Center on Urban & Metropolitan Policy

In Collaboration with the Joint Center for Housing Studies of Harvard University

Housing Heats Up:

Home Building Patterns in Metropolitan Areas

By Alexander von Hoffman, Harvard University Joint Center for Housing Studies

"Despite the dominance of suburban home building, large cities experienced rapid gains in new housing construction between 1991 and 1998."

Findings

A study of new housing construction in America's 39 largest metropolitan areas during recent periods of economic boom (1986), bust (1991), and revival (1998) finds that:

- The number of new homes constructed in America's largest metropolitan areas has been growing steadily since the recession of the early 1990s and is nearing the peak level of the real estate boom in 1986. Between 1991 and 1998, the number of new homes built in metropolitan areas grew by nearly 78 percent, climbing to 76 percent of the housing construction level of 1986.

- Most of the new homes are built in the suburbs. In each of the years studied, more than 80 percent of new housing construction took place in the suburbs.

- Despite the dominance of suburban home building, large cities experienced rapid gains in new housing construction between 1991 and 1998. The number of new housing permits in large cities more than doubled during this period, growing at a faster rate than that of suburbs and metropolitan areas in general. Large cities' share of metropolitan permits also rose from 14.6 percent in 1991 to 17.8 percent in 1998.

- However, the gains in metropolitan-area home building are distributed unevenly. In some large cities, new home building is stagnating; while in others, it is booming. In half of the large cities, the share of metropolitan permits shrunk between1986 and 1998, while it expanded in just over a quarter of the cities.

- Size of the cities' land area matters. In general, compact, densely developed cities are constructing fewer homes and have a relatively smaller share of regional housing permits than spacious cities that have substantial amounts of undeveloped land. Only two compact cities, Seattle and Orlando, issued more than 1,000 permits and had more than 10 percent of all permits issued in their metropolitan areas in 1998.

- A comparison of the 39 large cities by their land size shows clearly which cities, by 1998, had "hot" and "cold" housing construction markets. The hot markets are: Seattle, Orlando, Boston, Miami, Columbus (OH), Portland (OR), Tampa, New York, San Francisco, San Antonio, Phoenix, Houston, Dallas. Cold markets are: Baltimore, Providence, St. Louis, Sacramento, Detroit, Philadelphia, New Orleans, Chicago, Kansas City, Los Angeles.

I. Home Building in America: City Revival or Endless Sprawl?

The current unprecedented period of sustained economic growth in the United States has led to a surge in new home construction. A growing economy spurs job growth, which leads to population shifts, which in turn bring about a demand for additional housing. The demand for more homes in a given metropolitan area rises as people form new households, migrate from elsewhere, or seek new, usually more expensive, homes. Even as the national economy grows, however, some regions, and some places within regions, do better than others, and the amount of home construction is distributed unevenly among the cities and suburbs of our metropolitan regions.

The question of where in metropolitan areas new home construction occurs is of particular interest to policy makers and others. On the one hand, many government officials have been trying to trigger economic activity and population growth in America's cities for decades. The National Association of Home Builders recently pledged to construct 100,000 homes a year in cities over the next decade. On the other hand, fears that uncontrolled suburban growth will degrade the environment and engulf the neighboring countryside have made "suburban sprawl" a national political issue. In 1998, citizens approved more than two hundred ballot initiatives to preserve green spaces and curb real estate development. In 1999, Vice President Al Gore announced a federal effort to control sprawl by encouraging construction within central cities. The states of Maryland and Georgia recently enacted measures aimed at containing urban growth.

To help measure the patterns of urban growth, the extent of the urban revival, and the intensity of suburban sprawl in the United States, the Joint Center for Housing Studies of Harvard University has investigated patterns of home building in American cities at the national, regional, and metropolitan levels during the economic boom, bust, and revival of the last fifteen years.

This report analyzes data on building permits that have been issued for dwelling units in the 39 largest American urban regions at the peak of the last housing cycle in 1986, the trough in 1991, and the expansion years 1996 and 1998. (We have chosen two recent years for data points to determine whether the trend established in the early part of the current expansion has continued.) These data illuminate the extent and proportion of new housing construction in large cities and their surrounding metropolitan areas.[1]

The data examines the trends in the 39 largest metropolitan areas and their large cities.[2] The term "large city," used by the Joint Center for Housing Studies in this and other research on urban centers, refers to the largest city and any others with a population of more than 200,000 within a metropolitan area. We prefer this term to the more commonly used "central city," which the U. S. Bureau of the Census and Office of Management and Budget define as the largest city and, if they exist, any other cities of more than 250,000 people in each designated metropolitan area.[3] In 1990, these 39 largest metropolitan areas each had a population of more than one million people and together were home to half of the population of the United States. The combined population of the large cities of these metropolitan areas comprised 15 percent of the total national population. *(See Figure G later in paper for population figures.)*

One should keep in mind that because of key differences between American suburbs and cities, far more home construction occurs in outlying areas than in core large cities. Suburban areas usually cover much greater land area and contain more sparsely settled and undeveloped land than do large cities. Large urban centers, on the other hand, frequently have less territory, more developed and densely settled land, and numerous buildings (including old warehouses and office buildings) that can be renovated or remodeled for residential purposes. Hence, in most circumstances, suburban home building—and therefore sprawl—will outpace residential development in urban centers.

