

# **Office of Financial Management's City Population Estimates**

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**The Housing Unit Method**

**Evolution of OFM's Housing Unit Method**

**Form A Data Collection and the Local Review Work Sheet**

**How Can Cities Help Improve Estimate Accuracy**

Office of Financial Management  
March 2006

# The Housing Unit Method

The Housing Unit Method is used to estimate city populations. A simplified version is shown below:

Current City		Ave. Persons				
Housing	×	Occupancy Rate	×	Per Occupied House	=	<u>Persons in Houses</u>
Persons counted in annexations over prior 12 mo.						+
						<u>Persons in Annex.</u>
						+
Estimate of current GQ Persons						<u>Persons in Facilities</u>
<hr style="border: 0.5px solid black;"/>						<b>Total City Population</b>

OFM’s annual population estimates are benchmarked to the most recent federal decennial census or later local census and use federal census data definitions.

The 2000 federal census housing counts are updated on the basis of new construction, demolitions and annexations.

The method is only as good as the accuracy of the information going into it!

## Basic Features of the Housing Unit Method

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It is a perfect method. If you get housing, the occupancy rate and the persons per household correct—the population is correct. (GQ ignored for simplicity)

There is no modeling error as with regression or other models.

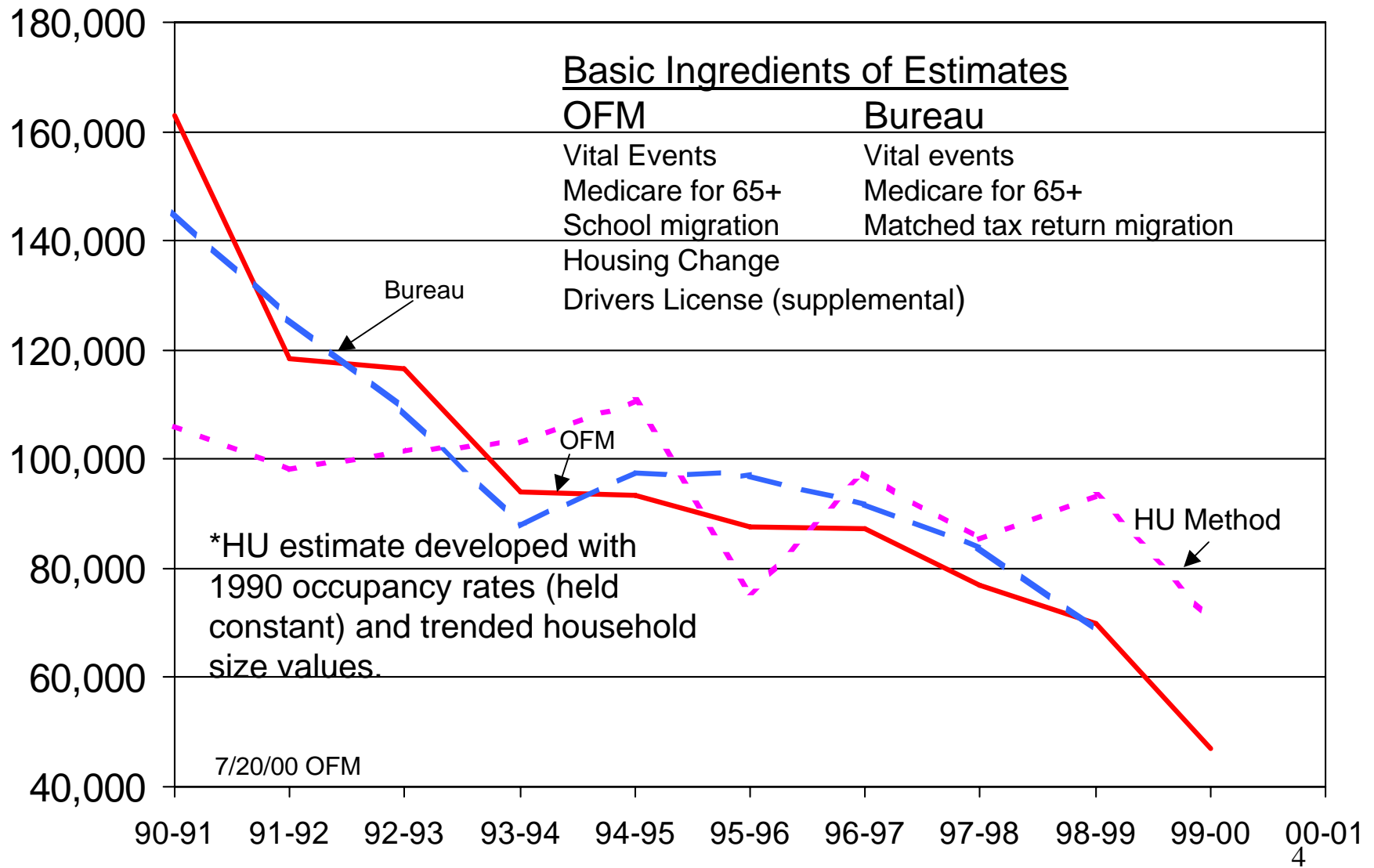
“IF” is a big word. It is difficult to get all three variables correct.

All indicator data have disadvantages—you need to know and understand them.

- Total housing rarely ever declines
- Housing growth may increase or slow, but is usually out of step with actual population change.

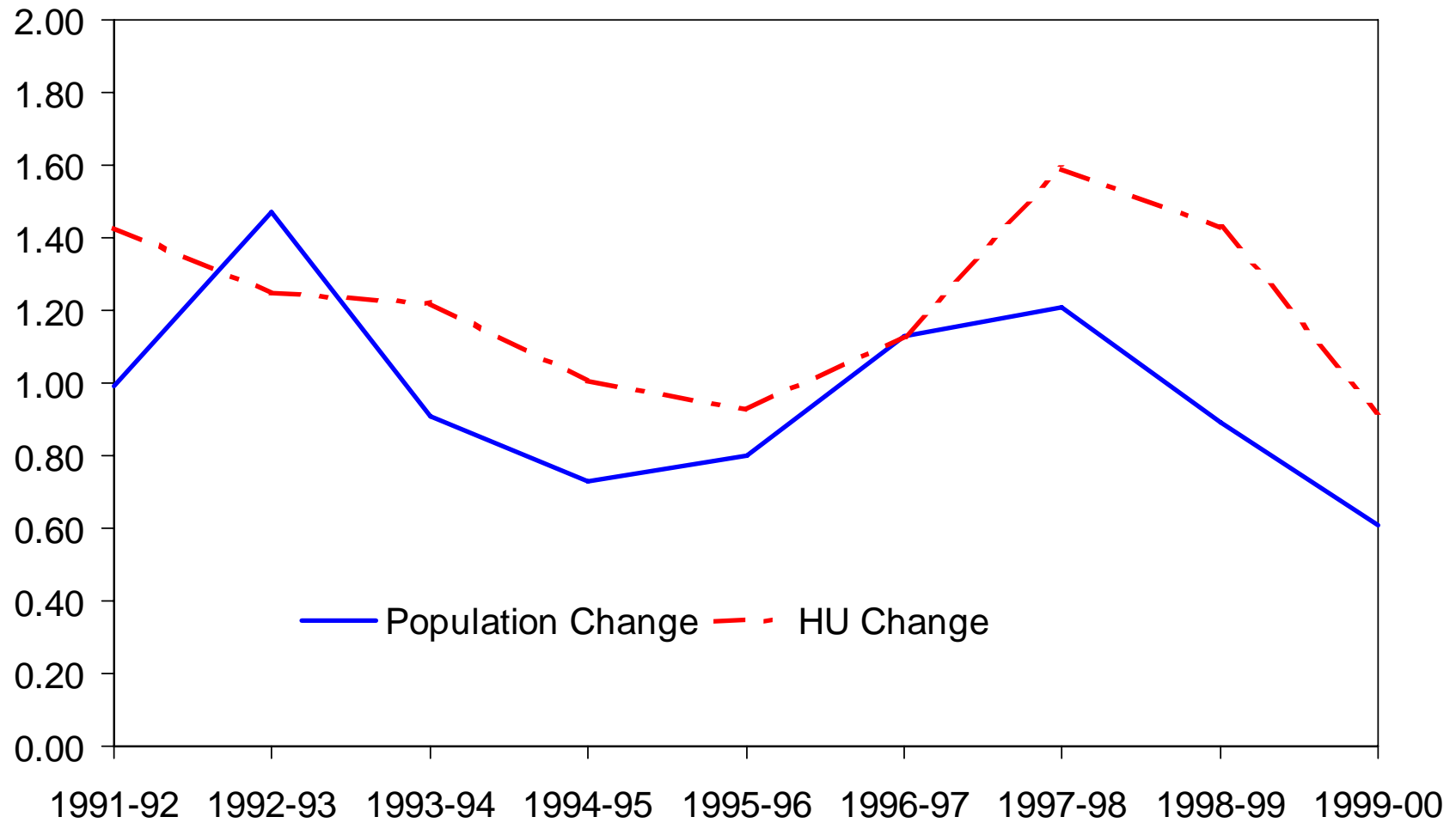
Component methods can more readily pick up change because the migration component, based on school-age children or drivers license flows more quickly show variation. The method tends to over estimate population.

