American Housing Survey

Components of Inventory Change and Rental Dynamics Analysis: Oakland, 1998–2011

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Executive Summary

Components of Inventory Change (CINCH) is a tool used by housing analysts to study how the housing inventory changes over time. One typically thinks of the housing stock as evolving through two mechanisms—the construction of new units and the demolition of old units. While new construction and losses through demolition and natural disasters are the primary means by which the housing stock changes, CINCH shows that there are other important engines of change.

This report describes how the housing stock in the Oakland metropolitan area changed between 1998 and 2011, with particular emphasis on affordable rental housing. The study uses data from the American Housing Survey, which collected detailed information on housing units in Oakland and on their occupants in both 1998 and 2011.

In 1998 the Oakland metropolitan area contained 895,100 housing units, including vacant units. By 2011 the number of housing units had increased to 994,600. This represents an overall increase of 11.1 percent, which translates to an average annual increase of 0.8 percent over the 13-year period. There were no changes to the definition of the Oakland metropolitan area.

Between 1998 and 2011, only 6,900 units left the housing stock. Of these, 2,200 are clearly permanent losses—the original unit is gone, and major construction would be required to replace it with a new unit. Another 4,100 are temporary losses—the original unit needs repairs or is being used for other purposes. These units may or may not return to the housing stock. Finally, there were 700 units that left the housing stock either permanently or temporarily for "other" reasons, a category that encompasses a wide variety of situations.

In the period between the 1998 and 2011 AHS surveys, 123,200 units were added to the housing stock. Ninety percent of these additions were newly constructed units. The 2011 AHS did track move-ins of mobile homes in Oakland, which contributed 1,100 units. Also, 4,500 units were formed from the conversion or merger of 1998 units. We classified 3,600 units as recovered because these units had been in the housing stock at some point but were classified in 1998 as nonresidential (3,000) or uninhabitable (600). Finally, 2,700 units were added in other unclassified ways.

The Oakland metropolitan area lost 0.8 percent of all 1998 housing units by 2011; additions between 1998 and 2011 represent 12.4 percent of the 2011 housing stock. Losses and additions varied across portions of the Oakland housing market defined by the characteristics of the unit or its occupants. We observed the following patterns, which were both atypical of the overall housing stock and statistically significant:

- Units that were owner-occupied in 1998 had a lower loss rate. The general low rate for owner-occupied units shows up for owner-occupied units with high monthly housing costs ($1,250 or more) and owner-occupied units with households earning $100,000 or more.

- Renter-occupied units in 1998 had a higher loss rate; the loss rate was particularly high for rental units with households earning less than $15,000.

- The rate of addition varied by structure type. Single-family attached units had a high rate of addition. The rates of addition were low for units in smaller multifamily buildings, those with 2 to 9 units and those with only 1 or 2 stories. The rates of addition were substantially higher than average for units in large multifamily buildings, those with 50 or units and those with 3 or more floors.

- Unit size mattered. Units with fewer than 7 rooms or with fewer than 4 bedrooms had lower-than-average rates of addition; those with 8 or more rooms or 4 or more bedrooms had high rates of addition.

- Units occupied in 2011 by households with elderly householders (65 or older) had low rates of addition. Units occupied by households with children had an above-average rate of addition.

- Units with White or American Indian householders in 2011 experienced lower-than-average rates of addition; those with Asian householders in 2011 had a high rate.

- The rate of addition was low among units that were renter-occupied in 2011 but not statistically different from that of all occupied units. Two subgroups of renter-occupied units, those with monthly housing costs between $800 and $1,249 and those with households earning between $30,000 and $49,999, did have statistically lower rates of addition.

- The rate of addition among units that were owner-occupied in 2011 was higher than that of all occupied units but not statistically different. Among owner-occupied units, those with lower monthly housing costs (less than $600) had lower-than-average rates of addition, while those occupied by high-income owners ($100,000 or more) and those with high monthly housing costs ($1,250 or more) had higher-than-average rates of addition.

The 1998 rental stock in Oakland was affordable. Of the 369,700 rental units in 1998, 189,700 were extremely low rent or very low rent units. In addition, 65,200 units were non-market; that is, they were either assisted or offered for no cash rent. These three categories accounted for 68.9 percent of the 1998 rental stock. The three highest rent categories comprised only 3.7 percent of the rental stock. Moves to a less affordable category (sometimes called gentrification) exceeded moves to a more affordable category (sometimes called filtration)—53.1 percent of all 1998 units compared to 10.3 percent. By 2011, 19.9 percent of the 369.700 rental units in 1998 were no longer in the rental stock. The largest proportion of these losses was due to changes in tenure.

The rental stock in Oakland was less affordable in 2011 than in 1998. Of the 408,700 rental units in 2011, 74,800 were extremely low rent or very low rent units. In addition, 56,600 units were non-market; that is, they were either assisted or offered for no cash rent. These three categories accounted for 32.2 percent of the 2011 rental stock. The three highest rent categories comprised

35.4 percent of the rental stock. Moves from a more affordable category (sometimes called gentrification) exceeded moves from a less affordable category (sometimes called filtration)— 47.2 percent of all 2011 units compared to 9.2 percent. Of the 408,900 rental units in 2011, 28.9 percent were not rental in 1998. The largest proportion of these gains was due to changes in tenure.

Components of Inventory Change and Rental Dynamics Analysis: Oakland, 1998–2011

1. Introduction

This report describes how the housing stock in the Oakland metropolitan area changed between 1998 and 2011, with particular emphasis on affordable rental housing. The study uses data from the American Housing Survey (AHS), which collected detailed information on housing units in Oakland and on their occupants in both 1998 and 2011.[1]

As part of its Components of Inventory Change (CINCH) program, the U.S. Department of Housing and Urban Development (HUD) has funded, for a number of years, similar studies of metropolitan areas to document changes in the American housing stock. These studies have traditionally included an assessment of changes in the rental housing market called rental dynamics. This paper is one of 29 metropolitan CINCH studies based on the information provided by the 2011 AHS.[2]

CINCH reports present both forward-looking analysis (what happened to the 1998 units by 2011) and backward-looking analysis (where the 2011 units came from in terms of 1998).[3] This paper repeats the analysis contained in the most recent CINCH and rental dynamics studies, but its organization differs from that of previous reports.

- Section 2 discusses data and related issues that affect the CINCH and rental dynamics analysis for Oakland.

- Section 3 explains the changes in the housing stock between 1998 and 2011 in terms of losses to the housing stock through demolitions or the other ways units can leave the housing stock and additions through new construction and other means.

- Section 4 looks at components of the housing stock that experienced losses or additions markedly different from the overall patterns of losses and additions.

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[1] Since 1973, the U.S. Department of Housing and Urban Development (HUD) and the Census Bureau have conducted an extensive survey of the American housing stock called the American Housing Survey (AHS). The AHS has two components: a national survey that, since 1985, has collected data every 2 years on the entire U.S. housing stock and a metropolitan component that, since 1985, has collected data at various times on the housing stock of 45 metropolitan areas. Both the national and metropolitan components use the same sample of housing units in successive surveys, making it possible to observe changes in units over time. The initial samples have been augmented in later years to account for units added by new construction or other means.

[2] HUD also funds CINCH studies of survey-to-survey changes in the national stock. At the national level, the Rental Dynamics studies are published separately. For a complete list of all CINCH studies, see http://www.huduser.org/portal/datasets/cinch.html.

[3] The forward-looking analysis was previously presented to HUD in December 2013. The data needed to produce the backward-looking analysis did not become available until after the allowed period of performance of the contract under which the previous report was completed.

- Section 5 breaks the rental housing stock into eight affordability categories and tracks what happened to units in each of those categories between 1998 and 2011.

- Section 6 summarizes the changes to the housing stock of the Oakland metropolitan area between 1998 and 2011.

The paper concludes with two appendices that contain analyses and data found in the body of previous CINCH reports.

- Appendix A explains the CINCH and rental dynamics methodologies.

- Appendix B contains the detailed CINCH and rental dynamics tables found in previous reports.

National economic conditions shaped in important ways the changes observed in this report. The 1998–2011 period began toward the end of the longest recorded business cycle (March 1991 to November 2001), encompassed a vigorous expansion (November 2001 to December 2007), included the recent harsh recession (December 2007 to June 2009), and ended with a period of lackluster recovery.

2. Special Issues: Oakland

Metropolitan areas are composed of counties or townships that are interrelated economically. The Office of Management and Budget periodically adjusts the composition of metropolitan areas as the economic relationships among counties change. In some cases, the AHS retains the metropolitan boundaries in effect when the original metropolitan sample was drawn; in other cases, the AHS will adjust the original sample to correspond to the new definition of the metropolitan area. A change in sample boundaries will affect the interpretation of CINCH analysis and its precision. The absolute sample size available to study changes between surveys determines how reliably the observed changes are measured.

Geography

In 1998 the Oakland metropolitan area contained 895,100 housing units, including vacant units. By 2011 the number of housing units had increased to 994,600. This represents an overall increase of 11.1 percent, which translates to an average annual increase of 0.8 percent over the 13-year period. There were no changes to the definition of the Oakland metropolitan area.

Sample size

Both CINCH and rental dynamics require that, if a sample unit is in both the 1998 and 2011 housing stock, it must be interviewed in both surveys to be included in the analysis. Other analytical requirements also limit effective sample size. There are 2,589 sample units that were common to the 1998 and 2011 AHS Oakland surveys and satisfied all the analytical

requirements.[4] Between 1998 and 2011, 30 sample units in the common area meeting the analytical requirements were lost to the stock; thus, the forward-looking analysis is based on a maximum of 2,961 sample units. Between 1998 and 2011, 372 sample units meeting the analytical requirements were added to the AHS to represent additions to the stock throughout the metropolitan area as defined in 2011; thus, the backward-looking analysis is based on a maximum of 2,961 sample units. In the forward-looking analysis, the average weight of a sample unit is approximately 342 units; in the backward-looking analysis, the average weight of a sample unit is approximately 336 units.

Data reliability

All CINCH analysis relies on two AHS variables: NOINT (why there was no interview), which, among other things, explains why a unit is temporarily or permanently out of the stock, and REUAD (why unit added), which explains why a sample unit entered the sample. Both variables require some detective work on the part of Census Bureau staff, and the longer the period between surveys, the more difficult the detective work. At the national level, the AHS data are collected every 2 years, so it is relatively easy to determine why a unit has been removed from or added to the sample. In the case of Oakland, 13 years separate the 2011 sample from the 1998 sample. As a result, explaining the loss or addition of sample units is very challenging. This report is part of a series that compares the housing stock in 2011 to the housing stock of 7 metropolitan areas in 1998, 12 metropolitan areas in 2002, 8 metropolitan areas in 2004, and 2 metropolitan areas in 2009. We compared the pattern of changes across the 29 areas studied in these reports to the changes recorded between 2009 and 2011 at the national level. With respect to losses, the patterns are reasonably similar except for the role played by the movement of mobile homes. Mobile home move-outs are much more important in explaining losses at the national level. At both the national and metropolitan levels, the "other" category accounts for one-fifth to one-quarter of the losses. With respect to additions, new construction accounts for 72 percent of all additions at the national level but 94 percent at the metropolitan level. We suspect that data issues downplay the importance of "means other than new construction" at the metropolitan level.

