Impact Fees and Housing Affordability [1]

One of the most common arguments against impact fees is that they increase the cost of housing.[2] Higher housing costs act like a regressive tax on lower income households. Higher home prices also reduce the number of households that can afford to become homeowners. Homebuilder associations and other developer groups often become ardent advocates of affordable housing when local governments begin pursuing impact fees. What they usually fail to mention is that the alternatives are generally higher property taxes or utility rates, which also function as regressive taxes on lower-income households and can also pose barriers to home ownership.

There are two principal ways to mitigate the effect of impact fees on housing affordability. One is to waive impact fees or to have the local government pay the fees for qualified affordable housing projects from another funding source. The other method is to design the fees so that they are lower for smaller, more affordable units (sometimes referred to as "variable-rate" impact fees).

Affordable Housing Waivers

One approach to mitigating the negative effect of impact fees on housing affordability is to waive or reduce impact fees for affordable housing projects. In general, this is to be avoided, since waivers weaken the fundamental characteristic of impact fees, which is that all new development pays in proportion to its impact on capital facilities. Waivers can also result in the impact fee account having insufficient funds to construct the improvements needed to serve growth. In some states, waivers are not allowed under the impact fee enabling statute. In other states, where there is no enabling act, local governments may need to be cautious to ensure that the courts do not see waivers as evidence that the impact fee is not a regulatory fee at all but an illegal tax.

However, some state enabling acts specifically authorize waivers for affordable housing or other reasons. New Mexico, for example, recently amended its enabling act to specifically authorize waivers for affordable housing projects. The City of Santa Fe is currently considering an impact fee ordinance that would waive impact fees for housing projects affordable to households earning less than 50 percent of the median income of the area, and reimburse impact fees for projects affordable to households earning less than 80 percent of the median income.

In many cases it is preferable for the local government to pay the fees for affordable housing projects from some other funding source. This approach ensures that the impact fee account has sufficient funds to construct the improvements for which the fee was enacted. The major problem with this approach is that in many cases it is difficult for the

---

[1] Prepared by Clancy Mullen, AICP, Senior Associate of Duncan Associates, Austin, Texas, for the "Impact Fees and Housing Affordability" session at the National Conference of the American Planning Association held in Denver on April 1, 2003 (512-258-7347 ext. 204; clancy@duncanplan.com)

[2] Impact fees do not always increase housing prices. Impact fees may be wholly or partially absorbed by landowners who, depending on market conditions, may have to accept less for their land. The issue of the effect of impact fees on housing prices is a complex one. For the purposes of this discussion, however, let's assume that impact fees do affect housing prices.

local government to come up with funding from other sources. Several communities have come up with innovative solutions to this problem.

Sacramento Regional County Sanitation District, a regional wastewater provider in Sacramento, California, issued bonds and used the proceeds to purchase rights to wastewater generation from some major industries that were in decline but for which the District had promised to set aside a certain amount of treatment capacity. It purchased these capacity rights at the cost of the wastewater impact fee then in effect. Shortly after that it revised the impact fees, significantly increasing the amount of the fees. It then allocated these wastewater "credits" to its member jurisdictions to give to affordable housing and other locally-desired projects. The users of the credits pay the old impact fee, and the District uses the revenue to repay the bonds.

A similar concept was included in Lincoln, Nebraska's recently-adopted impact fee ordinance. In the case of a redevelopment project, impact fees generally give credit for the traffic or other impact that was generated by the previous development. Lincoln took that concept further, and is giving itself credit when it demolishes structures for road widening and other projects. It plans to use these credits to pay the fees for affordable housing and economic development projects. The relevant language of the ordinance[3] is reproduced below.