# Annual Population Change from Different Estimates: Official Estimates by OFM and Census Bureau, Housing Unit Method\*



# King County Housing and Population Change

Percent Change



## Population Estimation Procedures Used by the Office of Financial Management (OFM)

Method	Description	Comments	Used for:
1. Component Method II	Population change since the last census is determined by <b>births, less deaths, plus migration</b> estimated from school-age migration. Population age 65 years and over is estimated separately from Medicare data.	Translation of school-age migration to reflect migration of population 64 years and under is based prior decade relationships.	State  Counties
2. Ratio Correlation	<i>This method distributes an existing state level population estimate to counties.</i> The procedure relates change in the county's share of the state population over the last decade to changes in the county's share of a set of symptomatic data over the same period. Changes in the county's share of the symptomatic data are then tracked over to following decade to develop population change. Current variables in the equation are school enrollment, voter and automobile registrations, out-of-state driver's licenses, and natural increase.		Counties

## Population Estimation Procedures Used by the Office of Financial Management (OFM) – Cont.

Method	Description	Comments	Used for:
3. Housing Unit Method	Change in population estimated from <b>change in housing since last census. Average person per house (PPH) and occupancy rates applied to updated housing by type of housing (i.e., single family, duplexes, 3-4 Unit Structures, 5-or more Unit structures)</b> . Population in Group Quarters facilities such as prisons, mental hospitals, and nursing homes, is estimated separately and added to the household population for the area total.	Accuracy is very dependent on current PPH and occupancy factors, which are difficult to update from the last census.  Small changes in PPH or occupancy assumptions have a large impact on population estimates for large areas.	State  Unincorporated area of Counties  Cities and Towns
4. Special Census  7/17/00 OFM	Local government conducts <b>actual enumeration</b> of the population for their April 1 population determination.	Census conducted in accord with OFM requirements.	Primarily done by smaller cities and towns.

## Comparison of Office of Financial Management and Census Bureau Population Estimates for Incorporated Places with 2000 Census Counts

Comparison of Office of Financial Management and Census Bureau Population Estimates for Incorporated Places with 2000 Census Counts

Population Size Categories	OFM Housing Unit City/Town Estimates		Census Bureau Housing Unit Estimate Place Estimates	
	Number of Cities	Average Absolute %Difference	Number of Cities	Average Absolute %Difference
0-99	3	8.6	3,572	35.1
100-499	47	11.0	10,590	15.6
500-999	44	8.1	6,661	10.6
1,000-2,499	54	6.5	8,085	8.8
2,500-4,999	37	5.4	4,375	7.5
5,000-9,999	27	4.4	3,083	6.2
10,000-24,999	22	6.2	2,493	5.2
25,000-49,999	13	3.2	987	4.7
50,000-99,999	4	4.9	505	4.0
100,000 and Over	3	3.5	279	4.3
<b>Total</b>	<b>254</b>	<b>7.0</b>	<b>40,630</b>	<b>12.4</b>

Note: OFM Estimates compared to federal census counts are adjusted to include annexation through April 1, 2000. Cities conducting a special census in April 1, 2000 are excluded from the comparison. The City of Snoqualmie is excluded; a large developing area was missed in the federal count.



## Incorrect use of the Housing Unit Method

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The “incremental” method, based on the assumption that the population and housing counted in the last census stays the same.

1.  $\frac{\text{2000 Census}}{6,280 \text{ people}} +$

2. Net New Houses  
 $\frac{\text{2000 to 2006}}{50} * \frac{\text{Occupancy}}{.95} * \frac{\text{PPH}}{2.5} = \frac{\text{Added People}}{119}$

3.  $6,280 + 119 =$  a 2006 population of 6,399

The fallacy in this method, which comes in many forms, is that the population count at the last census does not change. ***Average household size and occupancy changes and demolitions occur in the old housing as well as the new housing.***

# Evolution and Change in OFM's Housing Unit Method Data and Procedures

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## When does the HU method work well?

1. When there is good residential permit, completion and demolition data.
2. When circumstances are such that there is little change in occupancy rates and average household size.

## When does the HU method perform poorly?

1. When residential permit data, completions and demolition data are poor.
2. When household size and occupancy rates are changing.

**Most estimation techniques lose accuracy during periods of change.** Many models, like CMII, are built around “decade assumptions” or relationships and lack precision in capturing periods of rapid population change. The HU methods begins with the census period occupancy rates and PPH. Anything that changes these values will cause the estimate to go astray. Some examples are: a recession causing outmigration, rapid building caused by low mortgage rates, influx of population with higher fertility, aging housing , aging population, and change in house values.

It is always of value to just understand *when and why* an estimation method is not working well.