3. Changes to the Housing Stock: 1998–2011

Losses between 1998 and 2011

One typically thinks of the housing stock evolving through two mechanisms: the construction of new units and the demolition of old units. While new construction and losses through demolition and natural disasters are the primary means by which the housing stock changes, CINCH shows that there are other important engines of change.

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[4] The 1998 AHS surveyed 4,753 units in the Oakland metropolitan area; 3,522 of these units were in the 2011 AHS public use file (PUF). Of the 1,231 sample units no longer in the survey, 55 were legitimate temporary or permanent losses to the housing stock and were considered for the analysis. The remaining 1,176 cases are coded as "sample reduction for the current survey year" with no further explanation.

Table 1 reports that between 1998 and 2011, only 6,900 units left the housing stock. Of these, 2,200 are clearly permanent losses—the original unit is gone, and major construction would be required to replace it with a new unit. Another 4,100 are temporary losses—the original unit needs repairs or is being used for other purposes. These units may or may not return to the housing stock. Finally, there were 700 units that left the housing stock either permanently or temporarily for "other" reasons, a category that encompasses a wide variety of situations.

Table 1: Disposition of 1998 Oakland Housing Units in 2011[5]

Present in 1998	895,100
1998 units present in 2011	888,200
Units no longer in the stock	**6,900**
1998 units lost due to conversion/merger	400
1998 house or mobile home moved out	0
1998 units lost through demolition or disaster	1,800
Permanent losses	**2,200**
1998 units changed to nonresidential use	2,900
1998 units badly damaged or condemned	1,100
Temporary losses	**4,100**
1998 units lost in other ways	**700**

Demolitions and natural disasters accounted for 1,800 of the permanent losses, while mergers and conversions contributed another 400 permanent losses. "Conversion" is the terminology used in the AHS for the splitting of a unit into two or more units. The movement of a mobile home or house is considered a permanent loss because a housing unit is the combination of land and capital. While movement preserves the capital, it dissolves the union of capital and land that formed the original unit; therefore, the movement of a mobile home is considered a permanent loss. Unfortunately, the 2011 AHS survey in Oakland did not track mobile home move-outs, probably because the long time between surveys makes it difficult to determine whether the current mobile home was the same mobile home as in 1998.

Sometimes houses are used for business purposes. Such commercial use or the use of a house for a group home is considered a change to a nonresidential use. Badly damaged units may be repaired, left in an unusable state, or demolished.

Appendix B contains four forward-looking tables that break the overall stock into more than 100 subgroups, such as single-family detached houses or units occupied by Black householders in 1998. For each subgroup, these tables detail how many of the 1998 units in that subgroup are in the same subgroup in 2011, have moved into another subgroup, or have left the stock and how they left the stock. Section 4 looks across the Appendix B forward-looking tables and focuses on those subgroups that lost an unusually high or an unusually low number of units over the 1998–2011 period.

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[5] Numbers may not add consistently due to rounding. Counts were rounded to the nearest hundred.

Additions between 1998 and 2011

Table 2, together with the backward-looking Appendix B tables, provides a great deal of information on additions to the housing stock between 1998 and 2011.[6]

Table 2: Sources for 2011 Oakland Housing Stock[7]

2011 housing stock	994,500
2011 units present in 1998	871,300
Total additions to stock	**123,200**
Units added by new construction	111,300
House or mobile home moved in	1,100
Units added by conversion/merger	4,500
New or reconstructed units	**116,900**
Units added from nonresidential use	3,000
Units added from temporary losses	600
Recovered units	**3,600**
Units added in other ways	**2,700**

In the period between the 1998 and the 2011 AHS surveys, 123,200 units were added to the housing stock. Ninety percent of these additions were newly constructed units. The 2011 AHS did track move-ins of mobile homes in Oakland, which contributed 1,100 units. Also, 4,500 units were formed from the conversion or merger of 1998 units.

We classified 3,600 units as recovered because these units had been in the housing stock at some point but were classified in 1998 as nonresidential (3,000) or uninhabitable (600). Finally, 2,700 units were added in other unclassified ways.

Appendix B contains four backward-looking tables that break the overall stock into more than 100 subgroups. For each subgroup, these tables detail how many of the 2011 units in that subgroup were in the same subgroup in 2011, have moved from another subgroup, or are new additions to the stock. Section 4 looks across the Appendix B backward-looking tables and focuses on those subgroups that gained an unusually high or an unusually low number of units over the 1998–2011 period.

4. Components With Atypical Losses or Additions

The Oakland metropolitan area lost 0.8 percent of all 1998 housing units by 2011, but the loss rate varied across sectors of the stock. For example, the occupied housing stock lost 0.6 percent of its units between 1998 and 2011.

We examined all of the components of the 1998 Oakland housing stock contained in the four forward-looking tables in Appendix B to identify subgroups with unusual loss rates. Forward-

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[6] Inconsistencies between Tables 1 and 2 result from a combination of (1) changes in control housing counts between censuses and (2) different weights.

[7] Numbers may not add consistently due to rounding. Counts were rounded to the nearest hundred.

Looking Table A reports information on all units in the stock; Table 3 lists subgroups from Table A with loss rates statistically different than the loss rate of the overall stock. Forward-Looking Tables B, C, and D describe important characteristics of occupied units and their residents; Table 3 lists subgroups from those tables with loss rates statistically different than the loss rate of occupied units. We also employed judgment in selecting among components with statistically different loss rates. In general, we looked for subgroups with loss rates less than half or more than double the benchmark rate, but we listed other subgroups if their inclusion illustrated interesting patterns within loss rates. Finally, Table 3 includes the loss rates for four key segments of the housing market—occupied units, vacant units, owner-occupied units, and renter-occupied units—even if their loss rates are not statistically different.

Table 3: Sectors Experiencing Atypical Loss Rates in Oakland, 1998–2011[8]

Characteristics	Present in 1998	Total lost	Percent lost
Housing stock	895,100	6,900	0.8%
Occupancy status			
Occupied	855,700	5,400	0.6%
Vacant	37,600	1,100	2.9%
Tenure			
Owner-occupied	508,600	800	0.2%**
Renter-occupied	347,100	4,500	1.3%*
Renter monthly housing costs			
$800 to $1,249	119,800	200	0.2%*
Renter household income			
Less than $15,000	82,600	2,000	2.4%*
Owner monthly housing costs			
$1,250 or more	237,200	400	0.2%**
Owner household income			
$100,000 or more	151,000	200	0.1%***

* Statistically different from either all units or all occupied units, as appropriate, at the 10-percent level.
** Statistically different from either all units or all occupied units, as appropriate, at the 5-percent level.
*** Statistically different from either all units or all occupied units, as appropriate, at the 1-percent level.

Table 3 identifies loss rates that were both atypical of the overall housing stock and statistically significant:

- Units that were owner-occupied in 1998 had a lower loss rate. The general low rate for owner-occupied units shows up for owner-occupied units with high monthly housing costs ($1,250 or more) and owner-occupied units with households earning $100,000 or more.

- Renter-occupied units in 1998 had a higher loss rate; the loss rate was particularly high for rental units with households earning less than $15,000.

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[8] Two conditions were necessary for a housing sector to appear in Table 3, one mathematical and one judgmental: (1) the difference between the sector's loss rate and the benchmark rate had to have been statistically significant at the 10-percent level, and (2) the difference had to be interesting. Counts are rounded to the nearest hundred.

The 123,200 additions reported in Table 2 represent 12.4 percent of the 2011 housing stock. The rate of addition varied by the characteristics of the housing. Additions represented 12.1 percent of occupied units.

We examined all of the components of the 1998 Oakland housing stock contained in the four backward-looking tables in Appendix B to identify subgroups with unusual addition rates. Backward-Looking Table A reports information on all units in the stock; Table 4 lists subgroups from Table A with addition rates statistically different than the addition rate of the overall stock. Backward-Looking Tables B, C, and D describe important characteristics of occupied units and their residents; Table 4 lists subgroups from those tables with addition rates statistically different than the addition rate of occupied units. We also employed judgment in selecting among components with statistically different addition rates. In general, we looked for subgroups with addition rates less than half or more than double the benchmark rate, but we listed other subgroups if their inclusion illustrated interesting patterns within addition rates. Finally, Table 4 includes the addition rates for four key segments of the housing market—occupied units, vacant units, owner-occupied units, and renter-occupied units—even if their addition rates are not statistically different.

Table 4: Sectors Experiencing Atypical Rates of Addition in Oakland, 1998–2011[9]

Characteristics	Present in 2011	Total additions	Percent additions
Housing stock	994,500	123,200	12.4%
Occupancy status			
Occupied	907,200	109,600	12.1%
Vacant	87,000	13,400	15.4%
Units in structure			
1, attached	77,000	15,600	20.3%***
2 to 4	104,900	7,700	7.4%***
5 to 9	65,900	3,800	5.8%***
50 or more	48,900	13,200	27.1%***
Rooms			
4	181,500	18,100	10.0%*
5	199,100	14,400	7.2%***
6	169,600	14,700	8.7%***
8	99,300	16,700	16.8%**
9	41,800	8,700	20.7%**
10 or more	24,100	9,900	41.2%***
Bedrooms			
2	258,600	20,100	7.8%***
3	325,900	28,900	8.9%***
4 or more	250,600	52,500	20.9%***

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[9] Two conditions were necessary for a housing sector to appear in Table 4, one mathematical and one judgmental: (1) the difference between the sector's addition rate and the benchmark rate had to have been statistically significant at the 10-percent level, and (2) the difference had to be interesting. Counts are rounded to the nearest hundred.

