



STORY BY
JASON F. MCLENNAN

The Righteous Small House

Challenging House Size and the
Irresponsible American Dream

A house must be built on solid foundations if it is to last. The same principle applies to man, otherwise he too will sink back into the soft ground and become swallowed up by the world of illusion. —SAI BABA

I recently toured a residential subdivision whose grandiose homes were aggressively promoted as green. The developer and builder used a rating system to quantify the extent to which they had built sustainability into each structure. I was drawn to the project because of its claims of responsibility; I was repelled by it when I observed its inherent hypocrisy.

How, under any circumstances, can a 6,000-square-foot single family home be considered green? Something is terribly wrong with a system that ranks such a dwelling high on the green scale when it is intended to house only two to five people. Such oversized homes – with their three-car garages, bonus rooms, great rooms, etc. – are nothing less than mini-mansions (“starter castles,” as I call them) and have no business being associated with green building, even when they incorporate green features.

In my opinion, the existence of oxymoronic “green mansions” is symptomatic of a larger set of problems. Yes, the design and building communities need to establish universal guidelines to define truly green standards, and communicate the ecological notion that “less is more.” But perhaps more importantly, American society must realign its values when it comes to house size. With builders over-building, buyers being taught to embrace excess, lenders focusing more on size than value, each link in the chain weakens the one that follows. It is incumbent upon us as leaders in the green movement to educate consumers on how and why to seek saner, greener relationships with their homes.

This article explores two fundamental topics regarding the intersection between lifestyle and sustainability:

1. How big can a home get before it is simply too big to be called green, regardless of its design and materials?
2. From a sustainability standpoint, what size house should we seek? What guidelines should we follow when selecting a home? Should developers take responsibility for limiting the size of homes they build?

At What Point Does Size Cancel Out Sustainability?

Green homes require more than the token placement of solar panels and the use of recycled-content materials. True sustainability must go beyond tangible design and construction and encompass a philosophical commitment to green living.

A larger structure can meet multiple green standards; it can even impose a smaller environmental footprint than smaller homes. But it is simply too easy to rationalize



The moderately sized Green Dirt Farmstead — a net zero energy home is an appropriately scaled residence for a family of 5. PHOTO BY BOB GREENSPAN



Featuring reclaimed materials throughout, the homes' low-embodied energy and efficient space use make it a highly green home. PHOTO BY BOB GREENSPAN

outsized homes and justify their excess by wrapping them in a loud green ribbon.

The industry must follow consistent guidelines and increase public awareness of this growing problem – that is also related to the housing and financial crisis the country is currently in. When all segments of the market work together, green building will evolve from a guilt-removing fashion to a far-reaching instrument of change.

Putting Things in Perspective.

According to the National Association of Home Builders, the average size of a new single-family American residence in 1950 was 983 square feet. Today, it is nearly 2500 square feet. As home sizes ballooned over that time, family size shrank. The U.S. Census Bureau reports that in 1950, an average American family consisted of 3.8 people; today's average family contains 2.6 people.

YEAR	HOME SIZE	FAMILY SIZE	SQ. FT. PER PERSON
1950	983	3.8	258.7
2008	2500	2.6	961.5

These figures prove how inefficiently we use our resources when we build homes with such drastically disproportionate size-to-occupant ratios. Instead, as we go forward, we must adhere to a stricter code of square-footage-per-person, particularly when we speak of green projects.

Does Size Really Matter?

Plenty of people live in small houses and live what they like to think is an ideal eco-existence. But house size alone does not always relate to responsible resource use. When a childless couple or a one-child family lives in a relatively “small” house but their square-footage-per-person rates are high, they are not living as green as they might think. I am concerned less with total house size and more with relative resource use and quality green design.

I speak to this subject from personal experience as co-head of a blended family with four kids. As our family has grown, my wife and I have lived in homes of varying shapes and sizes – in apartments and single-family homes set in urban centers and rural areas. I've seen what does and doesn't work for family residences, and I've learned that a well-designed home or apartment can be small and functional at the same time.

Monster homes like these for two or three people are a gross misuse of resources.



Through her writing, Sarah Susanka has helped promote the desirability of living *Not So Big*. She has made the small house cool again, while calling into question what might be missing in the lives of those who settle into such massive physical spaces. Sarah's work celebrates the idea of restraint, which is sorely lacking in our culture. When did our grandparents' notion of "plenty" become "not enough" to 21st-century homeowners, her readers ask? When did the three-car garage, which more often serves as storage for unneeded junk than for vehicles, become a standard feature? When did we decide that we require separate rooms for living, reading, eating and recreation?

The Money Pit.

The market-driven interest in size for the sake of size creates a vicious financial and resource-wasting cycle. Buyers spend more on their homes, more to heat and cool them, more to clean them and more to fill them with possessions. Worse yet, most oversized homes are built by cookie-cutter developers who meet the market demand for square footage by compromising on design and material quality. It is amazing how so few large 'custom' homes are conceived and built without architects. The results speak for themselves with subdivision after subdivision of poorly designed boxes with terrible site integration, badly designed interior spaces and awkward floor plans. People spend hundreds of thousands of dollars on flimsy dumb boxes with tacked on columns, stainless steel fronted appliances and badly-labeled 'great rooms' and think somehow they are getting value. The "builder-plan" trend has dumbed down the building profession and resulted in a scarcity of true craftsmanship.

Instead, both sides of the industry (buyers and builders alike) should focus on quality rather than quantity, reinvesting in healthier materials, more durable construction and alternative energy sources in tandem with quality design led by architects and designers. A home should be judged by the quality of its details and craftsmanship rather than the size of its shadow.

Changing the Perception of Value.