## Changes in OFM's HU Method over time

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### **All relate to occupancy rate and household size adjustments**

- The “analog” city technique used to adjust household size
- Trended household size from prior decade
- OFM car vacancy surveys using sample blocks. Metro areas plus Tri-Cities and Bremerton. Regression back-up.
- HUD's contracted postal surveys
- Apartment Vacancy Real Estate Rates
- Postal statistics for counties (current)
- Postal Statistics for cities (current)

<b>Estimated vacancy rates based on USPS delivery statistics</b>									
<b>County</b>	<b>Averaged Vacancy Rate</b>					<b>Change In Rate From 2000</b>			
	<b>February- April 2000</b>	<b>February- April 2001</b>	<b>February- April 2002</b>	<b>February- April 2003</b>	<b>February- April 2004</b>	<b>2000 to 2001</b>	<b>2000 to 2002</b>	<b>2000 to 2003</b>	<b>2000 to 2004</b>
Adams	6.7951	6.9983	6.8127	10.8995	12.0946	-0.2032	-0.0176	-4.1044	-5.2995
Asotin	2.6085	2.9739	5.8651	6.1855	6.2790	-0.3654	-3.2566	-3.5770	-3.6705
Benton	2.1977	2.2738	2.9446	3.2725	3.7959	-0.0761	-0.7469	-1.0748	-1.5982
Chelan	2.4407	6.1770	7.5026	8.4066	8.1747	-3.7363	-5.0619	-5.9658	-5.7340
Clallam	2.9392	3.2275	3.9977	4.0218	4.2120	-0.2883	-1.0584	-1.0825	-1.2728
Clark	0.8155	1.2103	2.8706	3.1673	3.2352	-0.3949	-2.0551	-2.3518	-2.4197
Columbia	11.8339	14.9569	15.4637	14.6430	15.6659	-3.1231	-3.6298	-2.8092	-3.8320
Cowlitz	1.0767	3.0134	5.1034	5.6101	5.2548	-1.9367	-4.0266	-4.5333	-4.1781
Douglas	3.4647	5.1414	7.2774	8.2408	7.2928	-1.6768	-3.8127	-4.7761	-3.8281
Ferry	13.9672	16.6332	18.8840	20.8749	20.4825	-2.6660	-4.9169	-6.9077	-6.5153
Franklin	3.8477	4.4017	5.3811	4.7409	4.5515	-0.5540	-1.5334	-0.8932	-0.7038
Garfield	5.8243	4.5007	5.1115	5.7461	6.9629	1.3236	0.7128	0.0783	-1.1386
Grant	2.8928	5.4165	7.0491	6.9510	7.0074	-2.5237	-4.1563	-4.0582	-4.1146
Grays Harbor	2.4428	10.9569	10.9993	11.3219	11.6298	-8.5141	-8.5565	-8.8790	-9.1869
Island	0.7731	4.5239	4.3349	4.2692	4.5728	-3.7508	-3.5618	-3.4961	-3.7997
Jefferson	2.4575	4.6956	5.0724	6.7286	6.6505	-2.2381	-2.6149	-4.2710	-4.1930
King	0.6589	1.5742	2.0445	2.7691	2.7371	-0.9152	-1.3856	-2.1102	-2.0781
Kitsap	2.1295	3.2018	3.6826	3.6414	4.1608	-1.0724	-1.5531	-1.5119	-2.0313
Kittitas	2.2074	4.5933	5.5723	5.0663	4.0794	-2.3860	-3.3649	-2.8589	-1.8721
Klickitat	1.8429	5.6535	7.2474	8.0273	7.4538	-3.8106	-5.4045	-6.1844	-5.6109
Lewis	2.7090	6.4978	6.4638	6.5492	7.0206	-3.7888	-3.7548	-3.8402	-4.3116
Lincoln	13.0074	15.6469	16.1359	15.7515	15.2640	-2.6396	-3.1285	-2.7441	-2.2566
Mason	2.7594	6.0392	8.9562	8.6955	9.3098	-3.2799	-6.1968	-5.9361	-6.5505
Okanogan	3.8649	7.9386	8.5413	10.7434	12.1617	-4.0737	-4.6763	-6.8785	-8.2968
Pacific	1.1018	2.8477	4.6438	6.6070	6.2395	-1.7459	-3.5420	-5.5052	-5.1377
Pend Oreille	6.0231	6.5970	10.4278	11.3920	12.4808	-0.5739	-4.4047	-5.3689	-6.4577
Pierce	1.5484	2.8813	3.2247	3.6076	4.0717	-1.3328	-1.6763	-2.0592	-2.5233
San Juan	1.5152	7.3363	7.1089	6.1479	6.6733	-5.8210	-5.5937	-4.6326	-5.1581
Skagit	1.4585	4.2707	4.5940	5.0349	4.4013	-2.8142	-3.1375	-3.5784	-2.9448
Skamania	0.4456	2.5888	3.4957	2.6222	5.1914	-2.1432	-3.0501	-2.1766	-4.7458
Snohomish	0.6854	2.1113	2.8572	3.3148	3.6851	-1.4259	-2.1717	-2.6294	-2.9997
Spokane	3.3134	3.8285	6.0578	6.0007	6.1918	-0.5151	-2.7443	-2.6872	-2.8783
Stevens	6.5709	7.1766	8.0925	9.0926	9.6699	-0.6056	-1.5216	-2.5217	-3.0990
Thurston	0.6926	2.9131	3.2293	3.0009	3.0738	-2.2205	-2.5367	-2.3084	-2.3813
Wahkiakum	3.9742	7.6691	10.3379	11.2549	11.9186	-3.6949	-6.3638	-7.2807	-7.9444
Walla Walla	4.9669	5.8198	6.4255	6.9813	6.0868	-0.8529	-1.4586	-2.0144	-1.1199
Whatcom	2.3837	7.5284	8.2128	8.5183	8.4450	-5.1447	-5.8291	-6.1346	-6.0612
Whitman	7.5112	9.7077	11.0905	11.4688	10.4411	-2.1965	-3.5793	-3.9577	-2.9300
Yakima	1.9216	5.3680	6.8570	6.8020	6.6268	-3.4464	-4.9354	-4.8804	-4.7052
<b>State Total</b>	<b>1.6454</b>	<b>3.2452</b>	<b>4.0712</b>	<b>4.4752</b>	<b>4.5968</b>	<b>-1.5997</b>	<b>-2.4258</b>	<b>-2.8298</b>	<b>-2.9513</b>

