

# Senior Shedding

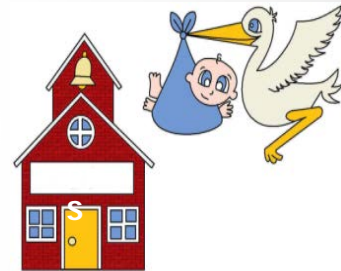
Mortality and Migration of Seniors  
Create Vacancies for Gentrifying Neighborhoods

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## Paper follows from demographic work for Portland Public Schools

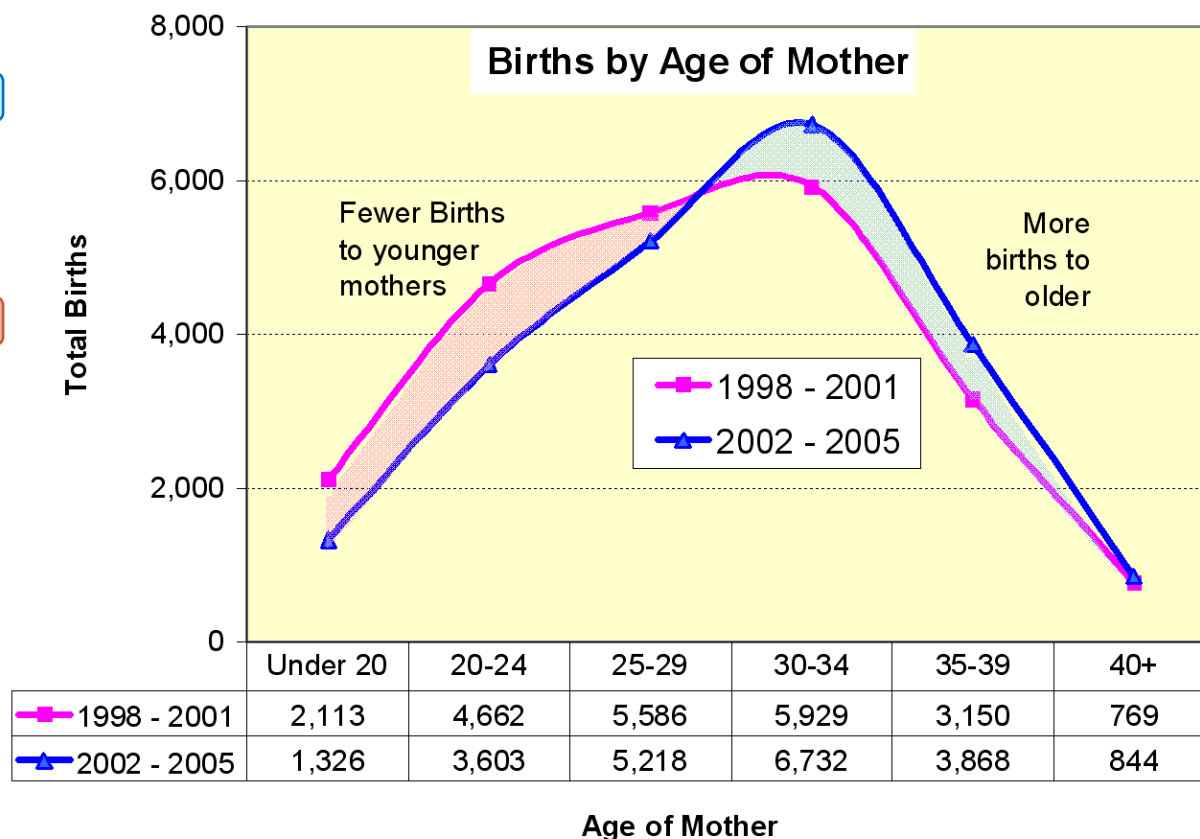
- The Population Research Center at Portland State University has provided demographic services to Portland Public Schools for over ten years, mainly school enrollment forecasts.
- We are paid for the forecasts, but are interested in the “back story” of the ups and downs of school enrollment at the neighborhood level.
  - In an earlier paper we examined some of the impacts of changes in age specific fertility: *“Older Moms Deliver: How increased births to older mothers have impacted enrollment in Portland’s schools”*.
  - This lead to questions about whether we were looking at housing turnover or gentrification.
  - The present paper follows up by looking at how the vacancies created by deaths and out-migration of seniors, baby boomers, facilitated housing turnover, or gentrification referred to here as: *Senior Shedding*.
  - Read the full paper at:



[www.pdx.edu/prc/news-and-presentations-from-the-population-research-center](http://www.pdx.edu/prc/news-and-presentations-from-the-population-research-center)

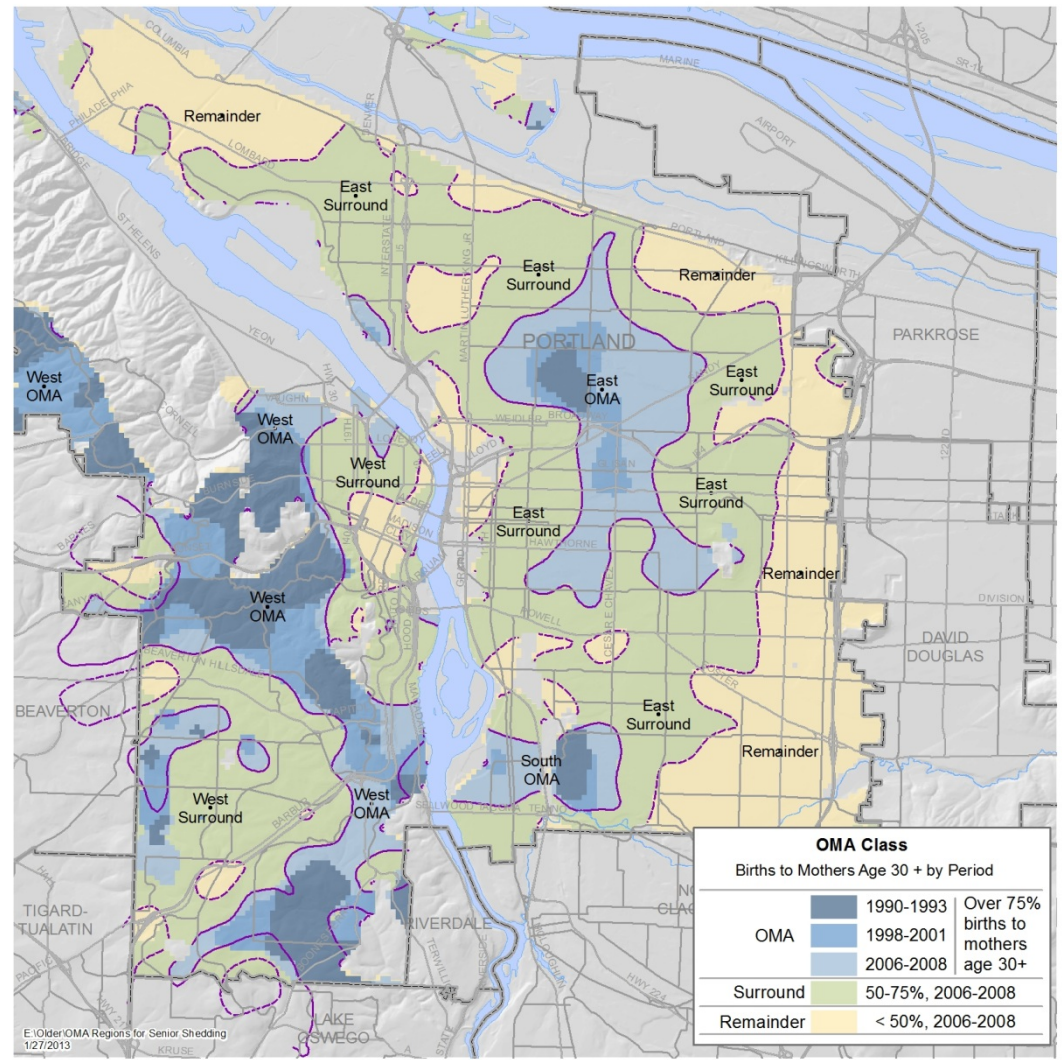
# There was a crossover in births by age of mother for the Portland School District