Characteristics	Present in 2011	Total additions	Percent additions
Stories in structure (multifamily)			
1	38,500	2,600	6.7%**
2	162,700	7,600	4.7%***
3	68,000	13,200	19.4%**
4 to 6	33,900	10,300	30.5%***
Age of householder			
65 to 74	105,300	9,500	9.1%*
75 or older	82,800	6,000	7.3%***
Children in household			
Some	308,900	46,400	15.0%**
Race and ethnicity			
White alone	571,100	56,100	9.8%**
White Non-Hispanic	447,900	41,900	9.4%***
American Indian or Alaska Native alone	11,800	700	5.7%*
Asian alone	208,000	39,400	18.9%***
Tenure			
Owner-occupied	538,300	70,100	13.0%
Renter-occupied	368,900	39,500	10.7%
Renter monthly housing costs			
$800 to $1,249	111,400	7,100	6.3%***
Renter household income			
$30,000 to $49,999	77,000	5,500	7.1%***
Owner monthly housing costs			
Less than $350	18,400	1,000	5.6%*
$350 to $599	55,900	1,700	3.0%***
$1,250 or more	373,500	58,000	15.5%***
Owner household income			
$100,000 or more	246,800	39,800	16.1%***

* Statistically different from either all units or all occupied units, as appropriate, at the 10-percent level.
** Statistically different from either all units or all occupied units, as appropriate, at the 5-percent level.
*** Statistically different from either all units or all occupied units, as appropriate, at the 1-percent level.

Table 4 identifies rates of addition that were both atypical of the overall housing stock and statistically significant:

- The rate of addition varied by structure type. Single-family attached units had a high rate of addition. The rates of addition were low for units in smaller multifamily building, those with 2 to 9 units and those with only 1 or 2 stories. The rates of addition were substantially higher than average for units in large multifamily buildings, those with 50 or more units and those with 3 or more floors.

- Unit size mattered. Units with fewer than 7 rooms or with fewer than 4 bedrooms had lower-than-average rates of addition; those with 8 or more rooms or 4 or more bedrooms had high rates of addition.

- Units occupied in 2011 by households with elderly householders (65 or older) had low rates of addition. Units occupied by households with children had an above-average rate of addition.

- Units with White or American Indian householders in 2011 experienced lower-than-average rates of addition; those with Asian householders in 2011 had a high rate.

- The rate of addition was low among units that were renter-occupied in 2011 but not statistically different from that of all occupied units. Two subgroups of renter-occupied units, those with monthly housing costs between $800 and $1,249 and those with households earning between $30,000 and $49,999, did have statistically significant lower rates of addition.

- The rate of addition among units that were owner-occupied in 2011 was higher than that of all occupied units but not statistically different. Among owner-occupied units, those with lower monthly housing costs (less than $600) had lower-than-average rates of addition, while those occupied by high-income owners ($100,000 or more) and those with high monthly housing costs ($1,250 or more) had higher-than-average rates of addition.

5. Rental Market Dynamics: 1998–2011

Rental market dynamics focuses on the supply of rental housing and how that supply changes over time. Rental dynamics analysis has many of the features of CINCH analysis. A key step in rental dynamics analysis is to separate the rental stock into classes or strata based on how affordable the units are. This paper uses eight categories:

- Non-market: Either no cash rent or a subsidized rent.

- Extremely low rent: Affordable to renters with incomes less than or equal to 30 percent of local area median income.

- Very low rent: Affordable to renters with incomes greater than 30 percent but less than or equal to 50 percent of local area median income.

- Low rent: Affordable to renters with incomes greater than 50 percent but less than or equal to 60 percent of local area median income.

- Moderate rent: Affordable to renters with incomes greater than 60 percent but less than or equal to 80 percent of local area median income.

- High rent: Affordable to renters with incomes greater than 80 percent but less than or equal to 100 percent of local area median income.

- Very high rent: Affordable to renters with incomes greater than 100 percent but less than or equal to 120 percent of local area median income.

- Extremely high rent: Affordable to renters with incomes greater than 120 percent of local area median income.

For each category, "affordable" is defined as a gross-rent-to-income ratio of 30 percent or less for the higher of the incomes that define the boundaries for that category.[10] The categories are defined relative to area median income; therefore, the boundaries of the categories will change as area median income changes.

Table 5 summarizes what happened to the 1998 rental units by how affordable they were in 1998. It is based on Forward-Looking Rental Dynamics Table 1 in Appendix B, which traces in more detail where these units wound up in 2011.

Table 5: Summary of Forward-Looking Rental Dynamics for Oakland

Affordability categories	1998 rental units	To more affordable categories in 2011	In same affordability category in both years	To less affordable categories in 2011	1998 rental units non-rental in 2011
Non-market	65,200	NA	26.5%	59.8%	13.8%
Extremely low rent	44,300	10.0%	6.9%	63.5%	19.6%
Very low rent	145,400	11.3%	17.4%	54.3%	16.9%
Low rent	53,700	14.7%	10.8%	56.1%	18.3%
Moderate rent	47,500	12.5%	14.3%	40.0%	33.1%
High rent	9,700	17.3%	24.6%	10.4%	47.7%
Very high rent	2,600	65.4%	0.0%	0.0%	34.6%
Extremely high rent	1,300	0.0%	0.0%	NA	0.0%
Total	369,700	10.3%	16.7%	53.1%	19.9%

The 1998 rental stock in Oakland was affordable. Of the 369,700 rental units in 1998, 189,700 were extremely low rent or very low rent units. In addition, 65,200 units were non-market; that is, they were either assisted or offered for no cash rent. These three categories accounted for 68.9 percent of the 1998 rental stock. The three highest rent categories comprised only 3.7 percent of the rental stock. Moves to a less affordable category (sometimes called gentrification) exceeded moves to a more affordable category (sometimes called filtration)—53.1 percent of all 1998 units compared to 10.3 percent.

By 2011, 19.9 percent of the 369,700 rental units in 1998 were no longer in the rental stock (73,600 units). The largest proportion of these losses was due to changes in tenure, with 59,800 rental units becoming owner-occupied or vacant for sale in 2011. Another 8,900 units became seasonal units, units occupied by persons with usual residence elsewhere, or units used for migratory workers. Finally, 4,800 rental units were no longer in the housing stock in 2011. Some of these losses were permanent; that is, the units were demolished or destroyed. Some losses were potentially reversible, such as units being used for nonresidential purposes. Forward-

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[10] Gross rent is equal to rent plus utilities.

Looking Rental Dynamics Table 2 shows how the movement out of the rental stock varied across the affordability categories.

Table 6 summarizes where the 2011 rental units came from, with respect to 1998, by how affordable they were in 2011. It is based on Backward-Looking Rental Dynamics Table 1 in Appendix B, which traces in more detail the origin of these units.

The rental stock in Oakland was less affordable in 2011 than in 1998. Of the 408,700 rental units in 2011, 74,800 were extremely low rent or very low rent units. In addition, 56,600 units were non-market; that is, they were either assisted or offered for no cash rent. These three categories accounted for 32.2 percent of the 2011 rental stock. The three highest rent categories comprised 35.4 percent of the rental stock. Moves from a more affordable category (sometimes called gentrification) exceeded moves from a less affordable category (sometimes called filtration)— 47.2 percent of all 2011 units compared to 9.2 percent.

Table 6: Summary of Backward-Looking Rental Dynamics for Oakland

Affordability categories	2011 rental units	From more affordable categories in 1998	In same affordability category in both years	From less affordable categories in 1998	2011 rental units non-rental in 1998
Non-market	56,600	NA	29.8%	38.9%	31.3%
Extremely low rent	19,000	15.9%	16.0%	38.2%	29.9%
Very low rent	55,800	31.2%	44.5%	7.6%	16.7%
Low rent	63,800	74.3%	8.8%	3.0%	13.9%
Moderate rent	68,700	69.9%	9.6%	0.9%	19.5%
High rent	111,900	57.6%	2.0%	1.2%	39.2%
Very high rent	19,600	43.8%	0.0%	0.0%	56.2%
Extremely high rent	13,300	29.6%	8.5%	NA	62.0%
Total	408,700	47.2%	14.8%	9.2%	28.9%

Of the 408,700 rental units in 2011, 28.9 percent were not rental in 1998 (118,100 units). The largest proportion of these gains was due to changes in tenure, with 66,700 rental units having been owner-occupied or vacant for sale in 1998. Another 6,300 units had been seasonal units, units occupied by persons with usual residence elsewhere, or units used for migratory workers. Finally, 45,000 rental units had not been in the housing stock in 1998. Of these, 36,300 were added by new construction and 8,700 by other means. Backward-Looking Rental Dynamics Table 2 shows how the movement into the rental stock varied across the affordability categories.

6. Summary of Housing Market Changes: Oakland Metropolitan Area, 1998–2011

In 1998 the Oakland metropolitan area contained 895,100 housing units, including vacant units. By 2011 the number of housing units had increased to 994,600. This represents an overall increase of 11.1 percent, which translates to an average annual increase of 0.8 percent over the 13-year period. There were no changes to the definition of the Oakland metropolitan area.

Between 1998 and 2011, only 6,900 units left the housing stock. Of these, 2,200 are clearly permanent losses—the original unit is gone, and major construction would be required to replace it with a new unit. Another 4,100 are temporary losses—the original unit needs repairs or is being used for other purposes. These units may or may not return to the housing stock. Finally, there were 700 units that left the housing stock either permanently or temporarily for "other" reasons, a category that encompasses a wide variety of situations. Demolitions and natural disasters accounted for 1,800 of the permanent losses, while mergers and conversions contributed another 400 permanent losses. The 2011 AHS survey in Oakland did not track mobile home move-outs.

In the period between the 1998 and 2011 AHS surveys, 123,200 units were added to the housing stock. Ninety percent of these additions were newly constructed units. The 2011 AHS did track move-ins of mobile homes in Oakland, which contributed 1,100 units. Also, 4,500 units were formed from the conversion or merger of 1998 units. We classified 3,600 units as recovered because these units had been in the housing stock at some point but were classified in 1998 as nonresidential (3,000) or uninhabitable (600). Finally, 2,700 units were added in other unclassified ways.

The Oakland metropolitan area lost 0.8 percent of all 1998 housing units by 2011; additions between 1998 and 2011 represent 12.4 percent of the 2011 housing stock. Losses and additions varied across portions of the Oakland housing market defined by the characteristics of the unit or its occupants. We observed the following patterns, which were both atypical of the overall housing stock and statistically significant:

- Units that were owner-occupied in 1998 had a lower loss rate. The general low rate for owner-occupied units shows up for owner-occupied units with high monthly housing costs ($1,250 or more) and owner-occupied units with households earning $100,000 or more.

- Renter-occupied units in 1998 had a higher loss rate; the loss rate was particularly high for rental units with households earning less than $15,000.

- The rate of addition varied by structure type. Single-family attached units had a high rate of addition. The rates of addition were low for units in smaller multifamily buildings, those with 2 to 9 units and those with only 1 or 2 stories. The rates of addition were substantially higher than average for units in large multifamily buildings, those with 50 or more units and those with 3 or more floors.