> *In the case of a demolition or termination of an existing use or structure, the impact fee for future redevelopment of that site shall be based upon the net increase in the impact fee for the new or proposed land use as compared to the previous use. Credit for the prior use shall not be transferable to another location, except that if the old location was acquired by the City for use for an Impact Fee Facility and will not be redeveloped, the City will receive a credit against future impact fees equal to the impact fee that would have been assessed against the relocated use which may be transferred by the City to a community redevelopment project in another location within the same benefit area.*

[3]Sec. 27.82.050(c)(7) of the Lincoln Municipal Code

Variable Impact Fees by Unit Size

The concept of waiving or reducing fees for affordable housing projects address the cost of housing only for some lower-income households. The broader issue is that typical impact fees charge a flat rate per dwelling unit, regardless of size. Because smaller units tend to cost less and house families with lower incomes, the one-size-fits-all approach taken by most impact fee systems imposes a much larger burden, proportionately, on smaller units.

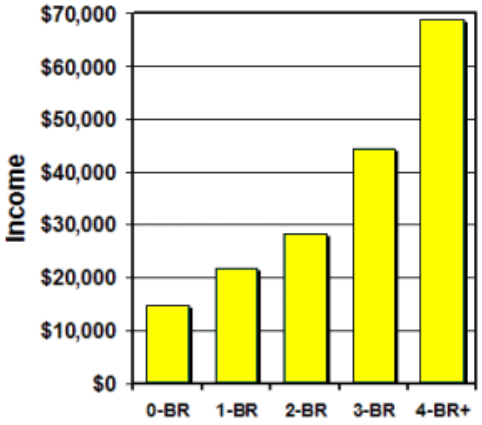
Figure 1: Two-bedroom, 960-square-foot house built in Denver in 2000, selling for $160,000

Figure 2: Five-bedroom, 3,926-square-foot house built in Littleton, CO in 2000, selling for $625,000

The regressive nature of one-size-fits-all impact fees was clearly demonstrated in a seminal 1992 article by Dr. Jim Nicholas of the University of Florida.[4] The 1985 data he presented in that article have been updated with 2001 data in Table 1 below. These data reveal the strong correlation between the size of the dwelling unit, whether measured by the number of bedrooms or square footage, the number of persons living in the unit, which is a measure of the demand on facilities, and the value of the unit and the income of the household (see Figure 3), which is a measure of the ability to pay.

Census data is the source of much of our information about housing and household characteristics, but the census does not record dwelling size in square feet. The available indicators of dwelling size in the census are number of bedrooms and number of rooms. National housing data, however, reveal a strong correlation between the number of bedrooms and the square footage of the dwelling unit (see Table 1).

Figure 3
INCOME BY BEDROOMS



A flat $2,000 impact fee per dwelling unit, regardless of size or type, would constitute 13 percent of the annual income of the median household living in an efficiency apartment, but only 3 percent of the median income of a dwelling unit with four or more bedrooms (see Table 1). Also, since the demand on public facilities is often a function of the number of people living in a community, a four-bedroom or larger house tends to have about three times the demand for services as an efficiency apartment. Consequently,

[4]Nicholas, James C., "On the Progression of Impact Fees," *Journal of the American Planning Association*, Vol. 58, No. 4, Autumn 1992, p. 517-525

not only is a one-size-fits-all fee regressive, it tends to overcharge smaller units and undercharge larger units.

Table 1
DWELLING CHARACTERISTICS BY NUMBER OF BEDROOMS

Bedrooms	Median Sq. Ft.	Mean Persons	Median Unit Value	Median Family Income	$2,000 fee as percent of income
0	500	1.2	n/a	$14,956	13%
1	828	1.5	$73,740	$21,716	9%
2	1,248	2.2	$83,655	$28,343	7%
3	1,692	2.8	$119,539	$44,649	4%
4+	2,406	3.5	$188,052	$68,834	3%

Source: U.S. Bureau of the Census, 2001 American Housing Survey (median square feet, mean persons and median family income based on all dwelling units; median unit value based on owner-occupied units only).

While most impact fees do acknowledge the difference between housing types, such as single-family and multi-family units, few of them vary by unit size. This is changing, however. For example, one-third of the 18 Florida counties that assess school impact fees currently base the fees on some measure of dwelling unit size. Three of the counties (Lake, Broward, and Hillsborough) base fees on the number of bedrooms in combination with housing type. Two counties (Martin and Palm Beach) have translated bedrooms into four or five size categories (e.g., a one-bedroom unit is on average less than 800 square feet, etc.). Finally, one county (Miami/Dade) charges school fees on a per square foot basis.