II. Home Building in the Thirty-Nine Largest Metropolitan Areas

A. New Housing Construction Activity Is Increasing in Metropolitan Areas, Particularly in the Suburbs

According to permit data for new housing construction in the years 1986, 1991, 1996, and 1998, home construction in metropolitan areas in the United States is well on the road to recovering from the effects of the recession of the early 1990s and may soon rise to the lofty levels of the 1980s boom. Total housing permits in the 39 largest metropolitan areas grew by nearly 78 percent between 1991 and 1998, reaching approximately 793,000 total permits or 76 percent of the peak permit level of 1986. *(See Figures A and B)*

The data also confirms that sprawl is alive and well. The majority of new housing construction activity in the last 15 years has taken place in the suburbs and exurbs of central cities. In 1986, at the height of the last housing construction boom, suburbs captured 81 percent of new housing permits in the 39 metropolitan areas. By the 1991 recession, the number of suburban housing permits dropped by 67 percent but their share of metropolitan permits increased to 85 percent.

continued on next page

As the economy recovered between 1991 and 1998, the number of new suburban homes built rose by 71 percent, making up approximately 82 percent of all homes built in metropolitan areas in 1998. Thus, the suburbs have captured the overwhelming share of new homes built in metropolitan areas in the last 15 years—between 80 and 85 percent. *(See Figure C.)* Furthermore, in each of the years examined here, the suburbs, small cities, and towns outside of these metropolitan areas—with the exception of those outside San Antonio—consistently attracted more new home building than their large cities.

B. Home Building in Large Cities Is Climbing Back but Still Lagging behind Suburban Construction

According to housing permit data, housing construction activity in large cities dropped off sharply after the building boom of the 1980s but has been soaring since the recession of the early 1990s. Between 1991 and 1998, the number of new homes built in the 39 large cities more than doubled, growing by 116 percent. This percentage increase in new housing construction activity outpaced that of the suburbs and metropolitan areas generally, which saw their housing permits grow 71 percent and 78 percent, respectively, during the same time period. The cities' share of metropolitan housing permits also grew by 3.2 percentage points, from 14.6 percent in 1991 to 17.8 percent in 1998.

Cities are gaining momentum in residential construction even without the boom in multi-family buildings promoted by various tax incentives (such as accelerated depreciation tables and loose restrictions on declaring losses) that existed in the 1980s. The number of multi-family permits issued in both large cities and metropolitan

continued on next page

Figure A
Total Housing Permits for 39 Largest Metropolitan Areas

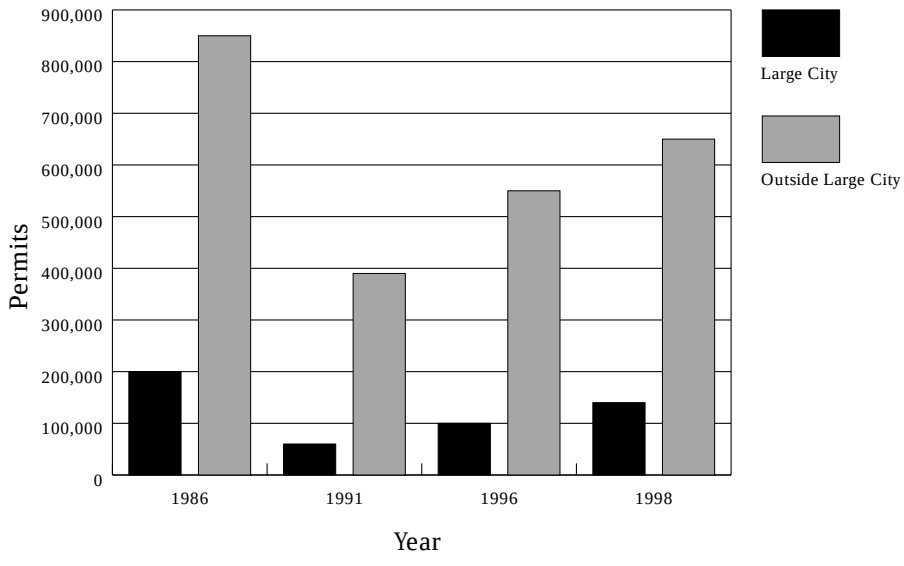
Year	Metro Area (% of 1986 Level)	Large City (% of 1986 Level)	Outside Large City (% of 1986 Level)	City Share of Metro (% of 1986 Level)	Outside Large City Share of Metro (% of 1986 Level)
1986	1,040,961 (100%)	198,441 (100%)	842,520 (100%)	19.1% (100%)	80.9% (100%)
1991	446,755 (42.9%)	65,376 (32.9%)	381,379 (45.3%)	14.6% (76.4%)	85.4% (105.6%)
1996	662,646 (63.7%)	104,568 (52.7%)	558,078 (66.2%)	15.8% (82.7%)	84.2% (104%)
1998	793,042 (76.2%)	141,466 (71.2%)	651,576 (77.3%)	17.8% (93.2%)	82.2% (101.6%)

Figure B
Percent Change in Housing Permits for 39 Largest Metropolitan Areas

Period of Change	Metro Area	Large City	Outside Large City
1986-1998	-23.8%	-28.7%	-22.7%
1991-1998	77.5%	116.4%	70.9%

Notes: 1998 data are preliminary. Large cities include the named central city and all other cities with populations over 200,000 in 1990. Data are summed from place-level data to match 1983 metropolitan area definitions, except New England where the metro area definitions are those in effect for the year of data collection. Source: U.S. Bureau of the Census, Current Construction Report, Series C-40.

Figure C
Housing Permits for Large City and Outside Large City



areas has more than doubled since the market bust in the early 1990s. In 1986, large cities issued 132,500 permits, as developers and investors rushed to develop multi-family buildings before a new tax law went into effect and eliminated housing investment tax shelters. In 1998, large cities issued only 80,000 multi-family permits, but this figure reflects real demand more accurately than does the number from the year of the tax shelter rush.

The progress in large city home building should be considered cautiously, however. As mentioned earlier, suburban areas remain the dominant sites for new homes in metropolitan areas. While the 1998 city share of metropolitan housing permits has almost returned to the peak level of 1986, new city housing still represents less than one-fifth of all new homes built in these metropolitan areas. And since the sharp drop after the speculative building boom in 1986, housing construction in large cities has not recovered as quickly as it has in cities' outlying regions. Even though cities did gain 116 percent additional permits from 1991 to 1998, the large cities issued 29 percent fewer permits in 1998 than they did in 1986, lagging somewhat behind the suburban areas, which issued 23 percent fewer permits in 1998 than in 1986.