- Unit size mattered. Units with fewer than 7 rooms or with fewer than 4 bedrooms had lower-than-average rates of addition; those with 8 or more rooms or 4 or more bedrooms had high rates of addition.

- Units occupied in 2011 by households with elderly householders (65 or older) had low rates of addition. Units occupied by households with children had an above-average rate of addition.

- Units with White or American Indian householders in 2011 experienced lower-than-average rates of addition; those with Asian householders in 2011 had a high rate.

- The rate of addition was low among units that were renter-occupied in 2011 but not statistically different from that of all occupied units. Two subgroups of renter-occupied units, those with monthly housing costs between $800 and $1,249 and those with households earning between $30,000 and $49,999, did have statistically lower rates of addition.

- The rate of addition among units that were owner-occupied in 2011 was higher than that of all occupied units but not statistically different. Among owner-occupied units, those with lower monthly housing costs (less than $600) had lower-than-average rates of addition, while those occupied by high-income owners ($100,000 or more) and those with high monthly housing costs ($1,250 or more) had higher-than-average rates of addition.

The 1998 rental stock in Oakland was affordable. Of the 369,700 rental units in 1998, 189,700 were extremely low rent or very low rent units. In addition, 65,200 units were non-market; that is, they were either assisted or offered for no cash rent. These three categories accounted for 68.9 percent of the 1998 rental stock. The three highest rent categories comprised only 3.7 percent of the rental stock. Moves to a less affordable category (sometimes called gentrification) exceeded moves to a more affordable category (sometimes called filtration)—53.1 percent of all 1998 units compared to 10.3 percent. By 2011, 19.9 percent of the 369,700 rental units in 1998 were no longer in the rental stock (73,600 units). The largest proportion of these losses was due to changes in tenure, with 59,800 rental units becoming owner-occupied or vacant for sale in 2011.

The rental stock in Oakland was less affordable in 2011 than in 1998. Of the 408,700 rental units in 2011, 74,800 were extremely low rent or very low rent units. In addition, 56,600 units were non-market; that is, they were either assisted or offered for no cash rent. These three categories accounted for 32.2 percent of the 2011 rental stock. The three highest rent categories comprised 35.4 percent of the rental stock. Moves from a more affordable category (sometimes called gentrification) exceeded moves from a less affordable category (sometimes called filtration)—47.2 percent of all 2011 units compared to 9.2 percent. Of the 408,900 rental units in 2011, 28.9 percent were not rental in 1998 (118,100 units). The largest proportion of these gains was due to changes in tenure, with 66,700 rental units having been owner-occupied or vacant for sale in 1998.

Appendix A: CINCH and Rental Dynamics Methodology

Overview

Components of Inventory Change (CINCH) is a tool used by housing analysts to study how the housing inventory changes over time. Figure 1 illustrates how the inventory evolves.

Figure A-1: How the Housing Inventory Changes
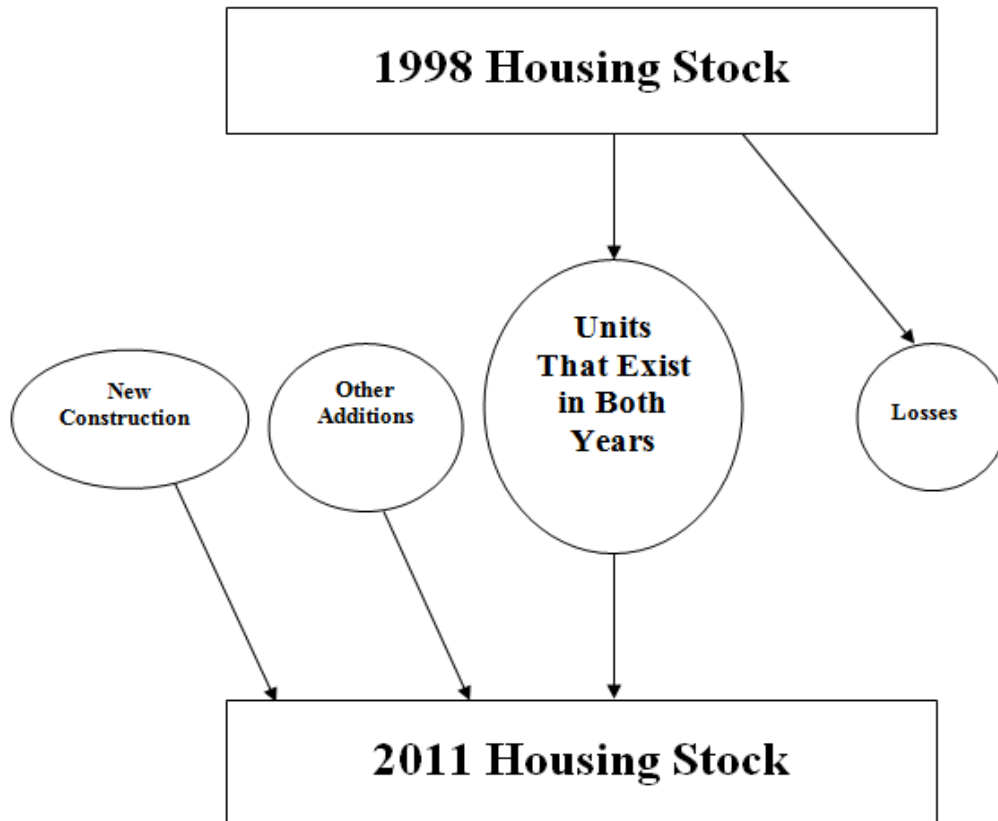
In the context of Figure A-1, the U.S. Census Bureau provides estimates for both rectangles (the 1998 and 2011 housing stocks) and one oval (units added through new construction between 1998 and 2011). No one estimates the other three ovals: the number of units that belong to both the 1998 and 2011 housing stock, units lost to the housing stock between 1998 and 2011, and other additions to the housing stock between 1998 and 2011.

While losses and other additions are small relative to the overall stock, they encompass important features of how housing markets evolve. Housing units are "clumps" of physical capital associated with specific plots of land, and the housing inventory is the aggregation of these capital-land combinations. New construction creates new clumps, and—like all capital— some "clumps" depreciate and disappear. However, housing units undergo other interesting changes. Losses can be either permanent or temporary. Units destroyed by natural disasters or intentionally demolished are permanent losses. Temporary losses include units that are used for

nonresidential purposes and units that are uninhabitable because of structural defects that can be repaired. Additions can result from restoring units that were uninhabitable or converting nonresidential structures into residential structures.

In addition to determining the size of each oval, housing analysts find information about the characteristics of the units in the different ovals useful. Interesting characteristics include structure type, age of the unit, size of the unit, location by region, location by metropolitan status, tenure, household size and composition, resident income, and resident race and ethnicity.

CINCH analysis has three goals:[11]

- To provide an estimate for all six components of Figure A-1.

- To disaggregate losses and other additions into relevant component parts.

- To characterize the units that survive from one period to the next and the units that are added or lost between periods.

The AHS has four features that make CINCH analysis possible:

- Each unit has weights that can be used to estimate its share of the overall stock.

- The AHS tracks new construction and the various types of losses and other additions.

- The AHS has detailed information about the characteristics of each unit and its occupants.

- The AHS tracks the same unit from one period to the next so that changes in status and characteristics can be observed directly.

Housing analysts and policymakers are particularly interested in what happens to affordable rental housing units. Rental dynamics is a form of CINCH analysis that classifies the rental housing stock by affordability level and tracks the evolution of the rental housing stock by affordability class.

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[11] Previous CINCH analyses have distinguished between the "status" of a unit with respect to the housing stock (e.g., existing as a nonresidential structure) and the "characteristics" of the unit or its occupants (e.g., rental vs. owner-occupied, or race of householder). This report uses this same distinction. Also adopting previous CINCH terminology, Appendix A will refer to the more recent AHS survey year, 2011, as the current year and the previous AHS survey year, 1998, as the base year.

Why the analysis needs to be separated into two components

It would be possible to list for every AHS sample unit its status and characteristics in both 1998 and 2011. In some cases, there may be no status, (e.g., not yet constructed in 1998) or no characteristics (e.g., no race of householder for vacant units), but with this understanding such a listing would still be possible. From the listing, one could construct an exact accounting of the movement of units among the various statuses and characteristics between 1998 and 2011.

The exact accounting would apply only to AHS sample observations, roughly a 1-in-500 picture of the housing stock at the metropolitan level. To obtain estimates of the magnitude of actual changes in the housing stock, one needs to apply weights to the sampled units. When weights are applied, the accounting will no longer be exact because units have different weights in different years.[12] For example, the exact accounting might show that 2,500 sample units that were rental in 1998 became owner-occupied or vacant for sale in 2011. To estimate the number of units in the national housing stock that were rental in 1998 and became owner-occupied in 2011, one would need to apply weights. However, using 1998 weights would produce a different estimate than using 2011 weights. There is no conceptual reason to favor the answer using 1998 weights over the answer using 2011 weights. The choice of weights depends upon how the intended analysis will be used.

For this reason, previous CINCH analyses have distinguished between:

1. *Forward-looking analysis;* that is, starting with the base-year stock (1998) and determining the status and characteristics of *those* units in the current year (2011). The goal is to explain what happened to the units comprising the housing stock in the base year. Forward-looking analysis takes the housing stock as given in the base year and looks at the destination of these units in the current year.

2. *Backward-looking analysis;* that is, starting from the current year (2011) stock and determining the status and characteristics of *those* units in the base year (1998). The goal here is to explain where the units comprising the current year housing stock came from. Backward-looking analysis takes the current-year housing stock as given and looks at the source of these units, either in the base year or in new construction or other additions.

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[12] The Census Bureau assigns both a pure weight (the inverse of the probability of selection) and a final weight to each AHS observation. The final weights are designed to sum up to independent estimates of the total housing stock. The pure weights will vary over observations within a given AHS survey because of stratification in drawing the sample. Generally, pure weights do not vary across survey years. The final weights will differ over observations within a given AHS because the Census Bureau makes adjustments for various factors affecting the sample. The final weights of a given observation will also vary between AHS surveys because of changes in the housing stock.

Why changes in geography boundaries affect CINCH analysis

The analysis in this report applies only to that portion of the metropolitan area that was common to the metropolitan area as defined in both 1998 and 2011, and the application to the common area is not precise for the following reasons:

- For forward-looking analysis (1998 to 2011), we observe only those sample units in the geography common to both 1998 and 2011. Thus the observed changes correctly apply only to the common area. However, the forward-looking weights are based by necessity on the entire 1998 geography. Since the common area is smaller than the 1998 geography, the counts are overestimates for the common area.