*Cities were not believers, they did not feel they followed the county trend.*

**Census 2000 Vacancy Rates compared to Estimated Postal Vacancy Rates  
(No PO Boxes)**

HH Match County Rate Name	Legal Status	City Name	Census 2000 Vacancy Rate	Postal 2000	Postal 2001	Postal 2002	Postal 2003	Postal 2004
<b>98.38</b>	<b>State Total</b>		7.33	1.26	2.53	3.34	3.68	3.81
<b>101.24</b>	King		4.22	0.60	1.44	1.91	2.65	2.60
<b>102.50</b>	King	Incorporated	4.32	0.57	1.43	1.93	2.65	2.61
<b>95.39</b>	King	Unincorporated	3.76	0.72	1.48	1.82	2.66	2.57
<b>98.22</b>	King	Algona city	3.76	4.27	3.09	3.53	4.29	4.30
<b>101.51</b>	King	Auburn city	3.83	1.08	3.48	4.11	4.25	4.78
<b>99.55</b>	King	Beaux Arts Village town	2.42	0.02	1.58	0.50	2.43	3.38
<b>103.89</b>	King	Bellevue city	5.29	0.41	0.91	1.56	1.72	1.98
<b>65.72</b>	King	Black Diamond city	5.33	12.86	15.02	11.30	11.02	10.60
<b>99.16</b>	King	Bothell city	3.23	0.86	2.23	2.11	2.73	2.88
<b>103.65</b>	King	Burien city	3.59	1.33	1.51	2.09	2.72	2.97
<b>98.51</b>	King	Carnation city	2.15	0.81	1.63	1.95	2.61	3.46
<b>108.43</b>	King	Clyde Hill city	2.04	0.34	2.02	1.29	4.86	5.74
<b>102.64</b>	King	Covington city	1.68	0.14	0.32	1.73	1.77	1.75
<b>99.82</b>	King	Des Moines city	3.74	1.36	2.05	3.08	4.45	3.85
<b>72.30</b>	King	Duvall city	3.04	1.26	2.46	1.71	2.11	2.19
<b>92.66</b>	King	Enumclaw city	3.12	0.63	3.44	3.36	3.58	2.63
<b>103.04</b>	King	Federal Way city	3.51	0.30	1.95	2.08	2.45	3.00
<b>145.64</b>	King	Hunts Point town	11.29	1.03	3.20	2.19	5.88	5.08
<b>113.46</b>	King	Issaquah city	6.83	1.20	1.71	2.64	2.65	2.08
<b>87.48</b>	King	Kenmore city	3.37	0.39	2.16	2.86	2.49	1.93
<b>104.08</b>	King	Kent city	4.23	0.05	0.23	0.59	2.04	2.56
<b>105.53</b>	King	Kirkland city	5.02	0.28	4.05	4.78	7.02	6.72
<b>96.52</b>	King	Lake Forest Park city	2.69	0.75	0.86	1.13	1.47	1.24
<b>103.27</b>	King	Maple Valley city	2.30	0.66	0.77	1.11	0.80	0.68
<b>94.44</b>	King	Medina city	4.64	1.04	3.14	2.73	4.87	5.71
<b>104.44</b>	King	Mercer Island city	4.19	0.15	3.00	2.36	3.63	4.16
<b>62.49</b>	King	Milton city	3.03	2.89	2.46	5.58	5.25	2.01
<b>105.38</b>	King	Newcastle city	2.86	0.03	1.26	0.78	4.59	3.67
<b>87.79</b>	King	Normandy Park city	2.28	1.44	1.41	1.72	2.37	2.51
<b>100.68</b>	King	North Bend city	2.54	0.51	1.48	2.05	2.39	3.05
<b>108.86</b>	King	Pacific city	4.49	0.88	3.61	5.56	7.29	5.19
<b>102.70</b>	King	Redmond city	5.66	0.17	0.17	0.75	1.40	1.07
<b>106.56</b>	King	Renton city	4.27	0.39	1.31	1.75	5.02	4.04
<b>116.14</b>	King	Sammamish city	4.03	0.01	0.43	0.68	1.15	1.00
<b>106.03</b>	King	SeaTac city	4.60	0.52	1.19	2.51	2.54	1.94
<b>102.25</b>	King	Seattle city	4.45	0.61	1.24	1.78	2.38	2.34
<b>100.23</b>	King	Shoreline city	2.91	0.68	1.01	1.26	1.20	1.19
	King	Skykomish town	35.80					
<b>54.87</b>	King	Snoqualmie city	3.66	0.03	0.24	0.36	1.39	3.45
<b>102.97</b>	King	Tukwila city	6.98	0.98	2.63	2.83	2.82	1.58
<b>94.73</b>	King	Woodinville city	2.33	0.14	0.53	0.60	0.98	0.81
<b>118.67</b>	King	Yarrow Point town	3.56	0.08	3.74	1.69	3.16	3.66

*So, we overlaid city boundaries on the postal carrier route data and using spatial interpolation developed postal vacancy rates for cities.*

## Form A: Good data are a Basic Requirement Here are the “DOs”

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- Assign the task to the most knowledgeable invested person
- Read the forms, call if you have questions
- Remember to include housing started the prior year (or before), but not previously reported as complete. “Carry-over units”
- Take the “totals” from any detailed attachments and write them in the appropriate place on Form A. See attachment will not work.
- Only include additional Manufactured Housing Parks, Special Units and Group Quarter Facilities ***if they were not present to be counted in the 2000 census.*** Call and verify.
- Consistent reporting is key for Manufactured housing, Specials, and Group Quarters. Do not confuse the **city’s count** with the **adjusted census count** developed by OFM from the information furnished by the city.

# Development of Estimates for Manufactured Housing, Special Housing, Special Population and Group Quarters Population

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	Count of Mobile Homes/ TR	Count of Special Units	Count of Population in Special Units	Count of GQ Population
1. Base Census Count	170	19	29	1,573
2. City Count at Base Census	128	35	39	1,137
3. City Count at 2005 Estimate Date	180	33	47	1,183
4. Difference = (3) – (2)	52	-2	8	46
5. Annexations 4/2/2004 through 4/1/2005	0	0	0	0
6. Estimate 20-05 = (1) + (4) + (5)	222	17	37	1,619

The base census count is accepted as given.

The difference between the administrative count at the estimate date and the base census date (*furnished by the city*) is developed.

This difference is added (or subtracted) from the base census count.

Mobile homes, special units, or group quarter facilities present in April of 2000 are assumed to be in the base census count.

Adding such units or specials, or GQ as being “new” creates a double count.

## Development of Estimates for Manufactured Housing, Special Housing, Special Population and Group Quarters Population Continued

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Q. What if I identify a group of specials that may be new but it cannot be verified?

A. The units and/or population will be treated as if they did exist in 2000. The current count will be used for the city's 2000 administrative count. Thus the difference between 2000 and the current year will be "0". But, any difference in subsequent years will be credited to the city.

Q. What if I do not have a 2000 count for "specials" in the block group that contains the city marina, I know we had 20 people living on boats in the marina in 2000. Should I add them?

A. No. We do not know if they were missed. Even if there is no housing or people in the census area that contains the marina, they might be allocated to a nearby block. The same is true for GQ facilities you feel are missing.

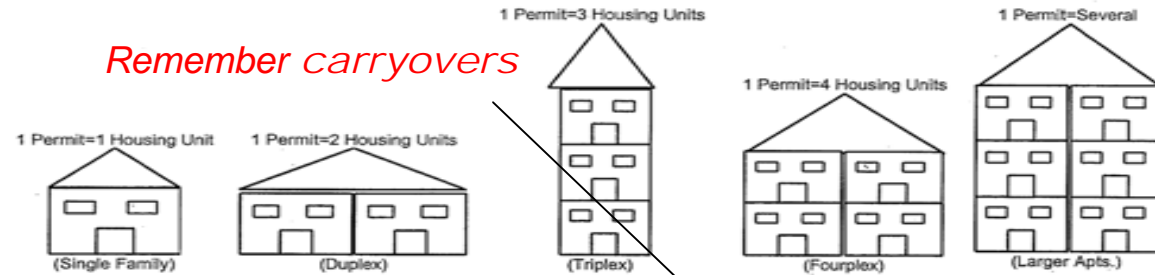
(Lets look at the actual form)



**A. New frame housing (Not mobile/manufactured housing; that's on the next page.)**

**Column I.** For how many structures were permits issued by structure by type from *April 2, 2005 through April 1, 2006?*

*Housing structures can contain one or more "separate living quarters" called "housing units."*



Remember carryovers

**Column II.** How many separate living quarters are added by these new structures permitted from *April 2, 2005 through April 1, 2006?*

Housing unit structure type	Column I. Number of housing structure permits	Column II. No. of separate living quarters/housing units in these permits	(3)	(4)	(5) = (3) + (4)
			Of these housing units, how many are completed?	Completions from housing started before April 1, 2005, but not yet reported as completed	Total completed separate living quarters/housing units
1-unit structure (Single family)	52	52	11	37	48
2-unit structure (Duplex)	3	6	0	2 (1 Permit)	2
3-unit structure (Triplex)	0	0	0	3 (1 Permit)	3
4-unit structure (Fourplex)	0	0	0	4 (1 Permit)	4
5 or more units (Larger apts.)	4	127	0	36 (1 Permit)	36
Total	56	185	11	82	93

**Column III.** How many *housing structures and housing units/separate living quarters* were demolished, destroyed by fire, converted to business use, etc., from *April 2, 2005 through April 1, 2006?*

Housing unit Structure type	Column III.	
	Number of housing structures demolished or converted	Number of housing units / separate living quarters demolished or converted
1-unit structure	20	20
2-unit structure		
3-Unit structure		
4-unit structure		
5 or more units		
Total	20	20

What about housing type changes/conversions? Report original unit as a demolition. Report changed unit as new construction.