- In 2001 the number of births to older mothers (age 30+) □
- About equaled those to younger mothers (under age 30). □
- The total number of births was about the same:
  - 22,208 from 1998-2001
  - 21,591 from 2002-2005.



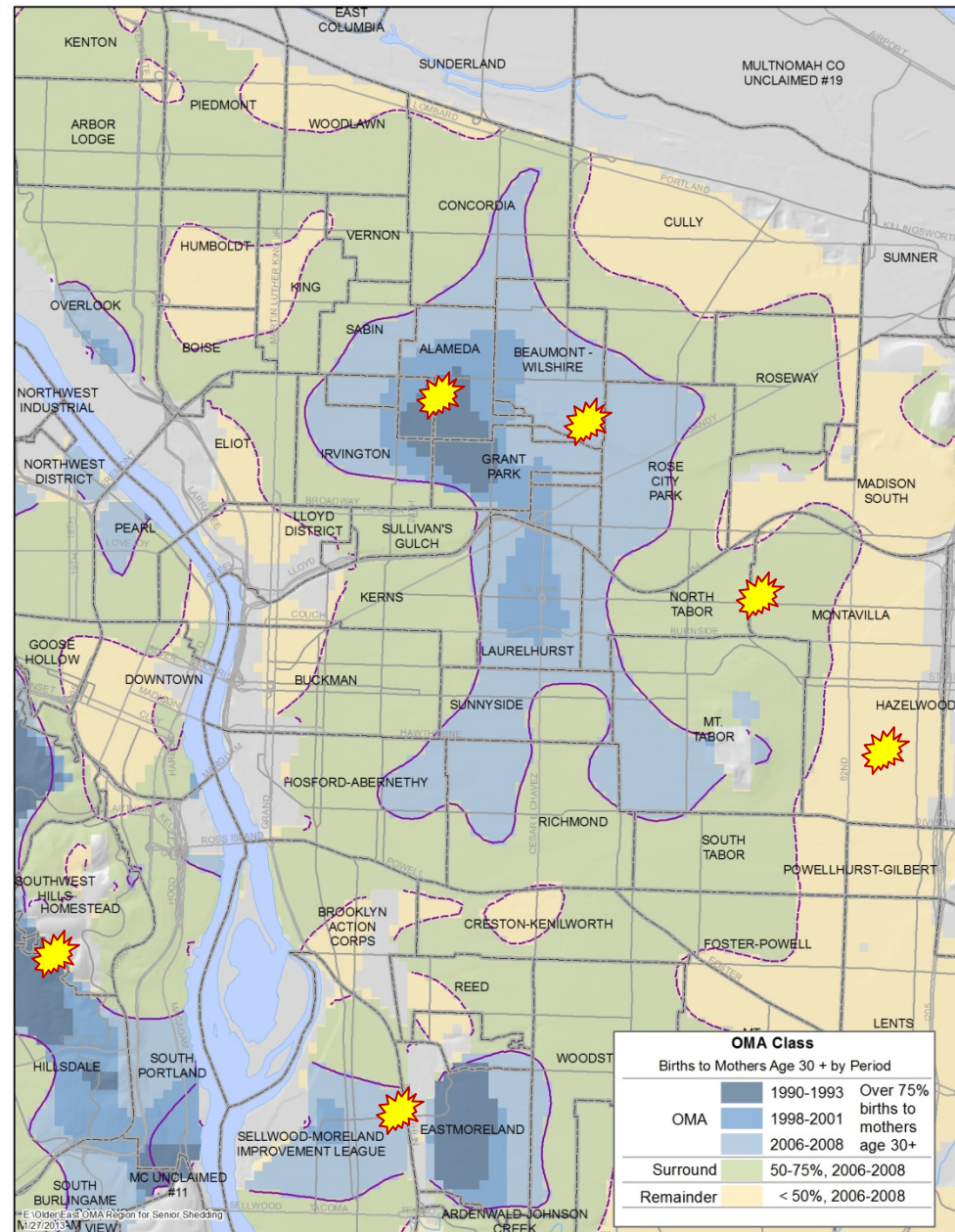
# There was a distinct geographic pattern to where the older moms settled

- In the **OMA** areas -over 75% of the births to older moms, staged over time
- In the **Surround** areas 50%-75% to older moms for 2006-2008
- In the **Remainder** areas under 50% of births to older moms in 2006-2008.





- The main focus of our interest is on the **East OMA**. The trend to births to older moms births began in the Irvington, Alameda, Grant Park, and Laurelhurst neighborhoods.
- The “older moms” area grew more in the east side neighborhoods than in the west side.
- A smaller area “older moms” area developed to the south in the Sellwood Moreland neighborhood.
- The growth in share of births to older moms spread out from the blue into the green areas.
- In the yellow areas, births are predominately to younger mothers. This area includes much of the District’s Hispanic population.



# A brief tour of the *older moms areas*

- The type of housing most sought were bungalow style homes built in the 1920's. The house on the right last sold for \$69,000 in 1988 and peaked in value at \$392,000 in 2008.
- Houses such as these colonial style homes also were built in the 1920's. The house on the right last sold in 1985 for \$68,000 and peaked in value in 2010 at \$470,000.
- The housing gentrification was accompanied by commercial gentrification along the arterials.
- Other upscale retailers, such as Whole Foods have moved into the area. This location previously housed a gas station and discount grocery store.
- As one moves outward from the East OMA to the East Surround the houses become variable in quality and size.
- Housing in the West OMA was largely in the years after WWII with a few areas of recent high value housing construction.