- For the backward-looking analysis (2011 from 1998), we observe (a) sample units that were in the common area in 1998 and are still in the stock in 2011, (b) sample units representing additions to the stock throughout the metropolitan area as newly defined, and (c) sample units that represent housing existing in 1998 in the added portion of the metropolitan area. We can eliminate (c) and try to focus the analysis on the common area, but there are two problems. The backward-looking weights are based by necessity on the entire 2011 geography. Since the common area is smaller than the 2011 geography, the counts are overestimates for the common area. Moreover, we cannot determine which newly added sample units in (b) represent the common area and which represent the added portion of the metropolitan area. Therefore, additions are overestimated with respect to the common area.

Appendix B: CINCH and Rental Dynamics Tables

Contents

This appendix contains 12 detailed CINCH and rental dynamics tables that have been featured in previous reports. There are:

- Four forward-looking CINCH tables that track changes to the 1998 housing stock in 2011 by various characteristics of the units or their occupants.

- Four backward-looking CINCH tables that track where the 2011 housing stock originated by various characteristics of the units or their occupants.

- Two forward-looking rental dynamics tables (one with counts and one with percentages) that track by affordability category what happened to the 1998 rental stock by 2011.

- Two backward-looking rental dynamics tables (one with counts and one with percentages) that track by affordability category where the 2011 rental stock came from with respect to 1998.

Appendix B begins with an explanation of how to read the tables.

How to read CINCH tables

Rows and columns serve different purposes in CINCH tables. The rows identify classes of units to be analyzed. The columns trace those units either forward or backward. All counts are rounded to the nearest hundred.

> The forward-looking tables report what happened to the 1998 housing stock by 2011. There are three possible dispositions of 1998 units:
>
> - Units that continue to exist in 2011 with the same characteristics (or serving the same market).
>
> - Units that continue to exist in 2011 but with different characteristics (or serving a different market).
>
> - Units that were lost to the stock in 2011.

The backward-looking tables report where the 2011 housing stock came from in reference to 1998. There are three possible sources of 2011 units:

- Units that existed in 1998 with the same characteristics (or serving the same market).

- Units that existed in 1998 but with different characteristics (or serving a different market).

- Units that are additions to the housing stock between 1998 and 2011.

Since the essence of the CINCH analysis is in the columns, we will explain the columns in detail.

Columns Common to Both Forward-Looking and Backward-Looking Tables

The first and last columns contain the row numbers, which are identical for the same tables in the forward-looking and backward-looking sets. Columns A through D set up the analysis and track units that exist in both periods.

- Column A specifies the characteristic that defines the subset of the stock that is being tracked forward or backward in a particular row, for example, occupied units or units built from 1990 through 1994.

- Column B gives the CINCH estimate of the number of units that satisfy two conditions: (a) being part of the housing stock in the relevant year (1998 for the forward-looking tables and 2011 for the backward-looking tables) and (b) satisfying the condition in column A.

- Column C is the CINCH estimate of the number of units from column B that (a) are also part of the housing stock in the other year and (b) continue to belong to the subset defined by column A.

- Column D is the CINCH estimate of the number of units from column B that (a) are also part of the housing stock in the other year but (b) no longer belong to the subset defined by column A. In some cases, the analysis will not allow a unit to change characteristics between the base year and the other year. Examples include type of structure, year built, and number of stories; these characteristics are considered impossible or unlikely to change.

Columns Unique to Forward-Looking Tables

In the forward-looking tables, columns E through J track what happened to units that were lost from 1998 to 2011.

- Column E is the CINCH estimate of the number of units from column B that are not in the 2011 housing stock because they were merged with other units or converted into multiple units.

- Column F is the CINCH estimate of the number of houses or manufactured homes from column B that were moved out during the period. In most cases, these units were relocated rather than destroyed. The AHS considers them "losses" because a housing unit is a combination of land and capital, and a move breaks that specific combination to create a new combination at a different location. For this reason, manufactured houses that move from one lot to another are treated as both losses and additions.[13]

- Column G is the CINCH estimate of the number of units from column B that became nonresidential at the end of the period. For example, a real estate firm, a tax preparation office, a palm reader, or some other business might buy or rent a house to use for business rather than residential purposes.[14]

- Column H is the CINCH estimate of the number of units from column B that were demolished or were destroyed by fires or natural disasters by 2011.

- Column I is the CINCH estimate of the number of units from column B that in 2011 were condemned or were no longer usable for housing because of extensive damage.

- Column J is the CINCH estimate of the number of units from column B that were lost by 2011 for other reasons.

The columns form a closed system. Column B counts the number of units tracked; columns C through J account for all the possible outcomes. Therefore, column B minus the sum of columns C through J always equals zero, except for rounding.

Columns Unique to Backward-Looking Tables
In backward-looking tables, columns E through J track where units came from that are part of the housing stock in 2011 but were not part of the 1998 housing stock.

- Column E is the CINCH estimate of the number of units from column B that were created by the merger or conversion of other units.

- Column F estimates the number of houses or mobile homes from column B that were moved in during the period. For many of the metropolitan areas in the 2011 AHS survey, information on movements was not collected.

- Column G is the CINCH estimate of the number of units from column B that had been nonresidential in 1998.

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[13] The AHS does not track what happens to a house or mobile home that is moved off of a lot that is part of the AHS sample, and does not inquire about the previous history of a unit that is moved on to a lot that is part of the AHS sample.

[14] If the owner or tenant both lives in a unit and conducts business out of the unit, the AHS considers the unit to be residential. Nonresidential, therefore, means strictly no residential use.

- Column H is the CINCH estimate of the number of units from column B that were newly constructed between 1998 and 2011. Note: Generally, in Backward-Looking Table A, there will be units in column H with year-built data substantially earlier than the survey year. There are three explanations for this apparent inconsistency. (1) With the exception of manufactured houses, presence in column H is determined by information from the Census Bureau indicating that the unit entered the sample from a listing of new construction; the Census Bureau may be mistaken. (2) Year built is based on information from the respondent; the respondent may be mistaken. (3) An older unit may have undergone substation renovation that required a new construction permit, but the respondent may have given the original construction date rather than the renovation date. The extent of major renovation occurring in many established neighborhoods throughout the country makes (3) a likely possibility.

- Column I is the CINCH estimate of the number of units from column B that were added by 2011 from units that were structurally unsound in 1998.[15]

- Column J is the CINCH estimate of the number of units from column B that were added by 2011 from units that had been temporarily lost to the stock in 1998 for reasons "not classified" or were newly added by "other" means.

In some metropolitan areas, the AHS surveys do not report data for all the rows in the tables in this appendix. The columns for those rows are left blank.

How to read rental dynamics tables

Forward-Looking Rental Dynamics Table 1 details by affordability category how the rental units in the 1998 housing stock relate to the 2011 housing stock. Column A estimates the number of units in each affordability category in 1998. Columns B through L explain where the 1998 rental units fit into the 2011 housing stock.

- If the units are still rental in 2011, they will be counted in columns B through I, depending upon how affordable they are in 2011.

- If the units have become owner-occupied or for vacant for sale, they will be counted in column J.

- Seasonal units, units that are not the primary residence of their occupants, units used for migratory workers, and units that are vacant but not for rent or sale are counted in column K.

- Column L counts 1998 units that are not in the 2011 housing stock; these can be either temporary or permanent losses to the stock.

The sum of columns B through L equals column A, except for rounding.

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[15] These units had codes that identified them as "occupancy prohibited" or "interior exposed to the elements."

Forward-Looking Rental Dynamics Table 2 presents the same information as Table 1, but columns B through L are now percentages of column A. Columns B through L sum to 100 percent in each row.

Backward-Looking Rental Dynamics Table 1 details by affordability category where the rental units in the 2011 housing stock came from with respect to the 1998 housing stock. Column A estimates the number of units in each affordability category in 2011. Columns B through L explain where the 2011 rental units originated.

- If the units were rental in 1998, they will be counted in columns B through I, depending upon how affordable they are in 1998.

- If the units were owner-occupied or for vacant for sale, they will be counted in column J.

- Seasonal units, units that are not the primary residence of their occupants, units used for migratory workers, and units that are vacant but not for rent or sale in 1998 are counted in column K.

- Column L counts rental units that were newly constructed between 1998 and 2011.

- Column M counts rental units that were added to the housing stock after 1998 by other means.

The sum of columns B through M equals column A, except for rounding.

Backward-Looking Rental Dynamics Table 2 presents the same information as Table 1, but columns B through M are now percentages of column A. Columns B through M sum to 100 percent in each row.

These four Rental Dynamics Tables look only at the endpoints of the 13-year period; for example, a unit that is low rent in 1998 and moderate rent in 2011 might have been high rent, owned, or out of the stock at points in between the two surveys. These tables do not track the path of rental units between 1998 and 2011.

Forward-Looking Table A: Housing Characteristics, Oakland

Row	A Characteristics	B Present in 1998	C 1998 units present in 2011	D Change in characteristics	E 1998 units lost due to conversion/ merger	F 1998 house or mobile home moved out	G 1998 units changed to nonresidential use	H 1998 units lost through demolition or disaster	I 1998 units badly damaged or condemned	J 1998 units lost in other ways	Row
1	Housing stock	895,100	888,200	0	400	0	2,900	1,800	1,100	700	1
	Occupancy status										
2	Occupied	855,700	786,700	63,600	200	0	2,500	1,100	900	700	2
3	Vacant	37,600	5,100	31,400	200	0	0	700	200	0	3
4	Seasonal	1,800	0	1,400	0	0	400	0	0	0	4
	Units in structure										
5	1, detached	549,900	546,800	0	200	0	900	900	900	200	5
6	1, attached	91,600	91,300	0	0	0	0	200	0	0	6
7	2 to 4	86,100	84,300	0	200	0	400	700	0	400	7
8	5 to 9	51,500	51,000	0	0	0	200	0	200	0	8
9	10 to 19	35,600	35,100	0	0	0	500	0	0	0	9
10	20 to 49	30,300	29,900	0	0	0	400	0	0	0	10
11	50 or more	33,500	33,100	0	0	0	500	0	0	0	11
12	Manufactured/mobile home	16,600	16,600	0	0	0	0	0	0	0	12