**B. Mobile homes and manufactured housing** (Not travel trailers, RVs, etc.; that's on the next page.)

FOR REFERENCE	Total	Occupied	Vacant
Counted in 2000 Census	170	159	11

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**Note:** Do *not* include any mobile/manufactured homes in areas annexed from April 2, 2005 through April 1, 2006

Section 1. Total mobile/manufactured homes within city limits as have been reported before.

Total	Total	Occupied	Vacant (no pads)
Reported on last year's Form A	180	161	19
Annexed April 2, 2004 - April 1, 2005 <i>These should not have been included on last year's Form A. Please check here if you did include them!</i> <input type="checkbox"/>	0	0	0
Moved out since April 1, 2005		7	7
Lost due to fire, flood, etc. since April 1, 2005			
Moved in since April 1, 2005			
<b>Total on April 1, 2006</b>	<b>180</b>	<b>154</b>	<b>12</b>

Remember to recount and enter any MH annexed the prior year.

The same is true for annexed specials on the following page.

Section 2. Detail information for mobile/manufactured homes in parks. Use additional sheets if necessary.

Name of court/development	Address	Phone #	Total	Occupied	Vacant
Holiday Resort	19250 Aurora Ave. N.	542-2760	50	45	5
Overland Park	1210 N. 152 <sup>nd</sup> Street	363-8558	37	34	3
Total in Parks			<b>87</b>	<b>79</b>	<b>8</b>

The OFM program automatically put in the annexed housing and the annexed GQs from the prior year. But, not manufactured housing or specials.

Section 3. Detail information for mobile/manufactured homes outside of parks on city lots that you have been reporting.

	Total	Occupied	Vacant
Total on city lots:	<b>91</b>	<b>80</b>	<b>11</b>

Please describe the procedure used to get the information in the above tables.

Permit data for new manufactured homes on city lots, telephone survey of mobile home parks, census data.

**C. Special housing...travel trailers, RVs, boats and other unusual places used for permanent living—only counted when occupied by persons with no other usual home!**

- Do not include any special housing in areas annexed from April 2, 2005 through April 1, 2006. These annexed populations are handled separately.
- A count of Special Units and population is required for annual updates.
- Special population counts from Census 2000 (or later special census) are shown and used for those cities/towns not tracking changes in Special Units.

**C.1. Total by Type of Special.** Detail from C.2. below must add to total reported here.

Type of special unit	Number of special units on April 1, 2006	***Must Count*** Count of population living in these special units on April 1, 2006	----- FOR REFERENCE -----	
Travel trailers	32	45	Special Units Counted in 2000 Census	
Recreational vehicles			Number of Units	Population
Houseboats			19	29
Other boats			----- FOR REFERENCE -----	
Other: (please specify)			Total special units reported by city April 1, 2005	Total population living in these special units reported by city April 1, 2005
<b>Total Special Housing</b>	<b>32</b>	<b>45</b>	33	47

**C.2. Detailed information.** Must be an actual count, not an estimate.  
Totals reported here must add to totals in C.1.

Is this Special a new entry? Circle One	Name of site/facility	Address	Contact/phone #	Total number of Special Units	Population Count in Special Units
Yes* / <b>No</b>	<b>Holiday Resort</b>	<b>19250 Aurora Ave. N.</b>	<b>Leesa Henderson</b> <b>206-542-1114</b>	<b>32</b>	<b>45</b>
Yes* / No					
Yes* / No					
Yes* / No					
Yes* / No					
Yes* / No					
Yes* / No					
			<b>Total</b>	<b>32</b>	<b>45</b>

Use additional sheets if necessary.

\*For each new entry, answer the following question: Could this Special Unit have been present in the city/town's last census? Yes / No

**Was this Special here in 2000 or last census?**

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*Remember to recount and enter any Specials annexed the prior year.*

**D. Group quarters population...persons living in places that reflect other than ordinary household life. Generally places where unrelated people eat and/or sleep together in a "group" living situation.**

- Do not include any group quarters population in areas annexed from April 2, 2005 through April 1, 2006. These annexed populations are handled separately.
- Group quarters counts from Census 2000 (or special census) are shown and used for those cities not tracking annual changes in specific group quarters facilities.
- Report current counts for the facilities your city/town has been reporting. These facilities are already listed in section D.3 beginning on the next page.
- Add new group quarters facilities (if any) below in D.2.

**D.1. Total Group Quarters Population by Type**

D.1. = D.2. + D.3. Type of group quarters facility	Population April 1, 2006	FOR REFERENCE	FOR REFERENCE
		Population Reported by City April 1, 2005	Population Counted in April 1, 2000 Census
Nursing/convalescent home	1130	1131	352
College dormitory, fraternity, sorority, etc.		0	0
Mental/correctional/jail (persons with stays of six months or more or who have no usual residence)/ other institutions		0	186
Military barracks, bachelor officers' quarters		0	0
Other non-institutional: (please specify) <b>Compass Center, Spring Meadows, St. Josephs Convent</b>	52	52	1035
<b>Total Group Quarters Population: Insert D + Newly Added Facilities</b>	<b>1182</b>	<b>1183</b>	<b>1573</b>

Note: The following are NOT group quarters: apartments for the elderly, university controlled family housing (including apartments), and short-term care facilities such as detention centers or drug/alcohol rehabilitation centers. If you have questions, call and ask for assistance.

**D.2. List New Group Quarters Facilities**

Name of new facility	Type of Facility	Address incl. zip code	Source of new facility*	Resident Population Count
<b>The Compass Center</b>	<b>Other / Veterans</b>	<b>1301 N. 200<sup>th</sup> Street 98133</b>	<b>Permit Data</b>	<b>25</b>
Use additional sheets if necessary	Total Population in New Group Quarters Facilities . . . .			<b>25</b>

Was this GQ here in 2000 or last census?

\*Conversion of residential/commercial structure? Annexation? New construction?

**D.3. Group Quarters Detail Worksheet for Previously Reported Facilities 2006.****Municipality of: Shoreline in King County**

Please make changes/corrections to facility information if needed. Post new counts.