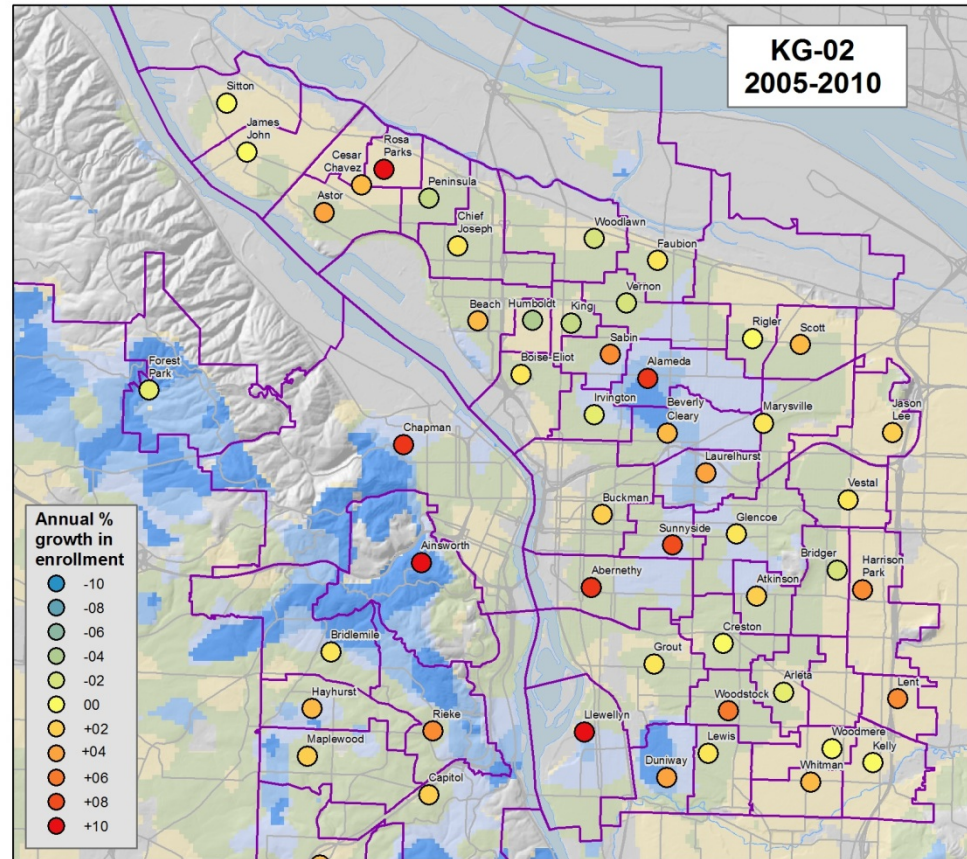


Photos from Google Earth,  
personal photos



# Enrollment in the Older Moms Areas (OMAs)

- The following series of maps shows the annual rate of enrollment growth and decline for KG-02 enrollment in the school 2011 attendance areas.
- From 1990-1996 grade KG-02 enrollment in the attendance areas for the **OMA** areas showed slight declines (green dots).
- From 1996-2000 the losses of KG-02 student deepened for most schools in the **East OMA** areas accompanied by school closings and reorganization
- Then from 2000-2005 these same attendance areas began to show modest increases in KG-02 enrollment.
- In the 2005-2010 period these increases accelerated in the **East OMA** areas and also popped up in other **OMA** areas.



The combination of the shift in births to older mothers and the enrollment growth in the schools in the **OMA** areas lead us to look further into the underlying processes.

*Note the data are for students residing in the 2011 elementary school attendance areas as school boundaries have changed over the 21 year period.*



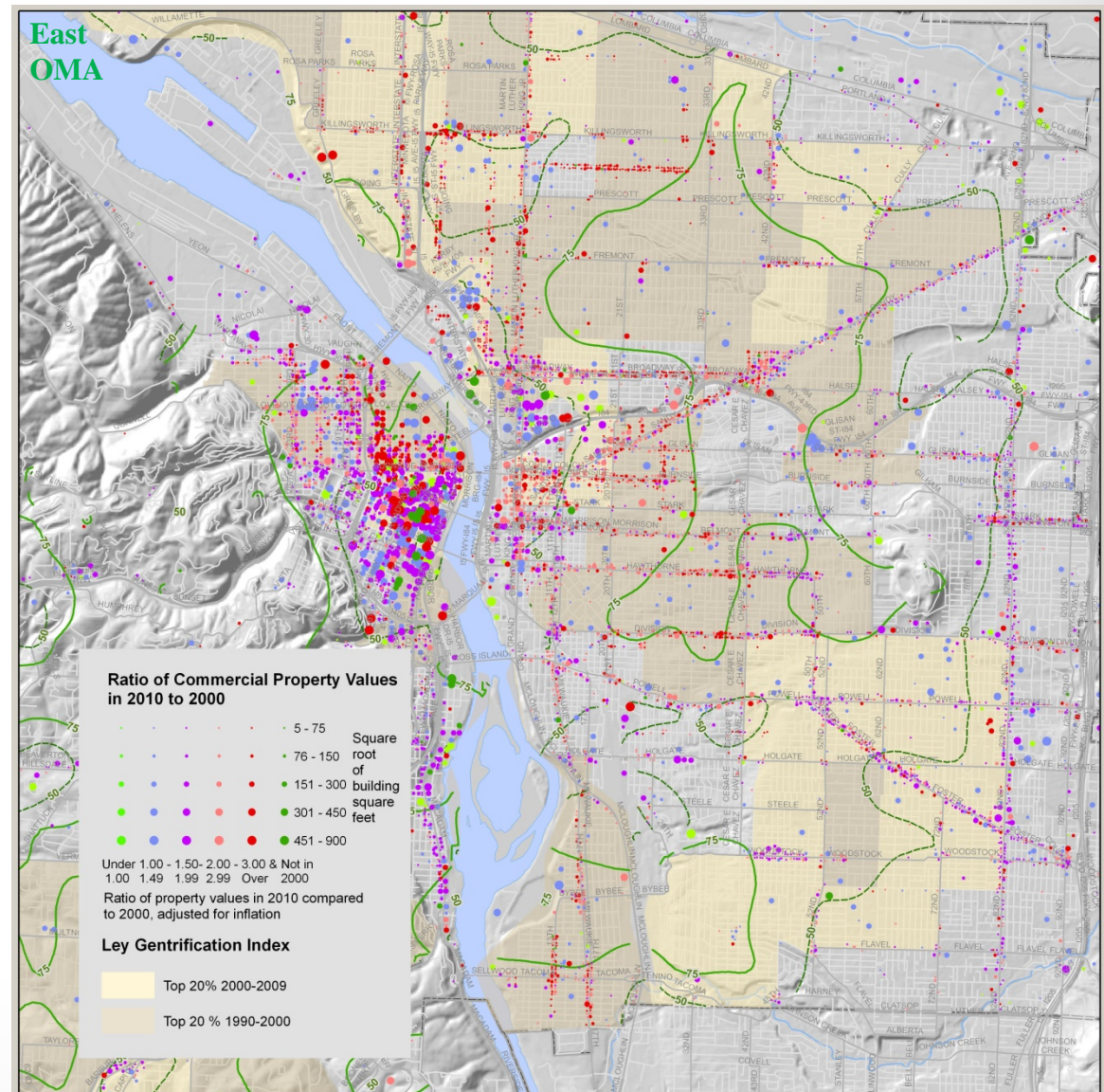
# Who were the older moms?