Figure 4
ASSESSMENT BASIS FOR FLORIDA SCHOOL IMPACT FEES

Assessment Basis	Counties
Flat Rate per Dwelling	Volusia
Housing Type	Citrus , Collier, Hernando, Lee, Manatee, Orange, Osceola, Pasco, St. Lucie, St. Johns, Seminole
Housing Type & Bedrooms	Broward, Hillsborough, Lake
Size Categories	Martin, Palm Beach
Square Footage	Miami/Dade

Source: Survey by Duncan Associates, July 2002

There are several reasons for the continuing predominance of impact fees that do not vary by unit size. One obvious reason is that a flat fee per dwelling unit is easier to calculate and has fewer data requirements. While this is still the case, the data requirements are not insurmountable, and greater resources are now available. The other principal reason for the predominance of one-size-fits-all residential impact fees was legal in nature. In the early days of the development of impact fees in the late 1970s and early 1980s, there were no state impact fee enabling acts, and impact fees were based on the "police power" of local governments to regulate development in order to advance the health and welfare of the community. Great care had to be taken to ensure that impact fees would not be struck down by the courts as an illegal tax. Even today, there is a residual feel by some attorneys that a fee per square foot for residential development may appear more like a tax than a regulatory fee. However, this should no longer be a major concern. Impact

fees are explicitly authorized by enabling legislation in 26 states, and are based on well-established case law in most others. In addition, impact fees for nonresidential uses have always been assessed on a square footage basis.

Data on which to base variable rate impact fees is now widely available, much of it on the internet. Data on the relationship between the size of the unit (measured in bedrooms or rooms) and the number of people or public school students living in the unit is available from U.S. census sample data for areas with a population of 100,000 or more. Data on the relationship between the number of bedrooms in a unit and the square footage of the unit is available from real estate and property appraiser data in most communities. These readily-available data are sufficient to develop variable-rate impact fees for those types of facilities that are typically charged only on residential uses on a per capita or per student basis, such as park, school and library impact fees.

To date, few road impact fees have been adopted that vary by the size of the dwelling unit. This is largely because road impact fees are generally based on national trip generation rate data, and the ITE manual[5] does not provide rates by dwelling unit size. However, the fact that trip generation rates for residential uses vary by the size (and even the income) of the household is actually well documented in the transportation planning literature. As shown in Table 2 below and the accompanying Figure 5, the average number of vehicle trips generated per day is almost directly proportional to the number of people living in the dwelling unit, which as we saw earlier is strongly related to the size of the dwelling unit.

Figure 5
TRIPS BY HOUSEHOLD SIZE

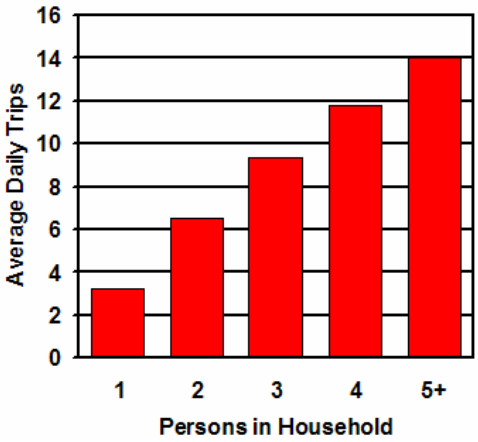


Table 2
DAILY TRIPS BY HOUSEHOLD SIZE

Household Size	Daily Trips
One Person	3.2
Two Persons	6.5
Three Persons	9.4
Four Persons	11.8
Five Persons or More	14.0
Weighted Avg.	8.1

Source: Transportation Research Board, NCHRP Report 365, "Travel Estimation Techniques for Urban Planning," Washington, D.C.: National Academy Press, 1998 (for urban areas with populations of 50,000 to 200,000).