Group Quarters Facility Type: Nursing/Convalescent Home						
OFM ID	Facility Name	Address	Zip Code	Phone Number	2005 Population	2006 Population
1223	AEGIS Alzheimers/Assisted Living	15100 1ST AVE NE SHORELINE	98155	206-417-9747	40	48
1035	Anderson House	17127 15TH AVE NE SHORELINE	98155	206-364-7131	87	87
1029	Anderson Plaza	17201 15TH AVE NE SHORELINE	98155	206-364-9336	98	104
1030	Arden Homes	16357 AURORA AVE N SHORELINE	98133	206-542-3103	89	88
1038	Christa Care	19303 FREMONT AVE N SHORELINE	98133	206-546-7402	77	66
1031	Crista	19303 FREMONT AVE N SHORELINE	98133	206-546-7400	175	175
1043	Fircrest School	15230 15TH AVE NE SHORELINE	98155	206-361-2990	193	170
1039	Northridge House	745 N 180TH ST SHORELINE	98133	206-542-3666	6	6
1040	Northridge House	20031 6TH AVE NE SHORELINE	98155	206-542-3666	6	6
1034	Park Ridge Care Center	1250 NE 145TH ST SHORELINE	98155	206-363-5856	109	111
1042	Pinehurst Boarding Home	2818 NE 145TH ST SHORELINE	98155	206-364-8810	21	22
1036	Pinehurst Nursing Home	2818 NE 145TH ST SHORELINE	98155	206-364-8810	100	103
1028	Richmond Beach Medical & Rehab Center	745 N 180TH ST SHORELINE	98133	206-546-2666	130	137
Subtotal for Nursing/Convalescent Home facilities (13 records)					1,131	1123

**E. Annexations approved from April 2, 2005 through April 1, 2006 ...in accordance with RCW 35.13.260 and RCW 35A.14.700**

Please provide the following information for each parcel of land annexed to your municipality between April 2, 2005 and April 1, 2006.

Name or other identification of annexed area(s)	Annexation ordinance number	Effective date	OFM approval date	OFM file number
Evans Annexation	5370	4-26-2000	8-29-2000	#2000-85

Effective date: The date when this parcel became a part of the city or town.  
 Approval date: The date when this parcel was approved by OFM as noted in the *Office Record* box of an annexation certificate that has been returned to your city or town. If unknown, leave blank.  
 OFM file number: The file number is found in the *Office Record* box on the copy of an OFM *approved* annexation certificate that has been returned to your city or town. If unknown, leave blank.

**RCW 35.13.260 AND RCW 35A.14.700 REQUIRE AN ANNEXATION CERTIFICATE TO BE FILED WITH OFM.**

- Has an *Annexation Certificate* for each parcel annexed been filed with OFM?  Yes  No
- Have all other statutory requirements been fulfilled?  Yes  No
- Have any legal challenges been filed contesting any of the annexations described above?  Yes  No

Note: All population and housing counts in annexations approved by OFM from April 2, 2005 through April 1, 2006 will be handled separately in developing population estimates for your city/town. If you have unreported annexations, please list them on this form and send the required documents regardless of population size. If you have questions regarding annexations or need forms, please call (360) 902-0597.

**2005 Population Local Review Worksheet: City: Shoreline County: King**

Direct any questions to 360/902-0599 Response deadline is June 21, 2004 Office of Financial Management/Forecasting 2/24/2006  
 SECTION 1: UPDATE OF HOUSING AND POPULATION. Frame housing in Cols. B through F are updated by construction and demolition as reported by cities and towns (Form A). Mobile Homes and Special Housing are from Section 3 below.

*Don't just focus on the total!*

	A. Total Units	B. 1-Unit	C. 2-Unit	D. 3.& 4-Unit	E. 5 or More Unit	F. Mobile Homes/ Trailers	G. Special Housing
1. 2000 Base Census Housing *	21,338	15,776	394	516	4,463	170	19
2. Net Housing Unit Change: Base Census to Estimate Year. Excludes Annexations 4/2/2004 through 4/1/2005	369	193	38	35	53	52	-2
3. Housing Estimate = (1)+(2)*	21,707	15,969	432	551	4,516	222	17
4. Occupancy Rate	0.944718	0.950400	0.965600	0.935400	0.926000	0.910400	0.823529
5. Occupied Units = (3) *(4)	20,507	15,177	417	515	4,182	202	14
6. Household Size	2.495343	2.723326	2.214834	2.272177	1.752473	1.880503	2.642857
7. Household Population = (5)* (6)	51,172	41,332	924	1,170	7,329	380	37
8. Other Military Housing	0	0	0	0	0	0	0
9. Occupied Units	0	0	0	0	0	0	0
10. Population	0	0	0	0	0	0	0
11. Annexed Housing 4/2/2004 thru 4/1/2005	0	0	0	0	0	0	0
12. Occupied Units	0	0	0	0	0	0	0
13. Population	0	0	0	0	0	0	0

*Check out the housing. Is it correct?*

**SECTION 2. SUMMARY ALL HOUSING AND POPULATION**

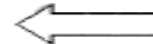
14. All Housing Units	21,707	15,969	432	551	4,516	222	17
15. Occupied	20,507	15,177	417	515	4,182	202	14
16. Occupancy Rate	0.944718	0.950400	0.965600	0.935400	0.926000	0.910400	0.823529
17. Persons Per Household	2.495343	2.723326	2.214834	2.272177	1.752473	1.880503	2.642857
18. Household Population	51,172	41,332	924	1,170	7,329	380	37

*Check out the PPH & Occupancy. Compare to last census.*

19. Group Quarters Population	1,328
20. All Population = (18) + (19)	52,500

\*Less Other Military Housing or population in Other Housing if applicable.

**2005 Population for Review and Comment: 52,500**



SECTION 3. DEVELOPMENT OF MOBILE HOMES, SPECIAL UNITS AND GROUP QUARTERS These are the housing and population categories that require a count by the cities each year on the data collection form (Form A).

	Count of Mobile Homes/TR	Count of Special Housing Units	Count of Population in Special Housing Units	Count of Group Quarter Population
1. Base Census Count .....	170	19	29	1,573
2. City Count at Base Census .....	128	35	39	1,428
3. City Count at Estimate date 2005 .....	180	33	47	1,183
4. Difference = (3) - (2) .....	52	-2	8	-245
5. Annexations 4/2/2004 through 4/1/2005 .....	0	0	0	0
6. Estimate 2005 = (1) + (4) + (5) .....	222	17	37	1,328

*Anything missed here?*

\*Less Other Military Housing or population in Other Housing if applicable.

**COMMENTS:**

Loss was due to growth in housing stock not keeping up with apparent decline in household size. Also, postal vacancy rates increased from 1.2% to 1.6% over the last year.

## How can cities help OFM develop an accurate estimate?

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- Local jurisdictions should provide OFM with accurate and consistent housing and group quarters information (Form A Data).
- Other information added to the estimation process needs to fit into the housing unit method in a quantitative manner.
- The 2000 federal census measures of occupancy rates and average persons per household can be updated, when possible, on the basis of available administrative or survey data.
- ***The most important prerequisite is that the administrative data be available for 2000.*** A comparison of the federal census and survey results in 2000 identifies the differences in the two sets of data due to differences in collection, definition, and geographic coverage.
- Criteria to ensure accuracy are important. Cities share set revenue funds. Population increases reduce the per capita allocation to all cities. Small shifts in average household size and vacancy rates for large cities have a dramatic impact on the allocations.
- ***All data used in developing annual estimates must be of sufficient quality to meet legal challenges.***



## What type of data can be used to update occupancy rates?

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Real estate vacancy surveys, utility data, and postal statistics are probably the most visible information that can be used to update occupancy rates—but only under specified conditions.

*We need to know the relationship between the data and the occupancy rate at the last census.*

Administrative data are collected for administrative purposes. They do not reflect the Census Bureau's definition of vacancy. Differences in definition and in the universe used in the sample will create a bias.