C. Home Construction Patterns Vary Widely in Different Cities

There are diverse trends—rather than one clear story—that define the home building experience of the 39 metropolitan areas and large cities in this study. Between 1986 and 1998, half of the large cities in the 39 largest metropolitan areas lost permit share in their metropolitan area to suburbs and small cities, while only about a quarter gained a greater share of permits.

continued on next page

Figure D
Large City Gains in Share of Metropolitan Housing Permits 1986–1998

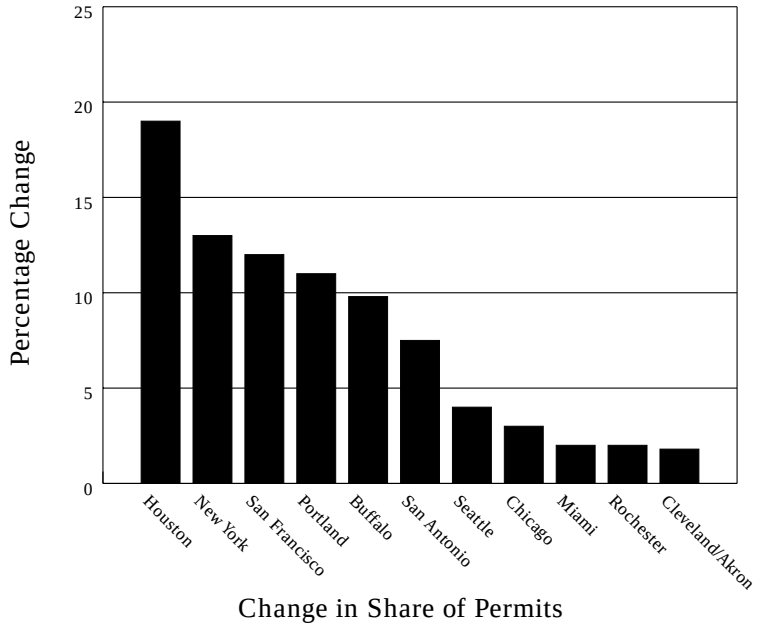


Figure E
Large City Losses in Share of Metropolitan Housing Permits 1986–1998

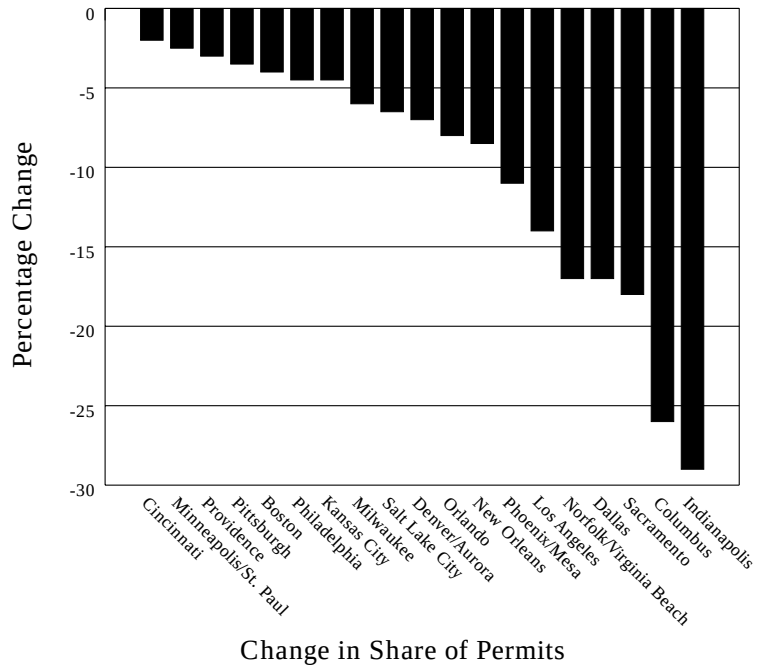


Figure F: Permits and Large City Share for 39 Largest Metropolitan Areas

Metro Area	Permits Issued 1986				Permits Issued 1991				Permits Issued 1996				Permits Issued 1998			
	Metro Area	Large City	Outside Large City	City Share of Metro (%)	Metro Area	Large City	Outside Large City	City Share of Metro (%)	Metro Area	Large City	Outside Large City	City Share of Metro (%)	Metro Area	Large City	Outside Large City	City Share of Metro (%)
Cities Under 100 sq. mi.																
Hartford	10,616	322	10,294	3.0	2,279	29	2,250	1.3	2,983	27	2,956	0.9	4,385	94	4,291	2.1
Providence	8,690	322	8,368	3.7	2,512	73	2,439	2.9	2,821	80	2,741	2.8	2,887	39	2,848	1.4
Miami	36,767	801	35,966	2.2	14,048	451	13,597	3.2	20,970	736	20,234	3.5	23,394	962	22,432	4.1
Rochester, NY	5,140	183	4,957	3.6	2,950	79	2,871	2.7	2,986	115	2,871	3.9	2,265	119	2,146	5.3
Buffalo	3,717	93	3,624	2.5	2,717	208	2,509	7.7	2,973	280	2,693	9.4	2,412	298	2,114	12.4
Boston	28,656	2,511	26,145	8.8	7,741	163	7,578	2.1	11,324	227	11,097	2.0	13,044	757	12,287	5.8
Pittsburgh	5,109	358	4,751	7.0	4,825	257	4,568	5.3	4,412	166	4,246	3.8	5,555	245	5,310	4.4
Washington, DC	41,467	640	40,827	1.5	18,146	333	17,813	1.8	27,586	0	27,586	0.0	33,517	429	33,088	1.3
St. Louis	18,131	210	17,921	1.2	8,350	121	8,229	1.4	12,315	395	11,920	3.2	11,950	162	11,788	1.4
Orlando	20,030	3,873	16,157	19.3	13,392	2,505	10,887	18.7	13,449	1,548	11,901	11.5	22,277	2,748	19,529	12.3
Cincinnati	10,492	314	10,178	3.0	9,842	470	9,372	4.8	12,013	370	11,643	3.1	11,868	219	11,649	1.8
Baltimore	19,406	158	19,248	0.8	11,159	530	10,629	4.7	10,741	107	10,634	1.0	11,194	64	11,130	0.6
Seattle	25,609	2,694	22,915	10.5	14,610	2,143	12,467	14.7	19,858	2,368	17,490	11.9	27,010	4,064	22,946	15.0
Milwaukee	6,164	792	5,372	12.8	6,695	581	6,114	8.7	7,376	182	7,194	2.5	8,063	607	7,456	7.5
Sacramento	17,763	3,681	14,082	20.7	9,825	1,049	8,776	10.7	8,974	542	8,432	6.0	14,412	415	13,997	2.9
Total	**257,757**	**16,952**	**240,805**	**6.6**	**129,091**	**8,992**	**120,099**	**7.0**	**160,781**	**7,143**	**153,638**	**4.4**	**194,233**	**11,222**	**183,011**	**5.8**
100-200 sq. mi.																
Minneapolis/St. Paul	27,345	1,219	26,126	4.5	13,630	204	13,426	1.5	16,924	191	16,733	1.1	19,257	490	18,767	2.5
Salt Lake City	10,357	1,054	9,303	10.2	4,756	181	4,575	3.8	12,850	409	12,441	3.2	10,640	473	10,167	4.4
Portland, OR	8,474	646	7,828	7.6	10,277	1,116	9,161	10.9	17,894	2,601	15,293	14.5	17,718	3,233	14,485	18.2
Atlanta	53,557	2,346	51,211	4.4	23,442	740	22,702	3.2	46,135	3,216	42,919	7.0	54,892	2,272	52,620	4.1
Philadelphia	34,352	2,056	32,296	6.0	14,643	366	14,277	2.5	18,627	674	17,953	3.6	22,226	457	21,769	2.1
Detroit	26,086	207	25,879	0.8	15,233	339	14,894	2.2	24,203	444	23,759	1.8	26,065	385	25,680	1.5
Cleveland/Akron	9,732	562	9,170	5.8	8,130	409	7,721	5.0	10,977	1,089	9,888	9.9	11,165	827	10,338	7.4