- **Highly educated.** The largest number of mothers had post graduate education (birth records)
- **Affluent.** Median household Income in the **East OMA** was over \$100,000 (ACS) and single family housing values over \$350,000 (tax-lot data), nearly all in owner occupied housing (ACS, tax-lot data).
- **Married.** Most of the households in the **East OMA** were married couples (Census, ACS).
- **Not all recent.** Many of the mothers moved into the **OMA** areas a number of years ago (linked birth and tax-lot data)
- **Local and from away.** Twenty years ago most of the households in the **OMA** areas would have moved locally, but in the past two decades many have in-migrated from outside of Oregon (Census, ACS).
- **Gentrification?** Those households who out-migrated to create the vacancies for the older moms were mainly older and less affluent (ACS, Census)



# We were interested in knowing if the demographic patterns could be viewed as gentrification

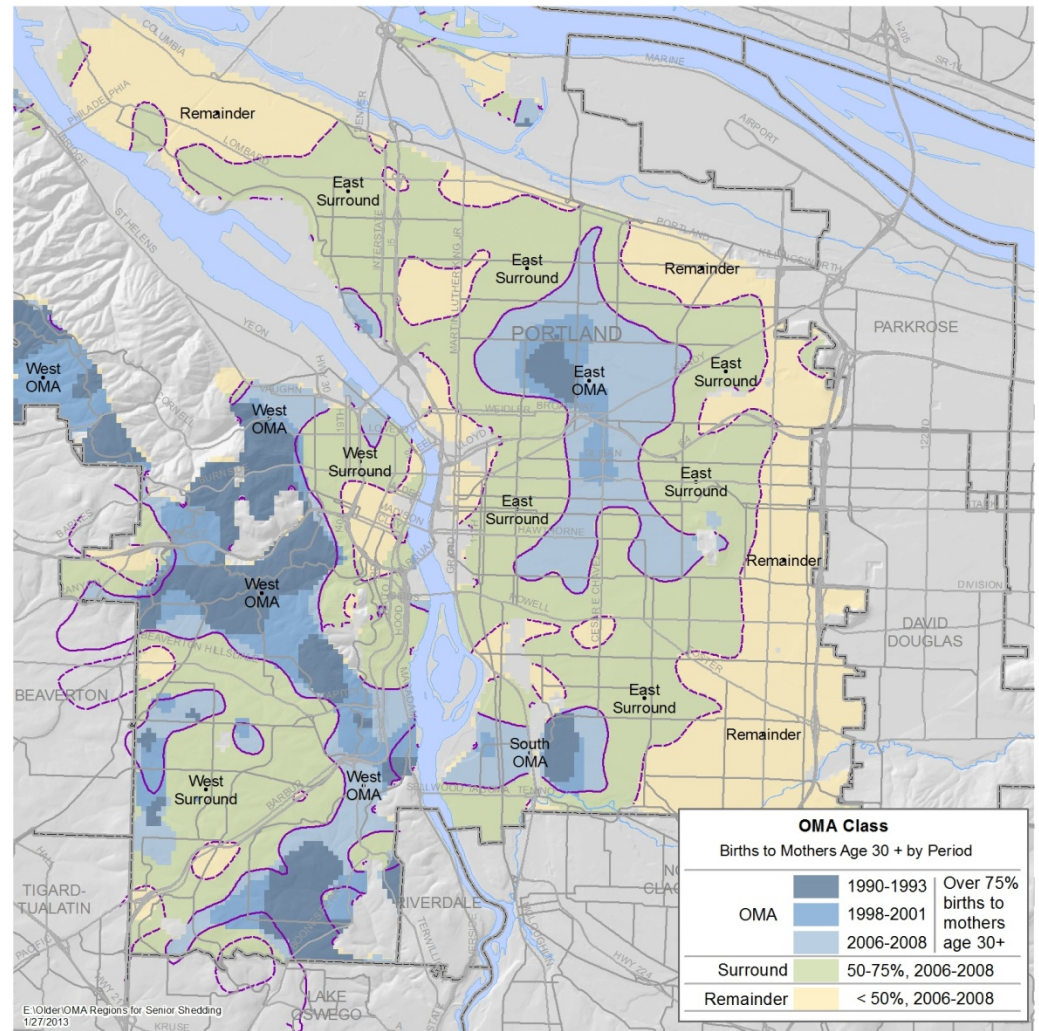
- Gentrification was mapped based on Percent College Educated and Employed in MTP Occupations – following Ley, 1996
- From 1990 to 2000 the average change in proportion with college degree and employed in MTP occupations rose around the edge of the **East OMA** (Census)
- From 2000 to 2008 the measure of gentrification spread out beyond the **East OMA** (ACS)
- Values for commercial properties in and near the **East OMA** rose sharply from 2000 to 2010. Red symbols indicate over 300% increase (RLIS)





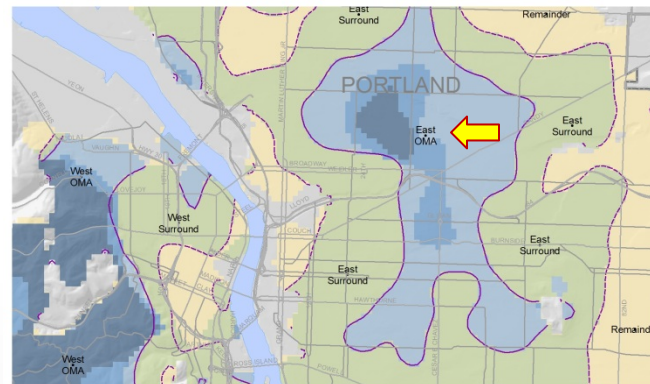
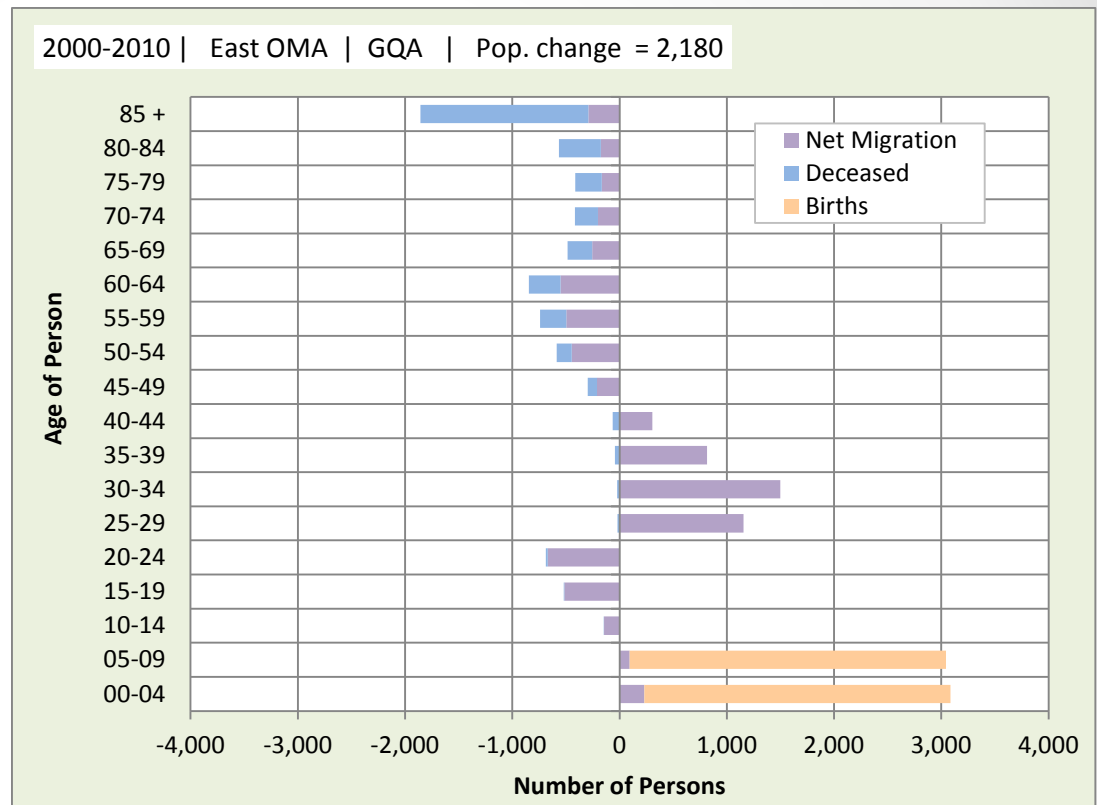
# What was the source of the housing vacancies that facilitated the turnover/gentrification process?