Real estate vacancy surveys measure the cost and availability of apartment rentals. Rental surveys fall notably short of counting federal census vacancies for two primary reasons. First, many "rented" units are not occupied by federal census definitions. Second, these surveys only cover apartment units that are currently on the rental market.

# Differences in Real Estate Survey Vacancies versus the Census Bureau

## Managers Say “Rented or Occupied” And Other Circumstances

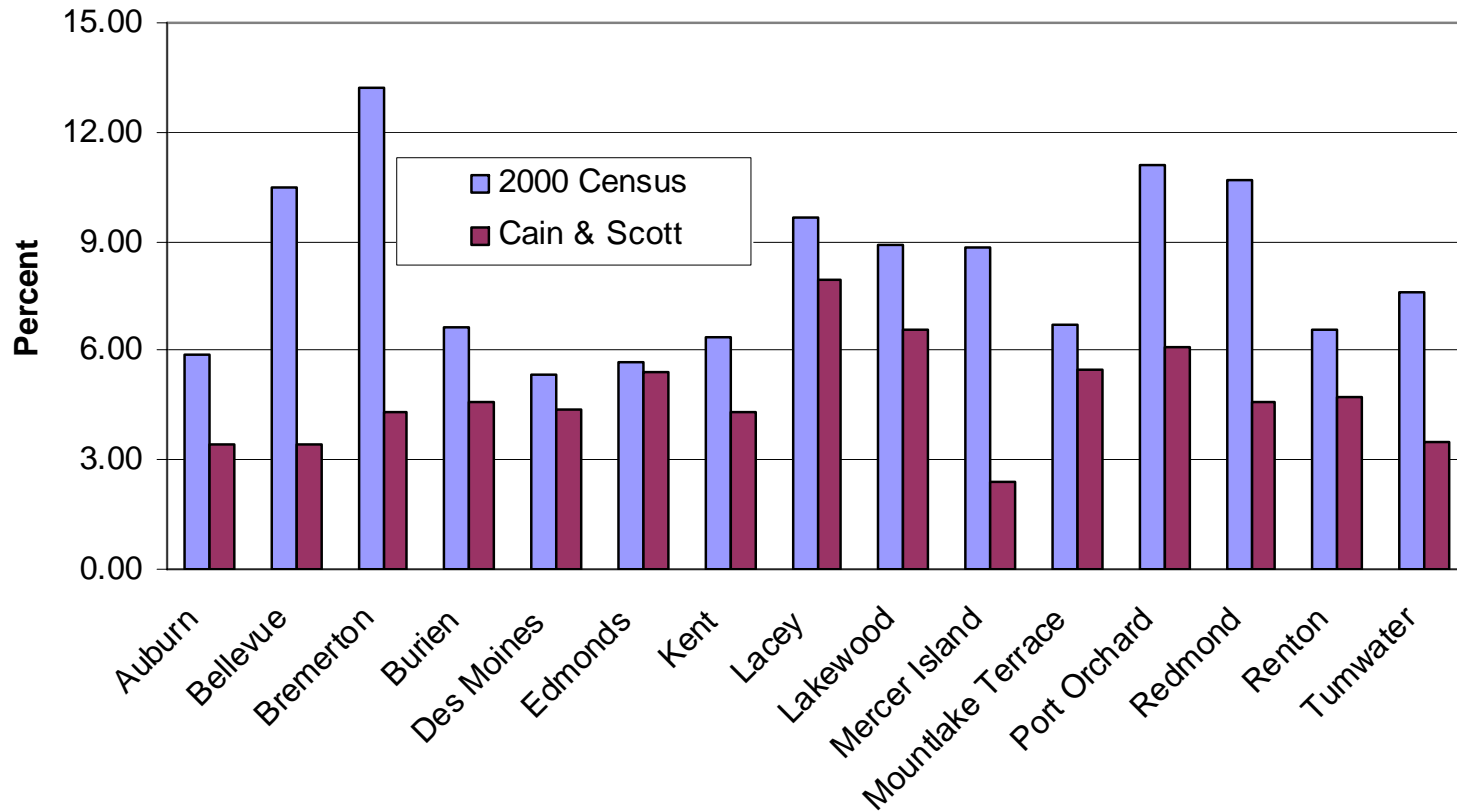
1. Units rented for temporary use by firms for contractors, consultants, employees on the road.
2. Persons moving may “overlap” rentals for a few weeks.
3. Rented apartment is a commuter’s work residence as compared to home residence.
4. Units under renovation are not reported as vacant by managers because they are not on the rental market.
5. Time share units considered occupied.
6. New completed apartment buildings are excluded from real estate surveys for 18 months.
7. Apartment construction in progress is excluded in real estate or telephone vacancy surveys.

## How Units Are Defined by The Bureau of the Census

1. Temporary use rentals are counted vacant, not occupied by usual resident.
2. The unit the person is moving into is considered vacant.
3. The unit that is not the usual residence of the commuter is counted as vacant.
4. Units under renovation are counted as vacant.
5. Time share units counted vacant, no usual resident.
6. Units in new apartment buildings are counted as vacant.
7. Apartment units under construction are counted as vacant if walls, roof and door are in place.

***Due to differences in definition — real estate surveys could contact 100 percent of the apartment buildings in an area and still obtain vacancy rates far lower than the federal census.***