Tampa/St. Petersburg	32,438	4,065	28,373	12.5	11,137	1,257	9,880	11.3	14,680	2,077	12,603	14.1	18,895	2,485	16,410	13.2
New Orleans	3,860	637	3,223	16.5	2,450	151	2,299	6.2	4,583	991	3,592	21.6	3,896	335	3,561	8.6
Columbus	13,629	8,309	5,320	61.0	8,429	3,624	4,805	43.0	12,716	4,383	8,333	34.5	11,594	4,131	7,463	35.6
Total	**219,830**	**21,101**	**198,729**	**9.6**	**112,127**	**8,387**	**103,740**	**7.5**	**179,589**	**16,075**	**163,514**	**9.0**	**196,348**	**15,088**	**181,260**	**7.7**
200-500 sq. mi.																
Chicago	44,365	3,504	40,861	7.9	26,335	1,290	25,045	4.9	37,940	3,093	34,847	8.2	37,128	3,974	33,154	10.7
San Francisco	49,206	6,622	42,584	13.5	17,706	3,812	13,894	21.5	21,432	5,495	15,937	25.6	29,424	7,416	22,008	25.2
Denver/Aurora	18,911	4,840	14,071	25.6	7,768	875	6,893	11.3	19,675	2,460	17,215	12.5	27,195	5,295	21,900	19.5
Norfolk/Virg. Beach	23,006	10,983	12,023	47.7	7,302	1,892	5,410	25.9	7,587	2,113	5,474	27.9	7,749	2,468	5,281	31.8
Kansas City	18,319	4,273	14,046	23.3	7,435	1,104	6,331	14.8	12,107	1,740	10,367	14.4	13,620	2,646	10,974	19.4
San Diego	44,130	18,995	25,135	43.0	7,891	2,541	5,350	32.2	6,848	2,420	4,428	35.3	11,891	5,210	6,681	43.8
San Antonio	7,783	5,074	2,709	65.2	1,986	1,268	718	63.8	16,513	6,968	9,545	42.2	9,081	6,627	2,454	73.0
New York	74,569	10,152	64,417	13.6	22,626	4,976	17,650	22.0	35,112	9,180	25,932	26.1	42,022	11,143	30,879	26.5
Indianapolis	11,500	7,451	4,049	64.8	7,335	2,499	4,836	34.1	12,963	3,447	9,516	26.6	15,671	5,626	10,045	35.9
Total	**291,789**	**71,894**	**219,895**	**24.6**	**106,384**	**20,257**	**86,127**	**19.0**	**170,177**	**36,916**	**133,261**	**21.7**	**193,781**	**50,405**	**143,376**	**26.0**
More than 500 sq. mi.																
Phoenix/Mesa	42,302	19,926	22,376	47.1	14,910	5,879	9,031	39.4	38,621	14,471	24,150	37.5	45,340	16,720	28,620	36.9
Charlotte	12,396	7,489	4,907	60.4	8,438	4,287	4,151	50.8	18,458	10,443	8,015	56.6	20,067	11,993	8,074	59.8
Houston	8,656	1,285	7,371	14.8	15,588	3,131	12,457	20.1	23,935	5,227	18,708	21.8	47,039	16,295	30,744	34.6
Los Angeles	160,308	38,419	121,889	24.0	40,755	8,602	32,153	21.1	32,587	3,140	29,447	9.6	42,423	4,350	38,073	10.3
Dallas	47,923	21,375	26,548	44.6	19,462	5,841	13,621	30.0	38,498	11,153	27,345	29.0	53,811	15,393	38,418	28.6
Total	**271,585**	**88,494**	**183,091**	**32.6**	**99,153**	**27,740**	**71,413**	**28.0**	**152,099**	**44,434**	**107,665**	**29.2**	**208,680**	**64,751**	**143,929**	**31.0**
Total for all Cities	**1,040,961**	**198,441**	**842,520**	**19.1**	**446,755**	**65,376**	**381,379**	**14.6**	**662,646**	**104,568**	**558,078**	**15.8**	**793,042**	**141,466**	**651,576**	**17.8**

Notes: 1998 data are preliminary. Large cities include the named central city and all other cities with populations over 200,000 in 1990. Data are summed from place-level data to match 1983 metropolitan area definitions, except New England where metro area definitions are those in effect for the year of data collection. The Boston metropolitan area includes only the Boston, Lawrence, Lowell, Manchester, and Nashua PMSAs. Data from Charlotte are drawn from Mecklenberg County; permit data for Charlotte were not available. (Land area of Mecklenberg County is 527 sq. mi., land area of Charlotte is 174.3 sq. mi.) San Francisco includes San Jose and Oakland. New York includes Newark and Jersey City. Los Angeles includes Long Beach, Anaheim, Santa Ana, and Riverside. Dallas includes Ft. Worth and Arlington.
Source: U.S. Bureau of the Census, Current Construction Reports, Series C-40.