For the City of Santa Fe, we combined these national data on trip generation by household size with local census data on household size by number of bedrooms and realtor data on

[5]Institute of Transportation Engineers (ITE), *Trip Generation*, 6th ed., 1997.

number of bedrooms by square footage to determine trip rates by four dwelling unit size categories for single-family units, as shown in Table 3.

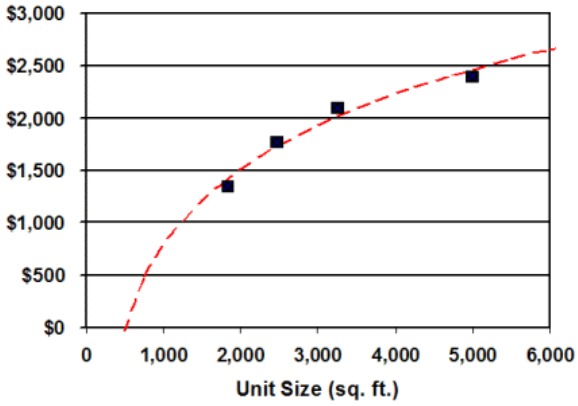
Table 3
SINGLE-FAMILY TRIP GENERATION RATES

Number of Bedrooms	Avg. Unit Size (sq. ft.)	Avg. House-hold Size	Average Trip Rate
2 Bedrooms or fewer	1,829	2.07	6.70
3 Bedrooms	2,470	2.80	8.82
4 Bedrooms	3,250	3.44	10.46
5 Bedrooms or more	4,985	4.06	11.93
All Single-Family Units		2.47	7.86

Source: Duncan Associates, *Capital Improvements Plan for Water, Wastewater, Road, Park, Fire and Police Development Impact Fees for the City of Santa Fe*, March 2003 draft.

Regression analysis was used to determine the curve that best fits the four data points (corresponding to the average two-bedroom, three-bedroom, four-bedroom and five-or-more-bedroom house, which are shown as squares in Figure 6). The resulting equation (shown as the dashed line in Figure 6) explained 97 percent of the variance.

Figure 6
ROAD FEES BY UNIT SIZE, SANTA FE



While permit clerks cannot be expected to calculate fees at the counter using a logarithmic equation, it is a simple matter to develop a fee schedule using 100 square foot or other intervals. An example of such a schedule using 500 square foot intervals is shown in Table 4 below.

Table 4
PROPOSED ROAD FEES, SANTA FE

Dwelling Sq. Ft.	Fee
0 - 1,500	$1,015
1,501 - 2,000	$1,367
2,001 - 2,500	$1,630
2,501 - 3,000	$1,840
3,001 - 3,500	$2,014
3,501 - 4,000	$2,164
4,001 - 4,500	$2,295

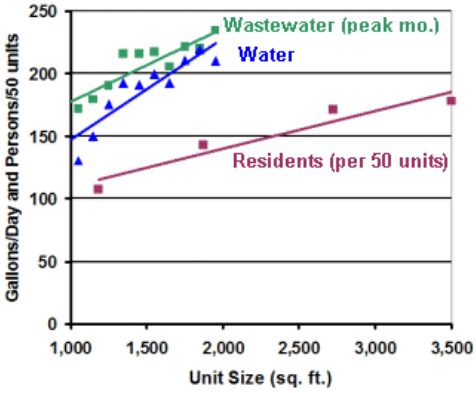
Source: Duncan Associates, *Capital Improvements Plan for Water, Wastewater, Road, Park, Fire and Police Development Impact Fees for the City of Santa Fe*, March 2003 draft.

Like road impact fees, water and wastewater impact fees are seldom varied by unit size. In the vast majority of cases, fees are charged based on the size of the water meter,

although a sizable minority charge residential fees on a per dwelling unit basis. In a few communities, residential fees are charged on the basis of the number of water fixtures.

While the author is unaware of any national statistics on the relationship between water consumption and wastewater generation by dwelling unit size, that there is a relationship certainly makes intuitive sense. Larger units tend to house more people, and water and wastewater demand forecasts are mostly a function of the projected increase in population. One would expect larger households, who tend to occupy larger homes, to have greater demand for water and wastewater services than smaller households. In fact, there is some limited data from Denton, Texas, which tends to support this conclusion.