Row	A Characteristics	B Present in 1998	C 1998 units present in 2011	D Change in characteristics	E 1998 units lost due to conversion/ merger	F 1998 house or mobile home moved out	G 1998 units changed to nonresidential use	H 1998 units lost through demolition or disaster	I 1998 units badly damaged or condemned	J 1998 units lost in other ways	Row
	Year built										
16	1995–1999	29,800	29,500	0	0	0	0	0	0	200	16
17	1990–1994	44,600	44,600	0	0	0	0	0	0	0	17
18	1985–1989	78,200	78,000	0	0	0	200	0	0	0	18
19	1980–1984	45,800	45,800	0	0	0	0	0	0	0	19
20	1975–1979	72,500	72,000	0	0	0	200	0	200	0	20
21	1970–1974	77,400	77,000	0	0	0	0	200	200	0	21
22	1960–1969	174,700	174,000	0	0	0	400	0	200	0	22
23	1950–1959	146,900	145,600	0	0	0	900	400	0	0	23
24	1940–1949	84,800	83,500	0	200	0	900	200	0	0	24
25	1930–1939	53,900	52,800	0	0	0	200	400	200	200	25
26	1920–1929	45,300	44,400	0	0	0	0	400	200	200	26
27	1919 or earlier	41,300	41,100	0	200	0	0	0	0	0	27
	Rooms										
28	1	9,500	3,100	5,500	0	0	900	0	0	0	28
29	2	10,500	3,400	6,100	200	0	700	0	0	0	29
30	3	120,800	82,400	37,300	200	0	700	200	0	0	30
31	4	175,800	114,300	60,400	0	0	0	400	700	0	31
32	5	176,500	94,000	81,700	0	0	200	400	0	200	32
33	6	152,600	70,800	80,400	0	0	200	400	200	400	33
34	7	121,900	57,900	64,000	0	0	0	0	0	0	34
35	8	81,500	35,200	46,100	0	0	0	0	200	0	35
36	9	30,800	11,000	19,800	0	0	0	0	0	0	36
37	10 or more	15,200	4,000	10,800	0	0	200	200	0	0	37

Row	A	B	C	D	E	F	G	H	I	J	Row
	Characteristics	Present in 1998	1998 units present in 2011	Change in characteristics	1998 units lost due to conversion/ merger	1998 house or mobile home moved out	1998 units changed to nonresidential use	1998 units lost through demolition or disaster	1998 units badly damaged or condemned	1998 units lost in other ways	Row
	Bedrooms										
38	None	10,900	3,800	6,100	0	0	900	0	0	0	38
39	1	142,300	110,300	30,000	400	0	1,100	200	200	0	39
40	2	252,600	211,000	40,000	0	0	200	700	400	200	40
41	3	305,900	258,500	45,800	0	0	200	900	200	200	41
42	4 or more	183,500	163,400	19,200	0	0	400	0	200	200	42
43	Multiunit structures	237,100	233,500	0	200	0	2,100	700	200	400	43
	Stories in structure										
44	1	32,100	31,600	0	0	0	200	0	200	0	44
45	2	124,300	123,000	0	200	0	0	700	0	400	45
46	3	53,200	52,300	0	0	0	900	0	0	0	46
47	4 to 6	27,500	26,600	0	0	0	900	0	0	0	47
48	7 or more										48

Forward-Looking Table B: Unit Quality, Oakland

Row		A	B	C	D	E	F	G	H	I	J	Row
		Characteristics	Present in 1998	1998 units present in 2011	Change in characteristics	1998 units lost due to conversion/ merger	1998 house or mobile home moved out	1998 units changed to nonresidential use	1998 units lost through demolition or disaster	1998 units badly damaged or condemned	1998 units lost in other ways	
1		Occupied units	855,700	786,700	63,600	200	0	2,500	1,100	900	700	1
2		With complete kitchen	836,400	759,800	72,100	200	0	1,600	1,100	900	700	2
3		Lacking complete kitchen facilities	19,300	1,400	17,000	0	0	900	0	0	0	3
4		With complete plumbing	839,900	767,500	67,700	200	0	1,800	1,100	900	700	4
5		Lack some plumbing	15,800	1,100	14,000	0	0	700	0	0	0	5
6		No hot piped water	2,700	0	2,200	0	0	500	0	0	0	6
7		No bathtub/shower	2,200	1,100	700	0	0	500	0	0	0	7
8		No flush toilet	3,800	1,100	2,200	0	0	500	0	0	0	8
9		No exclusive use	11,700	0	11,500	0	0	200	0	0	0	9
		Water										
10		Public/private water	846,900	780,100	62,100	200	0	2,300	900	700	700	10
11		Well serving 1 to 5 units	7,300	4,900	2,200	0	0	0	200	0	0	11
12		Other water source	1,500	400	700	0	0	200	0	200	0	12
		Sewer										
13		Public sewer	843,400	775,100	63,600	200	0	2,300	900	700	700	13
14		Septic tank/cesspool	11,700	6,200	5,000	0	0	0	200	200	0	14
15		Other	600	400	0	0	0	200	0	0	0	15

Row	A	B	C	D	E	F	G	H	I	J	Row
	Characteristics	**Present in 1998**	**1998 units present in 2011**	**Change in characteristics**	**1998 units lost due to conversion/ merger**	**1998 house or mobile home moved out**	**1998 units changed to nonresidential use**	**1998 units lost through demolition or disaster**	**1998 units badly damaged or condemned**	**1998 units lost in other ways**	**Row**
16	Severe problems	25,700	1,400	23,600	0	0	700	0	0	0	16
17	Plumbing	15,800	1,100	14,000	0	0	700	0	0	0	17
18	Heating	8,200	300	7,900	0	0	0	0	0	0	18
19	Electric	2,000	0	2,000	0	0	0	0	0	0	19
20	Upkeep	1,000	0	1,000	0	0	0	0	0	0	20
21	Moderate problems	34,800	700	33,400	0	0	500	200	0	0	21
22	Plumbing	2,300	0	2,000	0	0	200	0	0	0	22
23	Heating	1,000	300	700	0	0	0	0	0	0	23
24	Kitchen	19,300	1,400	17,000	0	0	900	0	0	0	24
25	Upkeep	22,000	0	21,800	0	0	0	200	0	0	25

Forward-Looking Table C: Occupant Characteristics, Oakland

Row	A Characteristics	B Present in 1998	C 1998 units present in 2011	D Change in characteristics	E 1998 units lost due to conversion/ merger	F 1998 house or mobile home moved out	G 1998 units changed to nonresidential use	H 1998 units lost through demolition or disaster	I 1998 units badly damaged or condemned	J 1998 units lost in other ways	Row
1	Occupied units	855,700	786,700	63,600	200	0	2,500	1,100	900	700	1
	Age of householder										
2	Under 65	707,200	547,900	154,800	200	0	1,800	1,100	900	400	2
3	65 to 74	79,800	6,600	72,700	0	0	500	0	0	0	3
4	75 or older	68,700	17,000	51,300	0	0	200	0	0	200	4
	Children in household										
5	Some	337,600	133,200	202,900	0	0	200	700	200	400	5
6	None	518,100	347,900	166,300	200	0	2,300	400	700	200	6
	Race and ethnicity										
7	White	554,500	399,200	152,200	200	0	1,600	200	900	200	7
8	Hispanic	43,700	18,900	24,600	0	0	200	0	0	0	8
9	Non-Hispanic	510,900	334,700	173,300	200	0	1,400	200	900	200	9
10	Black	109,600	43,300	65,000	0	0	500	400	0	400	10
11	Hispanic	1,000	0	1,000	0	0	0	0	0	0	11
12	Non-Hispanic	108,600	41,200	66,100	0	0	500	400	0	400	12
13	American Indian or Alaska Native alone	5,800	1,300	4,400	0	0	0	0	0	0	13
14	Asian or Pacific Islander	106,100	63,200	42,700	0	0	200	0	0	0	14
16	Other	79,600	3,400	75,600	0	0	200	400	0	0	16
17	Hispanic or Latino (any race)	101,200	51,600	49,000	0	0	200	400	0	0	17

Row	A Characteristics	B Present in 1998	C 1998 units present in 2011	D Change in characteristics	E 1998 units lost due to conversion/ merger	F 1998 house or mobile home moved out	G 1998 units changed to nonresidential use	H 1998 units lost through demolition or disaster	I 1998 units badly damaged or condemned	J 1998 units lost in other ways	Row
	Income sources of families and primary individuals										
18	Wages and salaries	672,400	474,000	195,300	200	0	1,100	700	900	200	18
20	Dividends, interest, or rent	415,700	161,300	252,100	0	0	1,100	200	500	400	20
21	Public assistance or public welfare	54,600	2,700	50,900	0	0	200	200	200	200	21

Forward-Looking Table D: Income and Housing Cost, Oakland

Row	A Characteristics	B Present in 1998	C 1998 units present in 2011	D Change in characteristics	E 1998 units lost due to conversion/ merger	F 1998 house or mobile home moved out	G 1998 units changed to nonresidential use	H 1998 units lost through demolition or disaster	I 1998 units badly damaged or condemned	J 1998 units lost in other ways	Row
1	Occupied units	855,700	786,700	63,600	200	0	2,500	1,100	900	700	1
	Tenure										
2	Owner-occupied	508,600	416,200	91,500	0	0	200	0	200	400	2
3	Homeownership rate	59.4%									3
4	Renter-occupied	347,100	255,300	87,300	200	0	2,300	1,100	700	200	4
	Renter monthly housing costs										
5	No cash rent	7,100	1,000	6,100	0	0	0	0	0	0	5
6	Less than $350	27,600	5,200	21,000	0	0	500	400	200	200	6
7	$350 to $599	64,000	5,800	56,800	0	0	900	200	200	0	7
8	$600 to $799	88,600	3,400	84,200	200	0	200	400	0	0	8
9	$800 to $1,249	119,800	19,600	100,000	0	0	200	0	0	0	9
10	$1,250 or more	40,100	20,400	19,000	0	0	400	0	200	0	10
	Renter household income										
11	Less than $15,000	82,600	17,600	63,000	0	0	1,400	400	200	0	11
12	$15,000 to $29,999	80,200	16,200	63,200	200	0	400	200	0	0	12
13	$30,000 to $49,999	69,600	11,000	57,700	0	0	200	400	0	200	13
14	$50,000 to $99,999	96,300	22,800	73,300	0	0	200	0	0	0	14
15	$100,000 or more	18,400	2,700	15,200	0	0	0	0	500	0	15

Row	A Characteristics	B Present in 1998	C 1998 units present in 2011	D Change in characteristics	E 1998 units lost due to conversion/ merger	F 1998 house or mobile home moved out	G 1998 units changed to nonresidential use	H 1998 units lost through demolition or disaster	I 1998 units badly damaged or condemned	J 1998 units lost in other ways	Row
	Owner monthly housing costs										
16	Less than $350	77,400	6,900	70,500	0	0	0	0	0	0	16
17	$350 to $599	75,900	14,100	61,500	0	0	0	0	200	0	17
18	$600 to $799	36,200	3,200	32,900	0	0	0	0	0	0	18
19	$800 to $1,249	82,000	11,600	70,200	0	0	0	0	0	200	19
20	$1,250 or more	237,200	174,000	62,800	0	0	200	0	0	200	20
	Owner household income										
21	Less than $15,000	45,400	6,100	39,300	0	0	0	0	0	0	21
22	$15,000 to $29,999	52,700	6,900	45,500	0	0	0	0	0	200	22
23	$30,000 to $49,999	76,400	11,300	65,100	0	0	0	0	0	0	23
24	$50,000 to $99,999	183,200	57,200	125,600	0	0	0	0	200	200	24
25	$100,000 or more	151,000	89,300	61,500	0	0	200	0	0	0	25