To be precise, in 1998, 19 cities' share was smaller than it was in 1986; 11 cities gained share, and nine held about the same share (or changed less than one percent). *(See Figures D, E, and F.)*

The amount of new home construction in large cities varied, even as it waxed and waned according to the national economy. As the housing industry put the brakes on building in 1991, only six of the 39 large cities issued more permits than they had in the flush year of 1986—they are Buffalo, Cincinnati, Baltimore, Portland (OR), Detroit, and Houston. The permit numbers in the other 33 cities dropped precipitously. As the economic recovery took hold, however, the figures for new home construction climbed for nearly all cities. Between 1991 and 1996, 28 cities—or over two-thirds of the total—increased the number of residential construction permits; 27 cities issued more permits in 1998 than in 1996. And, in 19 cities, the number of housing permits rose between 1991 and 1996 and again in 1998.

Within the twelve-year period from 1986 to 1998, the large cities' share of housing construction in their metropolitan areas also varied widely. Between the boom of 1986 and the crash of 1991, 23 cities lost their share of their metropolitan area's permits, while ten cities gained a greater share, which suggests that economic downturns affect urban markets more than they do suburban markets. Between the recession year of 1991 and the recovery year of 1996, 17 cities gained a greater share of their total metropolitan area's permits, eight stayed the same (less than one percent change) and 14 lost their share of permits. As the economic recovery persisted between 1996 and 1998, the share of the metropolitan

continued on next page

Figure G: Population and Area of 39 Largest Metropolitan Areas

Metro Area	Large City Population (Thousands)	Metro Population (Thousands)	City Pop. Density (000/sq.mi.)	City Area (sq. mi.)	Metro Area (sq. mi.)	Metro Land in City (%)
Hartford	133	1,110	7,688	17.3	1,527.0	1.1
Providence	153	1,421	8,270	18.5	935.0	2.0
Salt Lake City	173	1,218	1,587	109.0	5,311.0	2.1
Orlando	174	1,231	2,585	67.3	2,528.0	2.7
Rochester, NY	222	1,027	6,201	35.8	2,966.0	1.2
Buffalo	311	1,175	7,660	40.6	1,590.0	2.6
Cincinnati	346	1,837	4,482	77.2	2,620.0	2.9
Pittsburgh	350	2,212	6,295	55.6	3,851.0	1.4
St. Louis	352	2,491	5,687	61.9	5,311.0	1.2
Miami	365	3,514	10,253	35.6	3,261.0	1.1
Sacramento	376	1,632	3,904	96.3	5,149.0	1.9
Atlanta	402	3,395	3,050	131.8	5,140.0	2.6
Charlotte	441	1,321	2,530	174.3	3,392.0	5.1
Kansas City	441	1,672	1,416	311.5	5,031.0	6.2
New Orleans	477	1,266	2,641	180.6	2,488.0	7.3
Portland, OR	481	1,716	3,857	124.7	4,361.0	2.9
Tampa/St. Petersburg	521	2,199	3,103	167.9	2,529.0	6.6
Seattle	525	2,823	6,257	83.9	5,902.0	1.4
Washington, DC	543	4,216	8,844	61.4	3,967.0	1.5
Boston	558	4,563	11,529	48.4	2,423.0	2.0
Milwaukee	591	1,643	6,150	96.1	1,793.0	5.4
Minneapolis/St. Paul	618	2,674	5,738	107.7	5,085.0	2.1
Columbus	657	1,485	3,442	190.9	3,580.0	5.3
Norfolk	664	1,486	2,198	302.1	1,747.0	17.3
Baltimore	675	2,474	8,354	80.8	2,634.0	3.1
Cleveland/Akron	715	2,811	5,136	139.2	2,917.0	4.8
Indianapolis	747	1,360	2,065	361.7	3,072.0	11.8
Denver/Aurora	750	2,125	2,624	285.8	4,503.0	6.3
Detroit	1000	4,751	7,210	138.7	5,184.0	2.7
San Antonio	1068	1,461	3,207	333.0	2,527.0	13.2
San Diego	1171	2,655	3,614	324.0	4,261.0	7.6
Philadelphia	1478	5,970	10,940	135.1	5,446.0	2.5
Phoenix/Mesa	1504	2,611	2,846	528.5	9,155.0	5.8
Houston	1744	4,231	3,230	539.9	7,193.0	7.5
Dallas	1828	4,406	2,552	716.3	7,012.0	10.2
San Francisco	1941	6,605	7,081	274.1	7,434.0	3.7
Chicago	2721	8,415	11,976	227.2	5,681.0	4.0
Los Angeles	4822	15,495	7,214	668.4	34,007.0	2.0
New York	7878	18,323	22,664	347.6	7,062.0	4.9
Total	**39,916**	**133,020**	**5,186**	**7,696.7**	**190,575.0**	**4.0**

Notes: All population data are for 1996. Metropolitan area definitions as of 1984. Large metropolitan areas defined as those with population over 1 million in 1990. Cities include the named central city and all other cities with population over 200,000 in 1990.Dallas includes Ft. Worth and Arlington. San Francisco includes San Jose and Oakland. Los Angeles includes Long Beach, Anaheim, Santa Ana, and Riverside. New York includes Newark and Jersey City.
Source: U.S. Bureau of the Census, Estimates of the Population of Cities with Populations of 100,000 and Greater, July 1, 1996, Estimates of the Metropolitan Areas, July 1, 1996, and County and City Databook, 1994.