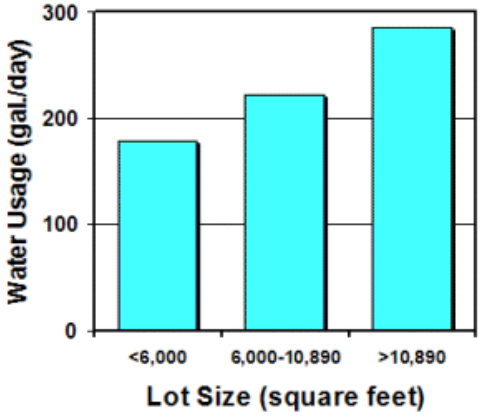
Figure 7
UTILITY DATA, DENTON, TX



The Denton Municipal Water Utility provided data on water and wastewater demand for single-family units between 1,000 and 2,000 square feet in 100-square-foot blocks for the years 1998 and 1999. Census data information was available for Denton County on the average household size for two-bedroom, three-bedroom, four-bedroom and five-bedroom or more single-family units for 1990. Finally, the average square footage of single-family units was determined for each bedroom category from realtor listings for January, 2003. All of these data are plotted in Figure 7.

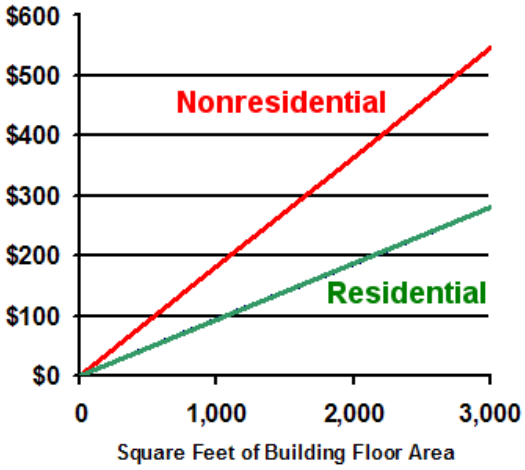
While the utility demand data are only available for smaller units (the average apartment in Denton used 203 gallons per day during this same period), they indicate that utility demand increases with dwelling size even more strongly than household size increases with dwelling size. These data support the reasonableness of using average household size as an indicator of water and wastewater demand. Several communities have used this relationship to base utility fees on the basis of the square footage of the residential dwelling unit, including Orange County, North Carolina and Collier County, Florida.

Figure 8
WATER USAGE, SANTA FE



Some water impact fees are based, not on the size of the dwelling unit, but on the size of the lot, due to the fact that larger lots require more water for landscaping, which is the biggest use of water during the peak summer months. Communities with water fees that vary by lot size include Basalt, Colorado, Fort Collins, Colorado, and Scottsdale, Arizona. Santa Fe, New Mexico is considering water impact fees that vary by lot size, based on a recent study of water use records that found water usage is strongly related to lot size, as shown in Figure 8.

Figure 9
PROPOSED FIRE FEES, SANTA FE



Most fire and police impact fees are based on calls-for-service data. Unfortunately, emergency call data are seldom available by the size of the dwelling unit. Another drawback is that calls for individual land uses can fluctuate significantly from one year to the next. An alternative approach is to use call data only to determine a cost allocation between residential and nonresidential development. Based on the reasonable assumption that the cost to serve development will increase proportionately to the square footage of new development, the residential cost per square foot can be determined by dividing the cost to serve residential development by the amount of residential square footage (the same can be done for nonresidential). This was the approach used in developing draft fire impact fees for Santa Fe, shown in Figure 9.

While many communities have adopted variable-rate impact fees for individual facilities, few have implemented variable fees by dwelling unit size for a broad array of facilities. One community that is currently contemplating such a set of impact fees is Santa Fe, New Mexico. The sum of that City's proposed water, wastewater, road, park, police and fire impact fees is illustrated in Figure 10.

Figure 10
PROPOSED FEES, SANTA FE