- **Assume:** We are looking at normal housing turnover accelerated by gentrification.
- **Hypothesis:**  
Most of the vacancies in the gentrifying areas resulted from deaths and out-migration of older households.
- **In the areas:**
  - East OMA
  - West OMA
  - South OMA
  - East Surround
  - Remainder of district



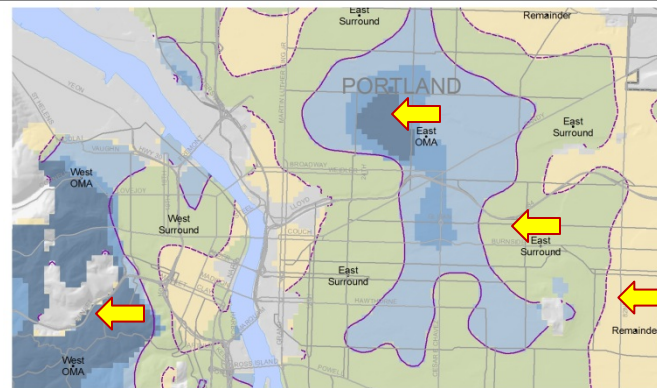
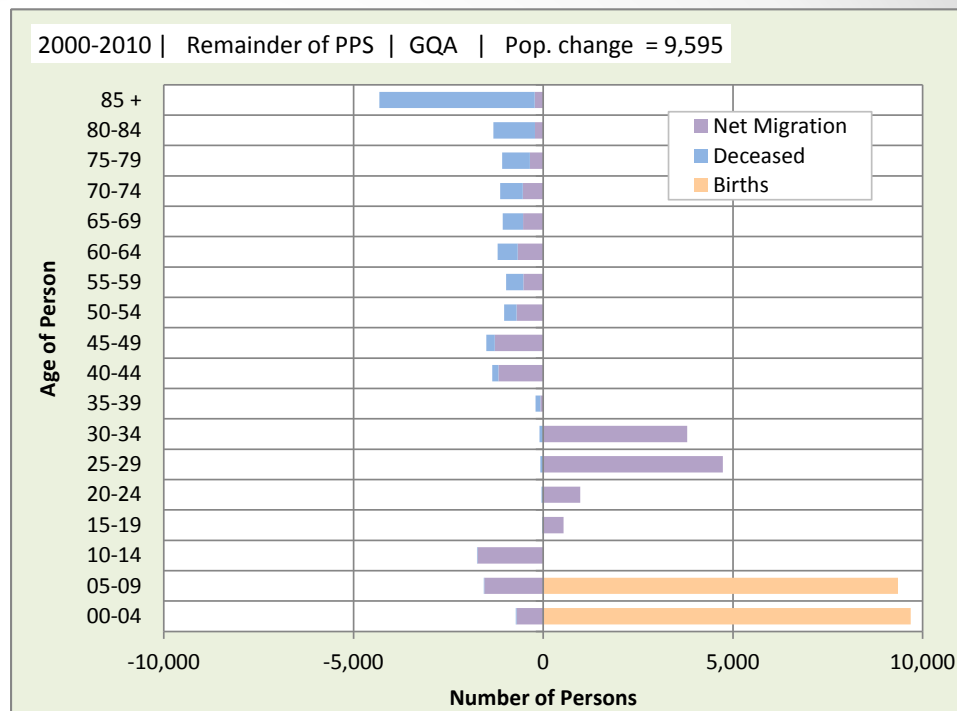
# Estimating Net Migration and Deaths

- Using 2010 block level Census data and national age/sex mortality rates deaths and net migration were estimated for the *older moms areas*. The example here is for the **East OMA**.
- Note that the large in-migration of persons 25-44, and their children, is balanced by the loss of those age 45+.
- Loss by death of the 45+ was significant, but so was out-migration of these age cohorts



# Deaths and migration for other areas

- By contrast in-migrants to the **West OMA** were more diverse in age and they were mainly accommodated by the deaths of older persons.
- In-migrants to the **East Surround** were considerably younger, mainly in the age 20-34 age cohorts.
- They were accommodated by a mix of out-migration the age 40+ population and the deaths of persons age 60+







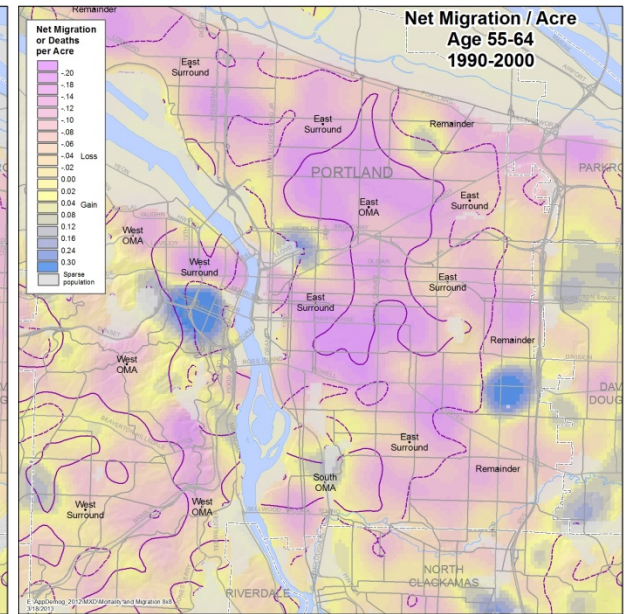
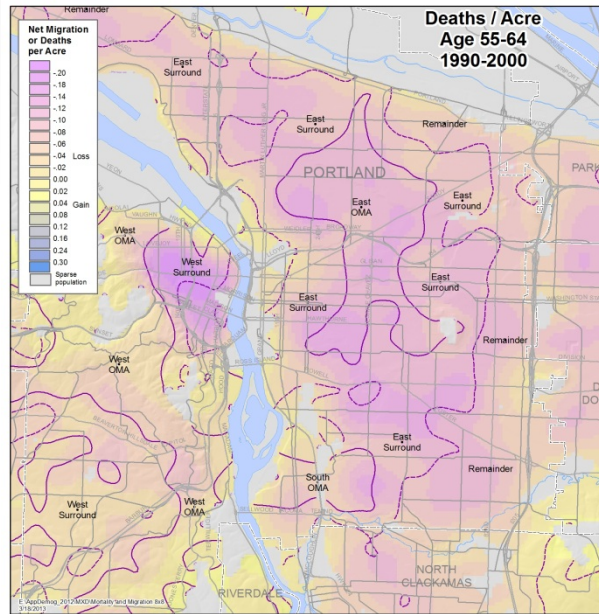
## Estimated deaths