Figure H: Hot and Cold Housing Markets by City Land Size

Size of City	Hot Housing Markets	Cold Housing Markets
Under 100 sq. mi.	Seattle, Orlando, Boston, Miami	Baltimore, Providence, St. Louis, Sacramento
100-200 sq. mi.	Columbus, Portland (OR), Tampa	Detroit, Philadelphia, New Orleans
200-500 sq. mi.	New York, San Francisco, San Antonio	Chicago, Kansas City
500 + sq. mi.	Phoenix, Houston, Dallas	Los Angeles

area's permitting rose in 20 cities, stayed about the same in 11, and fell in eight.

Eleven cities increased their share of metropolitan area permits from 1991 to 1996 and either increased or maintained that share in 1998. Only two cities, Cincinnati and Sacramento, lost their share of metropolitan permits both from 1991 to 1996 and from 1996 to 1998.

D. Land Area Makes a Difference

What can explain this variation in the numbers and share of residential permits? Not regional differences. No clear trends emerge in cities' number of housing permits and share of the metropolitan permits when sorted by the four major regions of the country.

On the other hand, knowing the size of cities helps make sense of the diverse patterns of home construction. Sorting the cities by their land area distinguishes between giant cities, such as Phoenix and Dallas, which contain significant areas of undeveloped land, and small, intensely developed metropolises such as Hartford and Miami. Furthermore, it produces a clear pattern of residential development.[4] *(See Figure G for specific land areas.)*

Sorting the list of cities into two size categories—those with land area greater than and less than 150 square miles—reveals that spacious cities have a strikingly larger share of housing construction than that of compact cities. During the recent economic booms and busts, all 17 cities with large land areas of more than 150 square miles (including and larger than Tampa/St. Petersburg) regularly exceeded 10 percent of their share of total metropolitan permits. The exceptions were Chicago and New Orleans, which had their share of metropolitan permits dip below 10 percent at least twice during the years examined. In contrast, only four of the 22 cities with small land areas of less than 150 square miles (ranging from tiny Hartford's 17 square miles to Cleveland/Akron's 140 square miles) issued more than 10 percent of their metropolitan areas' housing permits in any year.

Breaking the list into four size categories makes the pattern even clearer. Cities whose area covers less than 100 square miles—that is, cities with a large proportion of developed land—issued far fewer permits and held a much smaller share of metropolitan-area home building than the giant cities. For the entire period between 1986 and 1998, the ratio of number of permits issued in these cities to permits in their metropolitan areas lagged far behind that of the largest cities. In 1998, 15 cities of less than 100 square miles commanded an average of 6 percent of the permits in their total metropolitan areas—three times their share of the metropolitan land area but less than a quarter of the shares of permits received by the largest cities. *(See Figure F.)*

At the other end of the spectrum, extremely large cities, those with more than 200 square miles of territory, all had over 10 percent of their metropolitan area permits, and the ratio of permits to square miles was higher in the extremely large cities than in cities of under 200 square miles. Of course, the far-flung boundaries of these cities contain large tracts of suburban and undeveloped land.

Within the land area categories, some cities are doing very well and others very poorly. To highlight their progress—or lack of it—cities of similar sizes have been assigned to hot and cold zones, depending upon their number of permits, ratio of permits to city land size (permitting density), and share of the metropolitan region's total permits. *(See Figures H and I.)*

1. Cities less than 100 Square Miles

In the Hot Zone: Seattle, Orlando, Boston, Miami

Of cities less than 100 square miles in size, only two, Seattle and Orlando, issued significant numbers of permits and garnered over 10 percent of their metropolitan areas' housing permits in 1998.

Seattle, one of the hottest home building areas in the country, issued 4064 permits, by far the most permits in its size category and more than those issued in 14 larger cities. Seattle's average number of permits per square mile (permitting density) for the years 1986, 1991, 1996, and 1998 was 48, the highest of all 39 cities examined in this study. Although Seattle occupies only 1.4 percent of the territory in its metropolitan area—only four other cities had a lower percentage of metropolitan land—Seattle garnered 15 percent of 1998 metropolitan area housing permits, a figure exceeded

continued on next page

only by cities with far greater territory.

Orlando, Florida, packed into 67 square miles, is almost as hot an area of housing construction as Seattle. In 1998, Orlando had the second highest permits per square mile (41) of the 39 cities and followed Seattle in the number (2,748) and share of total metropolitan area permits (12.3) in the under 100 square mile category.

Among the smallest cities—under 50 square miles—Miami and Boston are the leaders in housing construction. Both have been increasing their number of permits recently, and may soon exceed 1,000 units a year. (Despite its high percentage of metropolitan area permits, Buffalo has issued a relatively small number of permits.) With a comparatively small land area of 36 square miles, Miami's 1998 permitting density was a torrid 27. In Boston, an old built-up eastern city, the ratio of permits to area was a remarkable 16.

In the Cold Zone: Baltimore, Providence, St. Louis, Sacramento

Despite Baltimore's urban renaissance projects such as the Harborside festival marketplace and Camden Yards baseball complex, home building there has come to a virtual standstill. A city of 81 square miles—3 percent of its metropolitan area—Baltimore only managed to produce 64 permitted units in 1998, or 0.8 permits per square mile. Its 1998 share of metropolitan area housing permits was a measly 0.6 percent, down from 1 percent in 1996. Perhaps a revival in housing construction will come soon to Baltimore. Nearby Washington, D.C. was unable to produce a single permit in 1996, but two years later the nation's capital issued permits for 429 units, a ratio of 7 permits per square mile.)