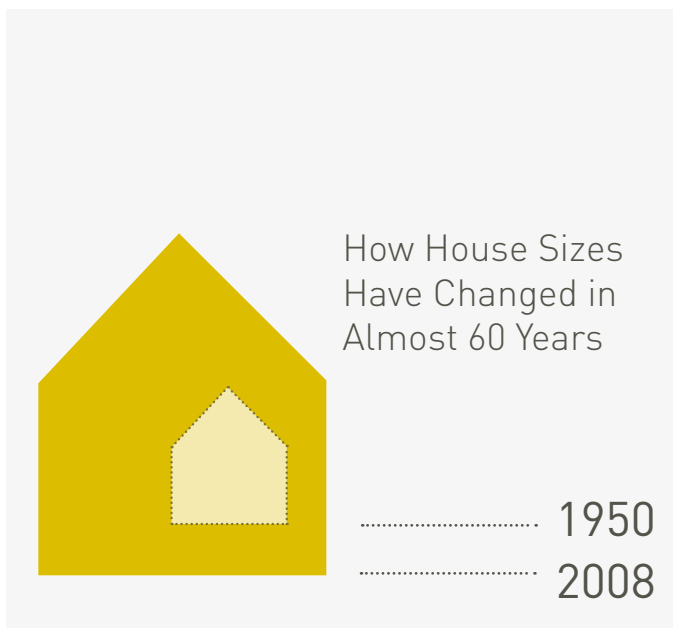
There are so many things wrong with the model of building massive houses. Consumers usually have a finite amount of money with which to build a home, but societal rules – established, I believe, by developers, builders and lenders in conjunction with societal mores that view "more is better" – dictate that value relates to square footage. The larger the home, the greater the cost ... so if a larger home costs the same as a smaller home, the former is supposedly a better deal. But it's not, not by a long shot. In order to expand home size and keep costs down, builders cut corners and consumers lose. I've seen many residents who move into giant new houses and can't figure out why they don't feel comfortable inside – and they don't understand that it's the poorly designed spaces. Feng Shui does in fact matter. Buyers' joy fades quickly and the reality of living in large, charmless boxes sets in.

A well-built house should far outlive its first owners. And all who dwell there through the years should be allowed to enjoy the comfort that comes with responsibility.

Unfortunately, these misaligned values are rife throughout the system. When buyers seek financing for a given property, lenders look for 'comps' in order to establish monetary value. Homes are valued based on a narrow range of shallow attributes, location and size. But the mortgage lending community doesn't factor in design quality or sustainability when it assesses a home; it measures square footage primarily. People seeking to do something durable and innovative see their efforts valued less than if they simply built what everyone else was building – surely a perverse incentive if there ever was one. Not surprisingly, smaller homes are particularly undervalued and even though it is more likely that someone with lower energy bills and operating costs can afford to pay their mortgages - they are penalized.

The Green Square Foot Metric.

If the industry embraced a national square-footage-per-resident standard, then designers, builders, buyers and lenders could quantify a home's green quotient.



Sizing Guidelines

The chart below establishes a set of size-per-occupant guidelines for green homes.

NUMBER OF OCCUPANTS	GREEN SIZE (SF)	YELLOW SIZE (SF)	WHERE RED SIZE STARTS (SF)
1	200 - 600	600 - 800	800 +
2	400 - 1200	1200 - 1600	1600 +
3	600 - 1600	1600 - 2400	2400 +
4	1000 - 2100	2100 - 2800	2800 +
5	1200 - 2500	2500 - 3200	3200 +
6	1500 - 2800	2800 - 3600	3600 +
7	1800 - 3200	3200 - 4000	4000 +
8	2200 - 3600	3600 - 4400	4400 +

Such a system would provide a concrete method with which to determine whether a house is green or simply greenwashed. Smaller, well-built and well-designed houses could become a cornerstone of a new, more responsible lending institution that moved us back from the precipice of the crashing housing market.

First things first: I propose that the design/build community set a maximum house size. Homes exceeding a certain size just wouldn't be built or purchased. Secondly, I recommend that the size-per-person should range from 200 to 800 square feet, depending on the depth of green design for the first three people in a household. When more than three people reside in a house, an additional 400 square-feet-per-person could be used.

This system mandates that no house exceed 4400 square feet – ever. Such a structure is still huge; but using the chart as a guide, it must provide shelter for eight or more people in order to meet sustainability guidelines.

As family size grows, home size does not necessarily have to increase to accommodate human comfort. (For example, you don't add another kitchen or entryway every time a child is born, you simply make them slightly bigger) Siblings might share bedrooms, family members can share bathrooms, etc. Yes, a separate family room is appealing when multiple kids are involved, and an enclosed garage helps keep the rain off the car. But the greenest solution is what people choose NOT to build.

The Big Bottom Line.

1. The average American family house or condominium, which today is built for three people, should be no larger than 1600 square feet in order to be considered green. (This is more than 600 square feet larger than the house of the 1950s but approximately 900 square feet smaller than the average house today.) Houses need to shrink again. This would do a lot to avoid a future housing crisis.
2. If people have more money and are looking for a new place to live, the compelling message should not be to move into a larger home, but rather to invest in quality and design and to downsize or 'rightsize' based on your family size.
3. Working at home drastically reduces green house gas emissions as transportation impacts are avoided. Additional square footage can be justified if people are working at home a significant amount of time. In these cases, I would propose a maximum 200 square feet bonus allowance to accommodate telecommuting for each working adult.
4. The square-foot-per-person metric lessens as more people join a household. (Sharing is also green.) So house size shrinks from 600 square feet per person down to 450 square feet per person as an overall average.

As professionals leading the charge toward greener ways of living, we must challenge assumptions that hinder our progress. Responsibility naturally breeds sustainability.