Backward-Looking Table A: Housing Characteristics, Oakland

	A	B	C	D	E	F	G	H	I	J	
Row	2011 characteristics	Present in 2011	2011 units present in 1998	Change in characteristics	2011 units added by conversion/ merger	2011 house or mobile home moved in	2011 units added from nonresidential use	2011 units added by new construction	2011 units added from temporary losses in 1998 stock	2011 units added in other ways	Row
1	Housing stock	994,500	871,300	0	4,500	1,100	3,000	111,300	600	2,700	1
	Occupancy status										
2	Occupied	907,200	765,700	31,800	3,400	1,100	2,400	100,600	600	1,600	2
3	Vacant	87,000	5,700	67,900	1,000	0	700	10,700	0	1,000	3
4	Seasonal	300	0	100	0	0	0	100	0	100	4
	Units in structure										
5	1, detached	590,100	518,200	0	1,300	0	600	68,500	300	1,300	5
6	1, attached	77,000	61,400	0	300	0	300	14,600	0	400	6
7	2 to 4	104,900	97,200	0	2,900	300	600	3,700	300	0	7
8	5 to 9	65,900	62,100	0	0	0	300	2,800	0	700	8
9	10 to 19	45,400	39,800	0	0	0	300	5,200	0	0	9
10	20 to 49	48,700	44,200	0	0	0	900	3,600	0	0	10
11	50 or more	48,900	35,600	0	0	0	0	12,900	0	300	11
12	Manufactured/mobile home	13,600	12,800	0	0	800	0	0	0	0	12

	A	B	C	D	E	F	G	H	I	J	
Row	2011 characteristics	Present in 2011	2011 units present in 1998	Change in characteristics	2011 units added by conversion/ merger	2011 house or mobile home moved in	2011 units added from nonresidential use	2011 units added by new construction	2011 units added from temporary losses in 1998 stock	2011 units added in other ways	Row
	Year built										
13	2010–2014	7,000	300	0	0	0	0	6,700	0	0	13
14	2005–2009	48,400	0	0	700	300	0	46,700	0	700	14
15	2000–2004	37,300	400	0	0	0	0	36,600	0	300	15
16	1995–1999	49,800	29,000	0	0	0	0	20,700	0	0	16
17	1990–1994	43,800	42,800	0	0	0	600	300	0	0	17
18	1985–1989	77,400	75,900	0	0	800	600	0	0	0	18
19	1980–1984	47,100	46,100	0	0	0	600	0	0	400	19
20	1975–1979	69,600	69,600	0	0	0	0	0	0	0	20
21	1970–1974	76,400	76,100	0	0	0	300	0	0	0	21
22	1960–1969	169,400	168,500	0	600	0	0	0	0	300	22
23	1950–1959	145,600	145,000	0	600	0	0	0	0	0	23
24	1940–1949	82,900	81,600	0	1,000	0	300	0	0	0	24
25	1930–1939	50,800	50,500	0	0	0	0	0	300	0	25
26	1920–1929	47,400	45,700	0	400	0	600	0	0	700	26
27	1919 or earlier	41,700	39,600	0	1,200	0	0	300	300	300	27

Row	A 2011 characteristics	B Present in 2011	C 2011 units present in 1998	D Change in characteristics	E 2011 units added by conversion/ merger	F 2011 house or mobile home moved in	G 2011 units added from nonresidential use	H 2011 units added by new construction	I 2011 units added from temporary losses in 1998 stock	J 2011 units added in other ways	Row
	Rooms										
28	1	7,100	2,900	3,500	0	0	0	700	0	0	28
29	2	15,500	3,500	9,400	300	0	1,300	1,000	0	0	29
30	3	114,100	81,200	17,300	1,300	300	900	12,100	300	800	30
31	4	181,500	112,600	50,700	1,900	0	600	15,000	0	600	31
32	5	199,100	91,000	93,700	900	0	0	12,500	0	1,000	32
33	6	169,600	70,000	84,900	0	0	0	14,700	0	0	33
34	7	142,300	56,700	63,800	0	800	0	20,300	300	300	34
35	8	99,300	34,700	48,000	0	0	0	16,700	0	0	35
36	9	41,800	10,900	22,200	0	0	0	8,700	0	0	36
37	10 or more	24,100	4,000	10,200	0	0	300	9,600	0	0	37
	Bedrooms										
38	None	16,100	3,500	10,900	0	0	600	1,100	0	0	38
39	1	143,300	108,900	14,400	2,200	300	1,200	15,100	300	800	39
40	2	258,600	206,200	32,300	1,300	0	900	17,000	0	900	40
41	3	325,900	253,000	44,000	900	800	0	25,900	300	1,000	41
42	4 or more	250,600	160,800	37,300	0	0	300	52,200	0	0	42
43	Multiunit structures	313,800	278,900	0	2,900	300	2,100	28,300	300	1,000	43
	Stories in structure										
44	1	38,500	35,900	0	300	0	600	1,000	300	300	44
45	2	162,700	155,100	0	1,900	300	600	4,800	0	0	45
46	3	68,000	54,800	0	600	0	600	11,600	0	300	46
47	4 to 6	33,900	23,600	0	0	0	300	9,700	0	300	47
48	7 or more	10,700	9,500	0	0	0	0	1,100	0	0	48

Backward-Looking Table B: Unit Quality, Oakland

Row	A 2011 characteristics	B Present in 2011	C 2011 units present in 1998	D Change in characteristics	E 2011 units added by conversion/ merger	F 2011 house or mobile home moved in	G 2011 units added from nonresidential use	H 2011 units added by new construction	I 2011 units added from temporary losses in 1998 stock	J 2011 units added in other ways	Row
1	Occupied units	907,200	765,700	31,800	3,400	1,100	2,400	100,600	600	1,600	1
2	With complete kitchen	890,300	739,300	42,700	3,400	1,100	2,400	99,200	600	1,600	2
3	Lacking complete kitchen facilities	16,900	1,400	14,200	0	0	0	1,400	0	0	3
4	With complete plumbing	900,100	747,200	43,900	3,400	1,100	2,400	99,900	600	1,600	4
5	Lack some plumbing	7,100	1,000	5,400	0	0	0	700	0	0	5
6	No hot piped water	300	0	300	0	0	0	0	0	0	6
7	No bathtub/shower	1,400	1,000	300	0	0	0	0	0	0	7
8	No flush toilet	1,400	1,000	300	0	0	0	0	0	0	8
9	No exclusive use	5,700	0	5,000	0	0	0	700	0	0	9
	Water										
10	Public/private water	900,700	759,600	32,100	3,400	1,100	2,400	99,900	600	1,600	10
11	Well serving 1 to 5 units	5,500	4,500	300	0	0	0	700	0	0	11
12	Other water source	1,000	300	700	0	0	0	0	0	0	12
	Sewer										
13	Public sewer	899,000	754,600	35,800	3,100	1,100	2,400	99,900	600	1,600	13
14	Septic tank/cesspool	7,900	5,800	1,000	300	0	0	700	0	0	14
15	Other	300	300	0	0	0	0	0	0	0	15

Row	A 2011 characteristics	B Present in 2011	C 2011 units present in 1998	D Change in characteristics	E 2011 units added by conversion/ merger	F 2011 house or mobile home moved in	G 2011 units added from nonresidential use	H 2011 units added by new construction	I 2011 units added from temporary losses in 1998 stock	J 2011 units added in other ways	Row
16	Severe problems	11,100	1,400	9,000	0	0	0	700	0	0	16
17	Plumbing	7,100	1,000	5,400	0	0	0	700	0	0	17
18	Heating	4,000	300	3,700	0	0	0	0	0	0	18
19	Electric										19
20	Upkeep										20
21	Moderate problems	23,700	700	21,300	0	0	0	1,400	300	0	21
22	Plumbing	1,900	0	1,900	0	0	0	0	0	0	22
23	Heating	1,300	300	1,000	0	0	0	0	0	0	23
24	Kitchen	16,900	1,400	14,200	0	0	0	1,400	0	0	24
25	Upkeep	6,200	0	5,900	0	0	0	0	300	0	25

Backward-Looking Table C: Occupant Characteristics, Oakland

Row	A 2011 characteristics	B Present in 2011	C 2011 units present in 1998	D Change in characteristics	E 2011 units added by conversion/ merger	F 2011 house or mobile home moved in	G 2011 units added from nonresidential use	H 2011 units added by new construction	I 2011 units added from temporary losses in 1998 stock	J 2011 units added in other ways	Row
1	Occupied units	907,200	765,700	31,800	3,400	1,100	2,400	100,600	600	1,600	1
	Age of householder										
2	Under 65	719,000	533,500	91,500	3,100	1,100	1,500	86,200	600	1,600	2
3	65 to 74	105,300	6,800	88,900	300	0	600	8,700	0	0	3
4	75 or older	82,800	16,800	60,000	0	0	300	5,700	0	0	4
	Children in household										
5	Some	308,900	128,800	133,700	900	0	600	44,000	300	600	5
6	None	598,300	340,400	194,600	2,500	1,100	1,800	56,600	300	1,000	6
	Race and ethnicity										
7	White	571,100	389,600	125,400	3,100	800	900	50,100	600	600	7
8	Hispanic	123,200	18,500	90,600	1,300	0	600	12,000	300	0	8
9	Non-Hispanic	447,900	327,100	78,900	1,900	800	300	38,100	300	600	9
10	Black	97,700	42,200	43,700	300	300	600	10,300	0	300	10
11	Hispanic	3,700	0	3,700	0	0	0	0	0	0	11
12	Non-Hispanic	94,000	40,200	42,000	300	300	600	10,300	0	300	12
13	American Indian or Alaska Native alone	11,800	1,300	9,800	0	0	0	700	0	0	13
14	Asian or Pacific Islander	208,000	65,600	103,000	0	0	900	37,900	0	600	14
16	Other	18,600	0	17,000	0	0	0	1,600	0	0	16
17	Hispanic or Latino (any race)	148,900	50,300	80,900	1,300	0	900	15,300	300	0	17