Providence, Rhode Island, a revival city, is not attracting new housing construction either. It only issued 39 permits last year, less than half the

continued on next page

Figure I: Permitting Density in Large Cities: 1998

Large Cities	Permits Per sq. mi.	Large City Share of Metro Permits (%)
Cities Under 100 sq. mi.		
Baltimore	0.8	0.6
Providence	2.1	1.4
St. Louis	2.6	1.4
Cincinnati	2.8	1.8
Rochester, NY	3.3	5.3
Sacramento	4.3	2.9
Pittsburgh	4.4	4.4
Hartford	5.4	2.1
Milwaukee	6.3	7.5
Washington, DC	7.0	1.3
Buffalo	7.3	12.4
Boston	15.6	5.8
Miami	27.0	4.1
Orlando	40.8	12.3
Seattle	48.4	15.0
Total	**12.8**	**5.8**
100-200 sq. mi.		
New Orleans	1.9	8.6
Detroit	2.8	1.5
Philadelphia	3.4	2.1
Salt Lake City	4.3	4.4
Minneapolis/St. Paul	4.5	2.5
Cleveland/Akron	5.9	7.4
Tampa/St. Petersburg	14.8	13.2
Atlanta	17.2	4.1
Columbus	21.6	35.6
Portland, OR	25.9	18.2
Total	**10.6**	**7.7**
200-500 sq. mi.		
Norfolk/Virg. Beach	8.2	31.8
Kansas City	8.5	19.4
Indianapolis	15.6	35.9
San Diego	16.1	43.8
Chicago	17.5	10.7
Denver/Aurora	18.5	19.5
San Antonio	19.9	73.0
San Francisco	27.1	25.2
New York	32.1	26.5
Total	**18.2**	**26.0**
More than 500 sq. mi.		
Los Angeles	6.5	10.3
Phoenix/Mesa	31.6	36.9
Dallas	21.5	28.6
Charlotte	22.8	59.8
Houston	30.2	34.6
Total	**21.7**	**31.0**
Total for all Cities	**17.6**	**17.8**

Notes: 1998 data are preliminary. Large cities include the named central city and all other cities with populations over 200,000 in 1990. Data are summed from place-level data to match 1983 metropolitan area definitions, except New England where the metro definitions are those in effect for the year of the data collection. The Boston metropolitan area includes only Boston, Lawrence, Lowell, Manchester, and Nashua PMSAs. Data for Charlotte are drawn from Mecklenberg County; permit data for Charlotte were not available. (Land area of Mecklenberg County is 527 sq. mi., land area of Charlotte is 174.3 sq. mi.) San Francisco includes San Jose and Oakland. New York includes Newark and Jersey City. Los Angeles includes Long Beach, Anaheim, Santa Ana, and Riverside. Dallas includes Ft. Worth and Arlington.
Source: U.S. Bureau of the Census, Current Construction Reports, Series C-40.

number of two years earlier, which gave it a permitting density of 2.1.

In the Midwest, the city of St. Louis has lost population to its suburbs for the last 70 years, despite almost continuous urban renewal and development programs. Judging from the drop in the number of permits (from 395 to 162), share of metropolitan area permits (from 3.2 to 1.4), and ratio of permits to area (from 6.4 to 2.6) between 1996 and 1998, the Gateway City's slump is persisting.

But even a western city can be in the cold zone. Sacramento, California's 96-square mile capital city, has seen the number of permits fall and its share of metropolitan permits shrink in 1991, 1996, and 1998.

2. Cities of 100-200 Square miles

In the Hot Zone: Columbus, Portland, Tampa

In cities with territory of more than 100 but less than 200 square miles, Columbus had the greatest number and share of permits. After a dip in construction in 1991, Columbus issued more than 4,000 permits and captured over a third of its metropolitan area permits in each of the years 1996 and 1998.

Portland, Oregon, where metropolitan growth controls have been implemented to concentrate urban development close to the city, stands out on the housing permit list. Portland was one of only three of the 39 largest metropolitan areas whose central cities increased their share of residential building permits issued in their total metropolitan area in 1986, 1991, 1996, and 1998. The other two cities—Buffalo and Houston—are not comparable to Portland. Buffalo derived its recent gains from a drop in the number of suburban permits rather than a rise in the city's. Houston occupies 540 square miles, the third largest land area of the great cities, takes up 7.5 percent of its metropolitan territory, and contains large amounts of suburban and undeveloped lands.

Portland is a good-sized but not enormous city—at 125 square miles, it is the twenty-second largest in area of the large cities studied. Yet it gained a progressively larger share of metropolitan permits in 1991, 1996, and 1998 despite robust growth in the number of permits in its suburban territory. Portland did far better in numbers and share of permits than did other cities of its approximate size—Atlanta, Philadelphia, Salt Lake City, and Minneapolis. Portland's 26 permits per square mile ranked the seventh highest of the 39 cities.

In the Cold Zone: Detroit, Philadelphia, New Orleans

The intermediate-size group of cities also included those who fared poorly in new housing construction. In 1998, Detroit had a measly 1.5 percent share of total metropolitan housing construction, even though it holds a 2.7 percent share of the land. Philadelphia suffers from the same chilly construction climate affecting Baltimore and Washington, D.C. In 1996, the City of Brotherly Love mustered a small number and share of permits, which then declined in 1998. In that year, Philadelphia's ratio of permits to land area was a weak 3.4.

Even in Sunbelt cities, housing construction can stagnate. Although New Orleans regularly holds a relatively significant share of the permits issued within its metropolitan area, in 1998 its numbers plummeted, from 991 in 1996 to 335—a number almost as low as in the downturn year of 1991. Its 335 permits produced a 1.9 permitting density that was lower than all the other cities, save Baltimore.

3. Cities of 200-500 Square Miles

In the Hot Zone: New York, San Francisco, San Antonio

In general, the housing permit data for the giant cities of more than 200 square miles in territory reveals little about the issue of development in the urban core versus the suburban periphery. Such enormous expanses usually include all types of land and land uses, so it is difficult to differentiate between the activity in the city and its metropolitan area

The exception to the rule is New York City. It stands in contrast to its mid-Atlantic neighbors (Philadelphia, Baltimore, and Washington) and, for that matter, every other city in the country. Despite the most densely settled population in the country, New York has ranked in the top six cities in number of permits in 1986, 1991, 1996, and 1998. Its 9,000 permits in 1996 and more than 11,000 permits in 1998 comprised over a quarter of the total for its metropolitan area. And although the city of New York (which here includes Newark and Jersey City) covers a territory of 348 square miles, we know that most of the housing development took place in densely packed urban areas. With more than 3,300 permits in 1996 and more than 3,800 permits in 1998, the borough of Manhattan led not only all the boroughs and smaller cities in the city of New York but also two-thirds of the other 39 large cities.