## Estimated net migration

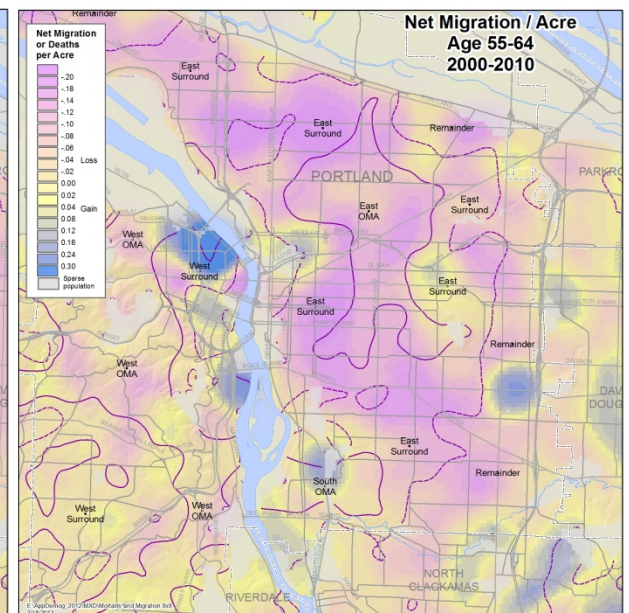
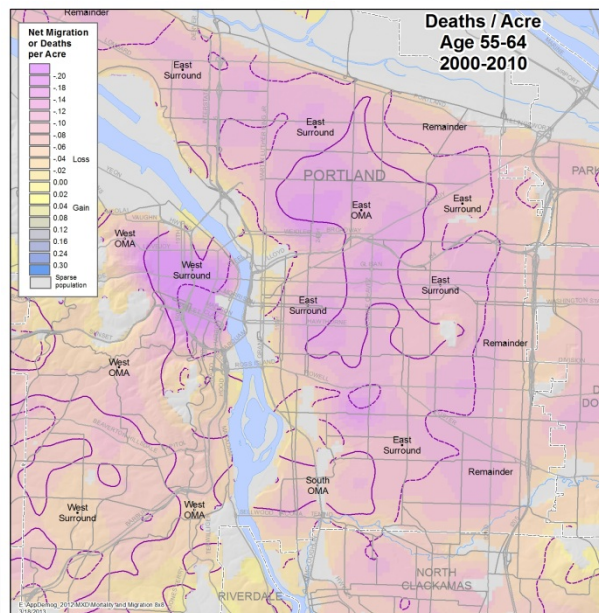
# Maps showing density for deaths and migration

- The maps on this page show the spatial distribution of vacancies created by deaths and net out-migration.
- In these maps the survived 55-64 population is compared with actual number 10 years later.
- The maps on the left show deaths and those on the right show net migration
- The two maps at the top are for the 1990-2000 period and those at the bottom are for 2000-2010.
- In subsequent slides we re-map deaths and net migration using actual block level deaths data.