Row	A 2011 characteristics	B Present in 2011	C 2011 units present in 1998	D Change in characteristics	E 2011 units added by conversion/ merger	F 2011 house or mobile home moved in	G 2011 units added from nonresidential use	H 2011 units added by new construction	I 2011 units added from temporary losses in 1998 stock	J 2011 units added in other ways	Row
	Income sources of families and primary individuals										
18	Wages and salaries	660,300	462,400	111,400	3,100	300	1,200	80,400	600	900	18
20	Dividends, interest, or rent	286,700	159,200	93,100	600	0	600	32,900	0	300	20
21	Public assistance or public welfare	17,100	2,700	11,900	0	0	300	1,600	300	300	21

Backward-Looking Table D: Income and Housing Cost, Oakland

Row	A 2011 characteristics	B Present in 2011	C 2011 units present in 1998	D Change in characteristics	E 2011 units added by conversion/ merger	F 2011 house or mobile home moved in	G 2011 units added from nonresidential use	H 2011 units added by new construction	I 2011 units added from temporary losses in 1998 stock	J 2011 units added in other ways	Row
1	Occupied units	907,200	765,700	31,800	3,400	1,100	2,400	100,600	600	1,600	1
	Tenure										
2	Owner-occupied	538,300	408,500	59,700	300	800	300	68,400	300	0	2
3	Homeownership rate	59.3%									3
4	Renter-occupied	368,900	247,400	82,000	3,100	300	2,100	32,100	300	1,600	4
	Renter monthly housing costs										
5	No cash rent	9,300	1,000	7,700	0	0	0	600	0	0	5
6	Less than $350	21,900	5,100	14,400	0	0	0	2,400	0	0	6
7	$350 to $599	23,800	5,700	15,600	0	0	600	2,000	0	0	7
8	$600 to $799	22,300	3,300	16,700	300	0	300	1,600	0	0	8
9	$800 to $1,249	111,400	19,100	85,300	900	300	600	4,700	300	300	9
10	$1,250 or more	180,200	19,300	136,300	1,900	0	600	20,800	0	1,300	10
	Renter household income										
11	Less than $15,000	70,800	17,200	45,700	300	0	1,200	6,100	0	300	11
12	$15,000 to $29,999	68,800	15,700	45,600	600	300	300	5,700	300	300	12
13	$30,000 to $49,999	77,000	10,700	60,800	900	0	600	3,900	0	0	13
14	$50,000 to $99,999	101,200	21,900	68,400	900	0	0	9,600	0	300	14
15	$100,000 or more	51,200	2,600	40,800	300	0	0	6,800	0	600	15

Row	A	B	C	D	E	F	G	H	I	J	Row
	2011 characteristics	Present in 2011	2011 units present in 1998	Change in characteristics	2011 units added by conversion/ merger	2011 house or mobile home moved in	2011 units added from nonresidential use	2011 units added by new construction	2011 units added from temporary losses in 1998 stock	2011 units added in other ways	Row
	Owner monthly housing costs										
16	Less than $350	18,400	6,500	10,800	0	0	0	1,000	0	0	16
17	$350 to $599	55,900	13,900	40,300	0	0	0	1,700	0	0	17
18	$600 to $799	33,700	3,000	28,100	0	0	0	2,600	0	0	18
19	$800 to $1,249	56,900	11,100	38,900	0	800	0	6,000	0	0	19
20	$1,250 or more	373,500	171,100	144,300	300	0	300	57,100	300	0	20
	Owner household income										
21	Less than $15,000	32,000	5,600	23,600	0	800	0	2,000	0	0	21
22	$15,000 to $29,999	45,600	6,700	35,000	0	0	0	4,000	0	0	22
23	$30,000 to $49,999	53,000	10,900	37,200	0	0	0	4,900	0	0	23
24	$50,000 to $99,999	160,900	56,500	85,800	0	0	0	18,600	0	0	24
25	$100,000 or more	246,800	88,000	119,000	300	0	300	38,900	300	0	25

Forward-Looking Rental Dynamics Table 1: Counts, 1998–2011, Oakland

Affordability categories	A Total in 1998	B Non-market in 2011	C Extremely low rent in 2011	D Very low rent in 2011	E Low rent in 2011	F Moderate rent in 2011	G High rent in 2011	H Very high rent in 2011	I Extremely high rent in 2011	J Owner-occupied in 2011	K Seasonal or related vacant in 2011	L Lost to stock in 2011
Non-market	65,200	17,200	3,100	5,600	9,000	9,700	9,300	2,000	300	6,000	2,100	900
Extremely low rent	44,300	4,400	3,100	12,100	6,600	3,800	5,100	700	0	6,100	1,400	1,100
Very low rent	145,400	12,300	4,100	25,400	32,500	24,500	19,500	1,400	1,000	20,600	2,000	2,000
Low rent	53,700	3,400	1,000	3,400	5,800	10,700	16,400	2,000	1,000	9,500	300	0
Moderate rent	47,500	1,700	1,700	900	1,700	6,800	15,600	2,100	1,400	12,900	2,400	400
High rent	9,700	300	300	0	300	700	2,400	700	300	4,000	700	0
Very high rent	2,600	300	0	0	0	0	1,400	0	0	700	0	200
Extremely high rent	1,300	0	0	0	0	0	0	0	1,000	0	0	200
Total	369,700	39,600	13,300	47,400	55,900	56,200	69,700	8,900	5,000	59,800	8,900	4,800

Forward-Looking Rental Dynamics Table 2: Row Percentages, 1998–2011, Oakland

Affordability categories	A Total in 1998	B Non-market in 2011	C Extremely low rent in 2011	D Very low rent in 2011	E Low rent in 2011	F Moderate rent in 2011	G High rent in 2011	H Very high rent in 2011	I Extremely high rent in 2011	J Owner-occupied in 2011	K Seasonal or related vacant in 2011	L Lost to stock in 2011
Non-market	65,200	26.5%	4.8%	8.5%	13.7%	14.9%	14.2%	3.1%	0.5%	9.2%	3.2%	1.4%
Extremely low rent	44,300	10.0%	6.9%	27.2%	14.8%	8.5%	11.5%	1.5%	0.0%	13.9%	3.2%	2.6%
Very low rent	145,400	8.5%	2.8%	17.4%	22.4%	16.9%	13.4%	0.9%	0.7%	14.2%	1.4%	1.4%
Low rent	53,700	6.4%	1.9%	6.4%	10.8%	19.8%	30.6%	3.8%	1.9%	17.7%	0.6%	0.0%
Moderate rent	47,500	3.6%	3.6%	1.8%	3.6%	14.3%	32.8%	4.3%	2.9%	27.1%	5.1%	0.9%
High rent	9,700	3.5%	3.4%	0.0%	3.5%	6.9%	24.6%	6.9%	3.5%	40.7%	6.9%	0.0%
Very high rent	2,600	12.9%	0.0%	0.0%	0.0%	0.0%	52.5%	0.0%	0.0%	25.7%	0.0%	8.9%
Extremely high rent	1,300	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	369,700	10.8%	3.6%	12.8%	15.1%	15.2%	18.9%	2.4%	1.4%	16.2%	2.4%	1.3%

Backward-Looking Rental Dynamics Table 1: Counts, 1998–2011, Oakland

Affordability categories	A Total in 2011	B Non-market in 1998	C Extremely low rent in 1998	D Very low rent in 1998	E Low rent in 1998	F Moderate rent in 1998	G High rent in 1998	H Very high rent in 1998	I Extremely high rent in 1998	J Owner-occupied in 1998	K Seasonal or related vacant in 1998	L New construction	M Added in other ways
Non-market	56,600	16,900	4,300	12,100	3,400	1,600	300	300	0	9,800	0	7,300	600
Extremely low rent	19,000	3,000	3,000	4,100	1,100	1,700	300	0	0	1,200	1,400	2,400	600
Very low rent	55,800	5,500	11,900	24,900	3,400	800	0	0	0	5,100	600	2,000	1,500
Low rent	63,800	8,900	6,600	31,900	5,600	1,600	300	0	0	4,700	1,400	700	2,100
Moderate rent	68,700	9,700	3,600	24,400	10,400	6,600	600	0	0	8,800	1,600	2,400	600
High rent	111,900	9,200	5,000	19,300	16,000	15,000	2,300	1,300	0	26,600	1,300	13,700	2,200
Very high rent	19,600	2,000	600	1,300	2,000	2,000	600	0	0	6,600	0	3,700	600
Extremely high rent	13,300	300	0	1,000	1,000	1,300	300	0	1,100	3,800	0	4,100	300
Total	408,700	55,500	35,000	119,000	42,800	30,700	4,800	1,600	1,100	66,700	6,300	36,300	8,700

Backward-Looking Rental Dynamics Table 2: Row Percentages, 1998–2011, Oakland

Affordability categories	A Total in 2011	B Non-market in 1998	C Extremely low rent in 1998	D Very low rent in 1998	E Low rent in 1998	F Moderate rent in 1998	G High rent in 1998	H Very high rent in 1998	I Extremely high rent in 1998	J Owner-occupied in 1998	K Seasonal or related vacant in 1998	L New construction	M Added in other ways
Non-market	56,600	29.8%	7.6%	21.3%	5.9%	2.9%	0.6%	0.6%	0.0%	17.4%	0.0%	12.9%	1.0%
Extremely low rent	19,000	15.9%	16.0%	21.8%	5.8%	9.0%	1.7%	0.0%	0.0%	6.5%	7.3%	12.7%	3.3%
Very low rent	55,800	9.8%	21.4%	44.5%	6.1%	1.5%	0.0%	0.0%	0.0%	9.2%	1.1%	3.6%	2.8%
Low rent	63,800	14.0%	10.3%	50.0%	8.8%	2.5%	0.5%	0.0%	0.0%	7.3%	2.2%	1.1%	3.4%
Moderate rent	68,700	14.1%	5.2%	35.5%	15.2%	9.6%	0.9%	0.0%	0.0%	12.8%	2.3%	3.5%	0.9%
High rent	111,900	8.2%	4.4%	17.3%	14.3%	13.4%	2.0%	1.2%	0.0%	23.7%	1.2%	12.2%	2.0%
Very high rent	19,600	10.2%	3.3%	6.7%	10.1%	10.3%	3.2%	0.0%	0.0%	33.9%	0.0%	19.1%	3.3%
Extremely high rent	13,300	2.5%	0.0%	7.6%	7.4%	9.8%	2.3%	0.0%	8.5%	28.6%	0.0%	31.0%	2.4%
Total	408,700	13.6%	8.6%	29.1%	10.5%	7.5%	1.2%	0.4%	0.3%	16.3%	1.6%	8.9%	2.1%