Although much of their residential construction may be in suburban types of environments, San Francisco and San Antonio are significant hot spots. Builders in San Francisco (which here includes Oakland and San Jose) received over 7,400 permits in 1998, one quarter of the permits in its metropolitan area, or 27 permits per square mile. San Antonio is also building significant numbers of new homes.

continued on next page

In 1998, it issued more than 6,600 permits, a whopping 73 percent of its metropolitan region's permits. The city's 333 square miles occupies 13 percent of the total metropolitan land area.

In the Cold Zone: Chicago, Kansas City
In the tepid zone, to be accurate. Both Chicago and Kansas City are increasing production of housing but at a slow rate. Chicago had the lowest share of metropolitan permits in its size class in each of the years studied, although its share and number of permitted units have been rising since 1991.

Kansas City has also been struggling to get back to the number (4,273) and metropolitan share of permits (23.3) it had in 1986, and its ratio of permits to land area was 8.5 in 1998, a low number for its category of city size.

4. Cities more than 500 Square Miles
In the Hot Zone: Phoenix, Houston, Dallas
The vast cities with more than 500 square miles of territory are almost regions in themselves: they are able to produce urban sprawl within their own city limits.

Phoenix/Mesa leads this group in share of the metropolitan region's total permits (37 percent) and permitting density (32) and all 39 large cities in number of permits, with more than 16,700 in 1998. Houston follows close behind with a 35 percent share of metropolitan area permits, a permitting density of 30, and just under 16,300 permits issued.

Another behemoth, Dallas (including Fort Worth and Arlington), issued about 15,400 permits in 1998, giving it a 29 percent of the metropolitan share and a respectable ratio of permits to land area of 22.

In the Cold Zone: Los Angeles
Los Angeles, it is worth noting, is apparently still absorbing the massive numbers of units produced during the real estate boom of the 1980s—there were an astounding 38,419 permits issued in 1986! Multi-family investors were busy here: 34,765 units were in multi-family permits that year. In the late 1990s, the number of permits has dropped to 4,350—a low number among the huge cities—and about 10 percent of the metropolitan share. The ratio of permits to square miles in the City of Angels was an extremely modest 6.5.

III. Conclusion
The data concerning home building permits in metropolitan areas reveals an urban revival in the late 1990s that is close to the achievements of the 1980s' boom. The recent surge in home building, however, is spread unevenly among different cities. Some urban centers, especially the geographically larger cities, are capturing most of the new construction. Other cities are still languishing. Meanwhile, permit data for both metropolitan areas and counties demonstrate that the pattern of sprawling suburban development persists.

From a policy perspective, the data indicates that the National Association of Homebuilders' goal of constructing 100,000 new homes in cities annually is an ambitious one. To meet their goal, the homebuilders will have to focus most of their efforts on the cities where there is a vigorous demand for new housing. Most of this new home building in large cities will have to take place in the undeveloped, suburban-looking tracts in spacious metropolises such as Phoenix or Dallas. Among smaller cities, the urban core of hot real estate market cities such as Boston and Seattle will absorb new residential construction long before similar locales in other cities. For the present, it will be difficult to sell significant numbers of new homes in such sluggish markets as Baltimore or Detroit.

The question that remains for policy makers is how to generate new home construction—or how to encourage the forces that generate new home construction—in areas where there is little demand. The problem is twofold. First, in economically vital metropolitan regions—such as in Los Angeles and St. Louis—policy makers must devise ways to channel job and population growth to central urban areas. Second, in cities whose regions are economically stagnant, the cities will have to act as an economic catalyst.

In order to limit suburban sprawl, it seems likely that government officials will have to impose measures that limit development on the periphery of metropolitan areas and encourage more intense development in the inner cities and those parts of the suburban ring that are already developed. To revitalize economically depressed cities, officials will have to make dramatic improvements in infrastructure and services, such as schools, and find ways to increase the number of jobs accessible to residents of the urban cores.

Endnotes

1 The permits analyzed here are permits for new construction, as opposed to rehabilitation. Permits for rebuilding a substantial portion of a building, however, were counted among the permits for new construction and similarly reflect demand for new housing. Some cities may have had only limited new construction but still had significant levels of repair and remodeling.

2 The term "metropolitan area" in this study refers to the standard geographic classifications of the Office of Management and Budget (OMB). Metropolitan area refers to the Consolidated Metropolitan Statistical Area (CMSA) where the OMB has defined one and the Metropolitan Statistical Area (MSA) where it has not. The definitions are those in effect as of 1983, except for New England categories which uses the boundaries in effect for the year of data collection. The Boston metropolitan area includes only the following parts of the Boston CMSA: Boston Primary Metropolitan Statistical Area (PMSA), Lawrence PMSA, Lowell PMSA, Manchester, New Hampshire, PMSA, and Nashua, New Hampshire, PMSA.

3 As Michael Carliner points out in his recent essay, "Home Building in Central Cities," the central city definition is full of anomalies. It includes 208 places with less than 50,000 people and fifteen with less than 20,000 as central cities and excludes thirty-seven cities with a population of more than 100,000. See *Housing Economics* (Feb. 1999), 8–17.

4 The permit figures are not available for Charlotte. The figures listed under Charlotte are based on available data for Mecklenburg County. Thus, although listed here in the largest city size category, these figures reflect housing development in the county not the city.

For More Information:

Alexander von Hoffman
Senior Research Fellow
Joint Center for Housing Studies, Harvard University
Phone: (617) 495-9915
Email: Alexander_von_hoffman@Harvard.Edu

For General Information:
Brookings Center on Urban & Metropolitan Policy
Phone: (202) 797-6139
Website: www.brookings.edu/urban