1990  
to  
2000



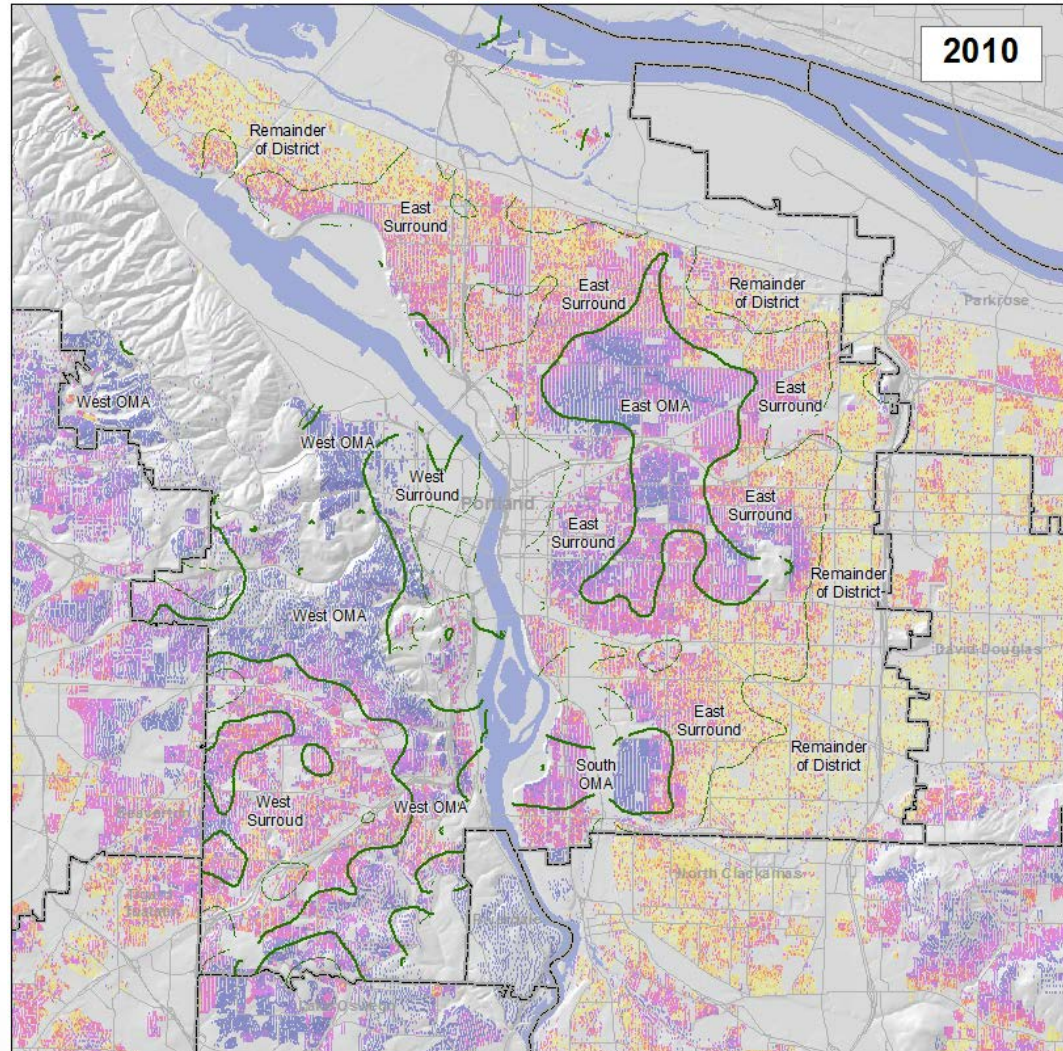
2000  
to  
2010





## Did rising housing values in the OMA areas drive out / ease out the oldsters?

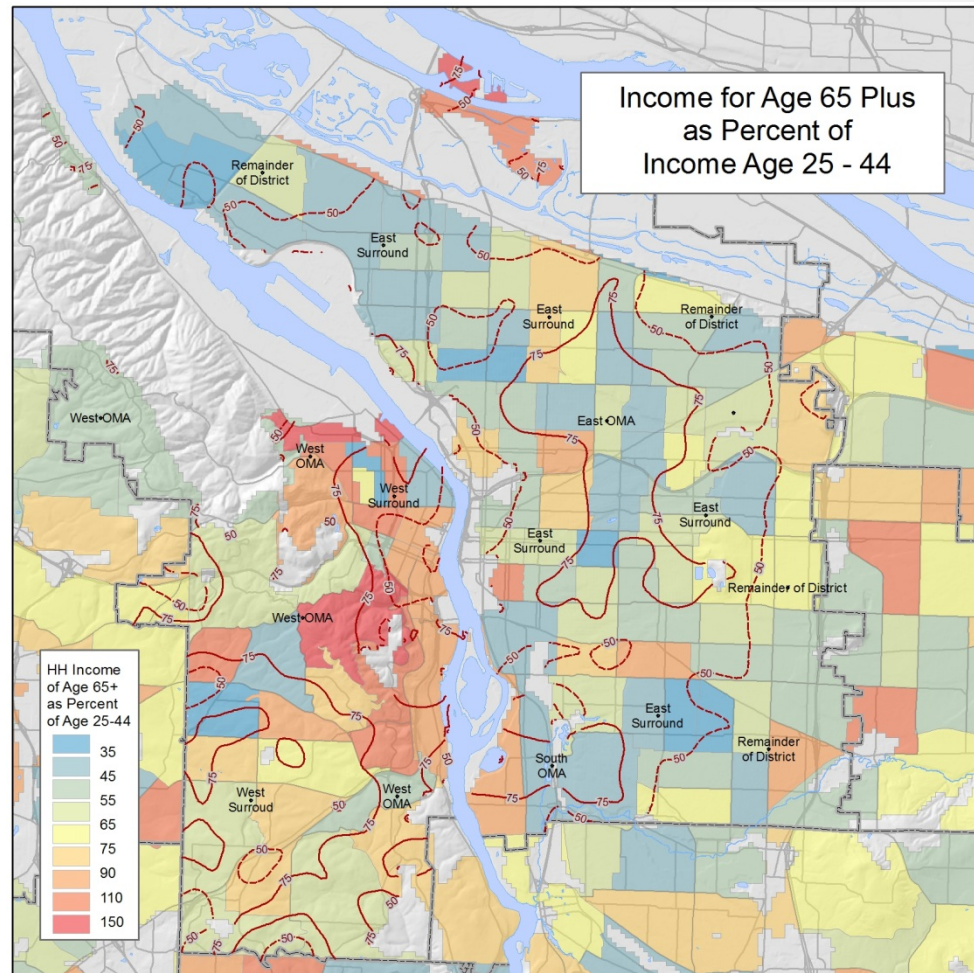
- Housing values in Portland rose rapidly from 2000 to the beginning of the recession.
- The relative change can better be seen by adjusting the values to the Metro Area median.
- If one compares the 2000 and 2010 median values one can see that some of the largest relative price increases have been in the **East OMA** and **East Surround** areas.





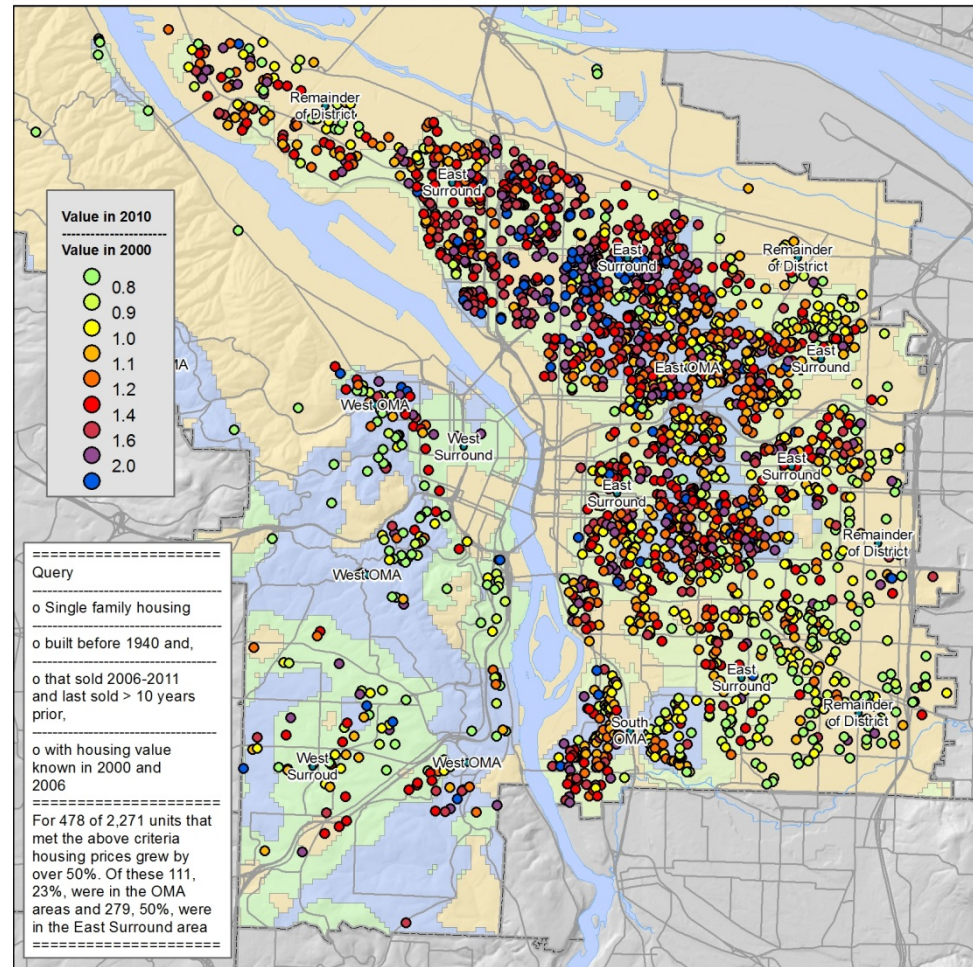
# Income of older households lower

- From ACS data the income of the age 25-44 households in the census tracts in the **East OMA** is high compared to the rest of the District, generally over \$100,000.
- Incomes in the **East OMA** are slightly lower for households age 45-65.
- And they are much lower for the households age 65 plus, generally under \$50,000.
- Incomes of the age 65 plus households in the **East OMA** generally are about 35 to 75 percent of those age 25-44.
- This suggests that the out-migrating older households may have been eased out by the more affluent younger households.



