existing services or facilities is lower.

However, because costs are currently evenly distributed among all users by "average" cost pricing, those who live farther away pay proportionately less. As a result, some users subsidize other users. FSU's Frank says the result is "an enormous price subsidy." He estimates that the true marginal costs of providing sewer service to a new home can range from \$2,738 to \$26,263 -- far higher than most existing impact fees.

And, since newer homes tend to be most affordable to higher income individuals, this inequity often translates into a subsidy of the rich by the poor, Frank notes. "There is a tremendous equity issue here," notes Nicholas. "What we've evolved is capitalism for the poor and socialism for the rich. So many problems we have today can be related back to that." One visible impact of this subsidy is sprawl. Why? As with subsidies for the auto, subsidies for sprawl simply encourage more development in costly-to-serve locations since developers are allowed to pass off some of their costs to the general public.

A less visible impact of sprawl subsidies is the ongoing fiscal distress of many growing communities. Frank believes charging average cost pricing "systematically underfunds" public services. Why? Actual marginal costs are often higher than average assessed costs, creating an ever-widening fiscal deficit for local and state governments.

### **Recapturing the Costs of Sprawl**

What can be done to fully account for the costs of development, and to eliminate inequities in the current system? With taxpayers already pushed to the limit, and many governments facing huge deficits, is there hope of changing course? Many communities across the U. S. now charge impact fees for schools, roads, sewers, etc. According to Jim Nicholas, one of the country's foremost experts, these fees can range up to \$50,000 on a single-family home in some parts of country, while, in other parts, impact fees are non-existent. The average impact fee for a single-family home is \$10,000, but is growing at a rate of 20% per year. (Typical rates for retail space are \$7 per sq. ft., \$6 per sq. ft. for office development, and \$5 per square foot for industry.)

Nicholas sees impact fees rising to an average of perhaps \$25-30,000 per single-family home -- a not insubstantial portion of the cost of an average home. Like bills for water and sewer services, most impact fees, however, are assessed on an average cost basis. The impact fees on new homes located ten miles from a treatment plant tend to be the same as those levied on homes two miles distant, even though in the former case, the actual costs of providing services may be much higher.

To address this equity issue, some jurisdictions, such as Tallahassee, Florida and DuPage County, Illinois, have begun to move toward geographically variable fees, a variation of "marginal cost" pricing. Other jurisdictions in Florida and California are selling "pre-paid subscriptions" to landowners and developers who plan on hooking into public service systems within the next 20 years.

Frank thinks many local governments now have the analytical capacity to create more sophisticated marginal pricing systems. Yet acceptance of marginal cost pricing by local governments has been slow. The problem? "Politicians don't like to charge voters one rate and others a different one," notes Frank. Jim Nicholas seconds the observation, noting average cost pricing has been used because it's simpler and easier to defend in court, while appearing to be fair -- even if it really isn't.

Nicholas believes the shift toward marginal cost pricing can only

occur if impact fees are already an accepted reality in a given jurisdiction and a good history of case law exists regarding their constitutionality and methodology. Frank suggests one way to build support for a more equitable pricing system may be to build coalitions of people in low-cost locations to complain that sewer rates are far too high because high-cost locations are not being charged for full cost. Yet the difficulty with building coalitions is that a clear geographic break may not actually exist in terms of land ownership patterns.

For example, when officials in Lee County, Florida, proposed a \$7,500 "sprawl" surcharge on outlying development, it was met with "near riots" at a public hearing, with little support even from existing homeowners in central locations, according to Nicholas. Why? A public poll later revealed many of the existing homeowners were also speculating on land at the urban fringe that would be subject to the new surcharge.

### **Melding Markets and Law**

The larger question, according to Nicholas, is whether full cost/marginal cost pricing would really influence development at all. He notes that in Lee County, the proposed \$7,500 surcharge would have been a minor portion of the cost of \$200-400,000 homes, or lots valued at over \$100K. "If the issue is trying to affect development patterns, don't hook your cart to this horse [market pricing]," warns Nicholas. "It is certainly a component of a solution. But would sprawl go away if development picked up all these costs? I think the answer is no."

Nicholas observes "law sets the parameter of the marketplace. If we don't like the results of the marketplace, then we need to go back to those laws and either restructure them or somehow modify them to get the results we want. " One strategy he recommends is to tailor planning incentives that would, for example, reduce road impact fees if a developer agrees to promote vanpooling or mass transit, as is done in Montgomery County, Md. Similar incentives could be created to encourage compact development, affordable housing, and other desirable outcomes.

### **Least-Cost Development**

Another intriguing way to use joint market-regulatory strategies to contain sprawl -- particularly in an era of tight money -- may be the idea of "least-cost" development. The electric power industry is now using the "least cost" principle in the Pacific Northwest as a way of investing in conservation instead of new plant capacity. Since conservation can "free up" supply by lowering demand, it can be an equally cost-effective way of generating "new" power, or what energy efficiency guru Amory Lovins calls "negawatts."

In the Northwest, utilities are now permitted to include the cost of providing conservation tools (low-energy bulbs, insulation, etc. ) to consumers in their rate bases, much as the cost of new power plants have been included. The result? A new source of funding for investments in more energy-efficient infrastructure. Can the same concept be applied to create more efficient, compact and conservation-minded development patterns? Henry Richmond, executive director of 1000 Friends of Oregon, and founder of the National Growth Management Leadership Project, thinks it might.

As the recent Rutgers study in New Jersey indicates, the cost of building in more compact development patterns is much lower than our current "business as usual" approach of allowing inefficient sprawl. Can we allocate those cost savings for fewer miles of roads and water and sewer lines (let's call them "negamiles") to the rate bases of various public service providers (school, road and sewer districts), and use that money as a way to fund new investments in transit, housing and efficient development patterns?

Obviously, electric utilities and public service districts differ in terms of profit/non-profit status, size, scale, etc. and these differences would need to be accounted for in designing a "least-cost" development system. Yet Richmond believes the principle may be worth further investigation: "The idea of "least-cost" planning has been a tremendous positive step for the utility industry. It only makes sense that we should now examine how the least-cost principle could also be applied to planning for land uses and new development."

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