## Comparison of 2000 Vacancy Rates for Selected Cities 5 or More Unit Structures



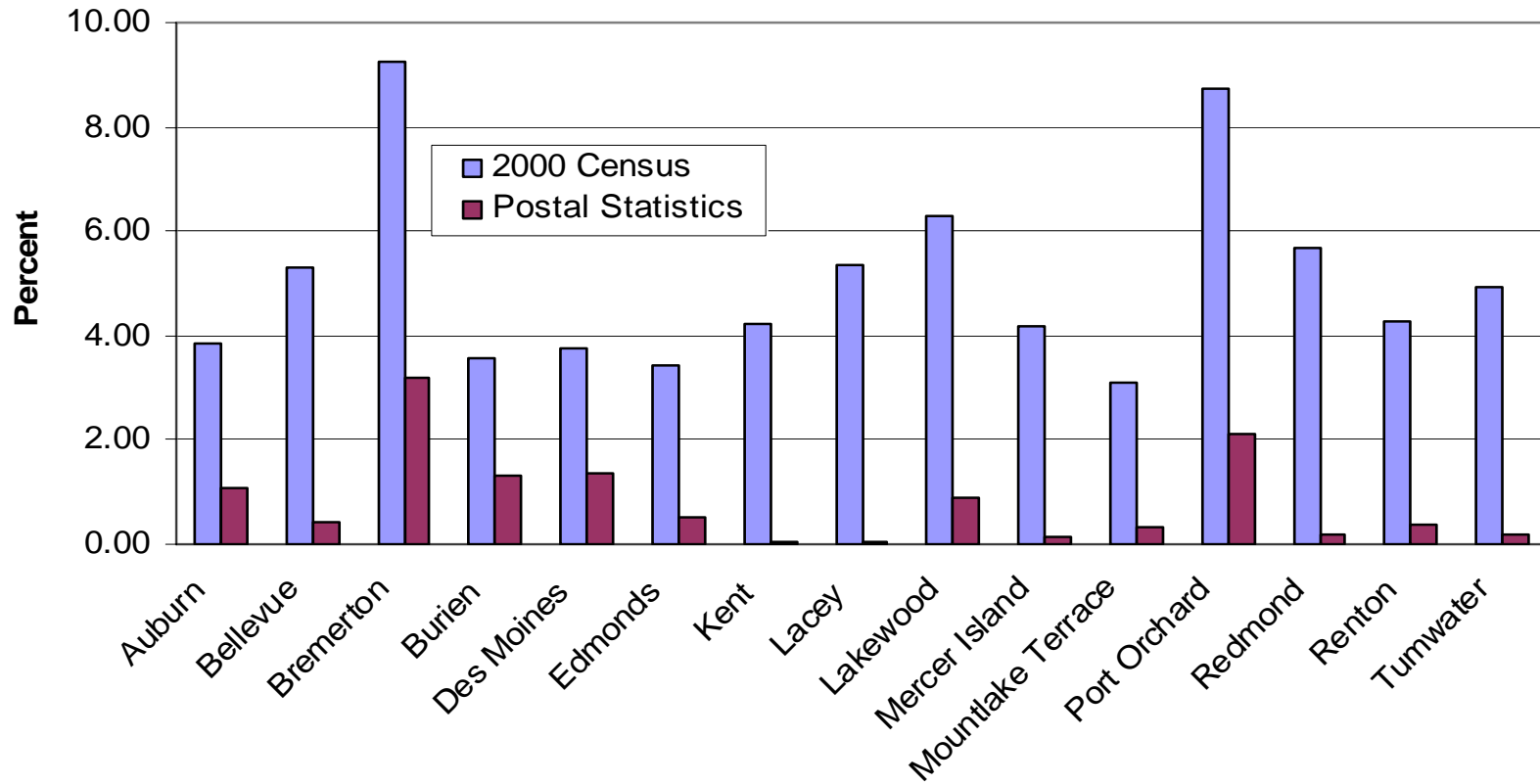
Cities	Percent Vacant		
	2000 Census	Cain & Scott	Difference
Auburn	5.88	3.41	3.41
Bellevue	10.51	3.41	3.41
Bremerton	13.25	4.30	4.30
Burien	6.63	4.60	4.60
Des Moines	5.36	4.40	4.40
Edmonds	5.69	5.40	5.40
Kent	6.39	4.30	4.30
Lacey	9.65	7.91	7.91

Cities	Percent Vacant		
	2000 Census	Cain & Scott	Difference
Lakewood	8.88	6.59	6.59
Mercer Island	8.86	2.37	2.37
Mountlake Terrace	6.69	5.50	5.50
Port Orchard	11.10	6.07	6.07
Redmond	10.66	4.61	4.61
Renton	6.59	4.70	4.70
Tumwater	7.57	3.52	3.52

# Difference between Federal Census Housing and a Postal Delivery Point

	Census Bureau	U.S Postal Service
1. Basic definition of housing unit.	A housing unit is a structure intended for permanent occupancy in which people live separately and have direct access . Commercial structures are excluded	A postal delivery (or stop) is an address, including post office boxes, where mail can be delivered. Addresses are classified as residential or business.
2. Coverage in specific geographic areas.	The federal census attempts to identify and include every residential housing unit in a given geographic area. A geographic location of every residential living unit is required.	The USPS collects information on active and possible delivery addresses. <b>Postal data exclude structures without an address.</b>
3. How are new units added?	The census re-counts units every ten years.	Jurisdictions submit new addresses. These units are not considered a deliverable address (a stop) until a delivery box/place is in place.
4. How are obsolete or fire destroyed units removed?	Houses are not removed; they are just not there to be counted	If there is no activity in 90 days, the USPS needs to take an action. It may be removed from active or possible deliveries

# Comparison of 2000 Vacancy Rates for Selected Cities Total Structures



Cities	Percent Vacant		Difference
	2000 Census	Postal	
Auburn	3.83	1.08	2.75
Bellevue	5.29	0.41	4.88
Bremerton	9.23	3.17	6.06
Burien	3.59	1.33	2.26
Des Moines	3.74	1.36	2.38
Edmonds	3.45	0.51	2.94
Kent	4.23	0.05	4.18
Lacey	5.33	0.05	5.28

Cities	Percent Vacant		Difference
	2000 Census	Postal	
Lakewood	6.30	0.91	5.39
Mercer Island	4.19	0.15	4.04
Mountlake Terrace	4.19	0.15	4.04
Port Orchard	8.72	2.10	6.62
Redmond	5.66	0.17	5.49
Renton	4.27	0.39	3.88
Tumwater	4.94	0.18	4.76

## What type of data can be used to update household size?

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- It is difficult to obtain data reflecting changes in household size without a full census.
- OFM's county level regression model used in the 1990's was only of marginal value.
- OFM's State Population Survey and the American Community Survey do provide "broad brush" trends for large areas.

Information from the American Community Survey and Washington State Population Survey are similar, but certainly do not match.

Is it the annual averaging in the American Community Survey? What else? We can only speculate.

**American Community Survey  
Household Size**

	<u>2000</u>	<u>2004</u>	<u>2004/2000</u>
Washington	2.53	2.51	0.9921
King	2.39	2.36	0.9874
Pierce	2.60	2.57	0.9885
Snohomish	2.65	2.64	0.9962
Spokane	2.46	2.42	0.9837
Clark	2.69	2.68	0.9963
Yakima	2.96	3.00	1.0135
Seattle City	2.08	2.09	1.0048
Yakima City	2.63	2.73	1.0380

**Washington State Population Survey  
Household Size for County & County Groups**

	<u>2000</u>	<u>2004</u>	<u>2004/2000</u>
Washington	2.57	2.48	0.9650
North Puget	2.49	2.48	0.9960
West Balance	2.47	2.31	0.9352
King	2.55	2.35	0.9216
Puget Metro	2.56	2.55	0.9961
Clark	2.68	2.64	0.9851
East Balance	2.57	2.41	0.9377
Spokane	2.47	2.46	0.9960
Tri-Cities	2.91	2.88	0.9897

## **May partial surveys be done to obtain occupancy and/or household size data for select categories of housing?**

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Partial surveys are not used because the classification of housing by structure type is inaccurate.

Without a solid count of total city housing few estimate issues can be resolved.

*If a city spends money to conduct a survey, the survey should provide accurate information to resolve issues and/or questions. Partial surveys result in several disputable issues that will make a substantial difference in the city's population estimate*



## What type of surveys are approved by OFM?

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Small and medium sized cities are encouraged to conduct a special census. This is a 100 percent survey of all city housing in accordance with federal census definitions and procedures. Prepared instruction manuals and cost estimates are available on request.

For large cities, sample surveys are used to obtain current occupancy and household size information. Total coverage is too expensive. A random sampling procedure is used for each housing category type. It is required the sample size yield an error of only 1.5 percent at 95 percent confidence.

Samples require a representative universe from which to draw the sample units. Recent experience has shown that it is very difficult to get a set of housing data from which to draw a representative sample. See 2003 Research Brief “The Pasco Case” on OFM webpage.

## Office of Financial Management City Contacts

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**County Analyst**

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- Theresa Lowe
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- Mike Mohrman



## Official April 1 Population Estimates: Counties by Analyst



**Financial Management**

STATE OF WASHINGTON  
Forecasting Division  
Kyle Reese-Cassal  
3-17-06