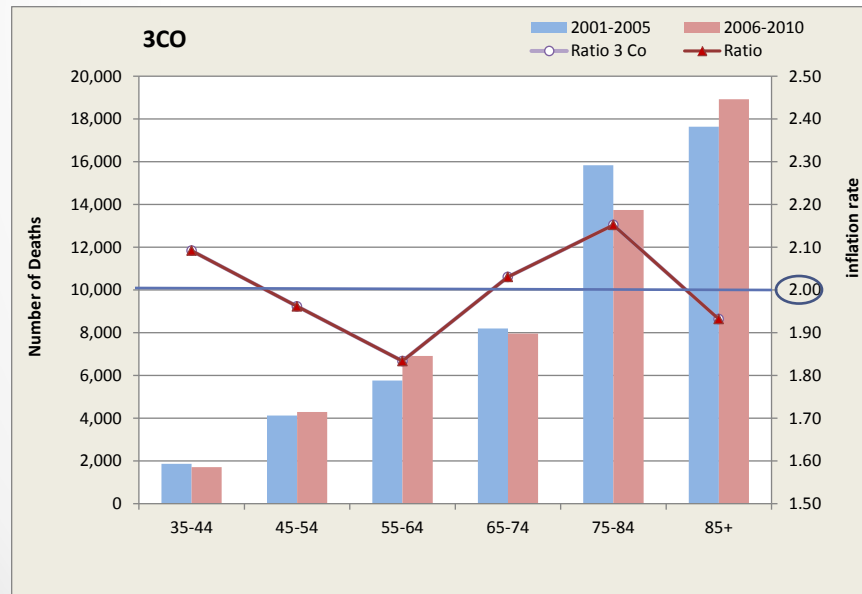
# Did the increase in housing values encourage older residents to leave?

- A large proportion of the pre WWII high value housing that sold from 2006-2011 was in the **East OMA** area.
- Did the large increase in prices encourage long term (older) owners to cash out and leave?
- Querying the tax-lot data shows that most of the large increases in value in these homes that were sold were in the **East OMA**.
- However from a percentage standpoint the largest increases in housing values were in the **East Surround** area.



# Effects of migration and mortality using block level deaths

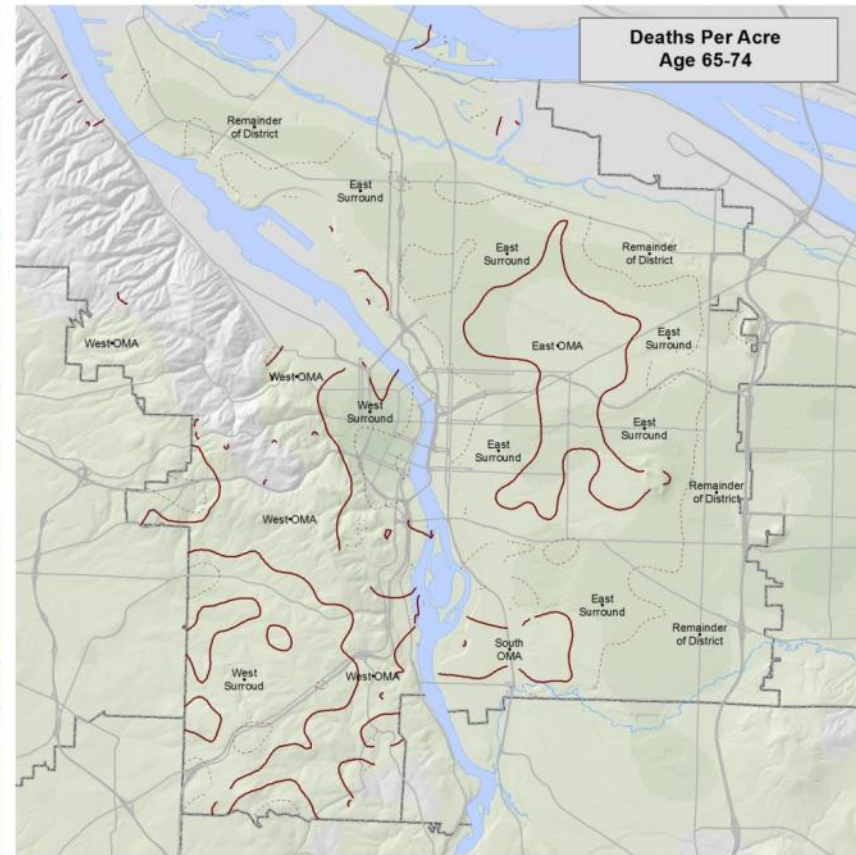
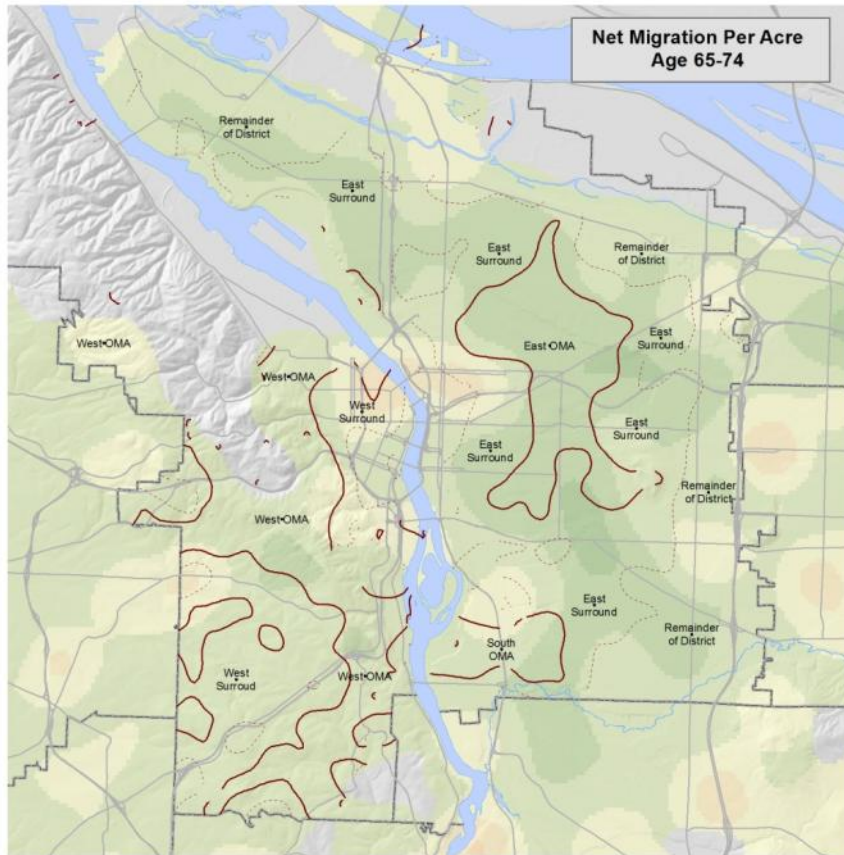
- We were fortunate to be provided with census block level mortality data from the Oregon Health Authority.
- Unfortunately the data were for 2006-2010 and did not span the entire decade.
- We estimated the data for the 2001-2005 period by inflating the number deaths based on the ratio of deaths in the 2006-2010 period for the block level data to the 2001-2010 deaths for the core three counties of the Portland metro area.



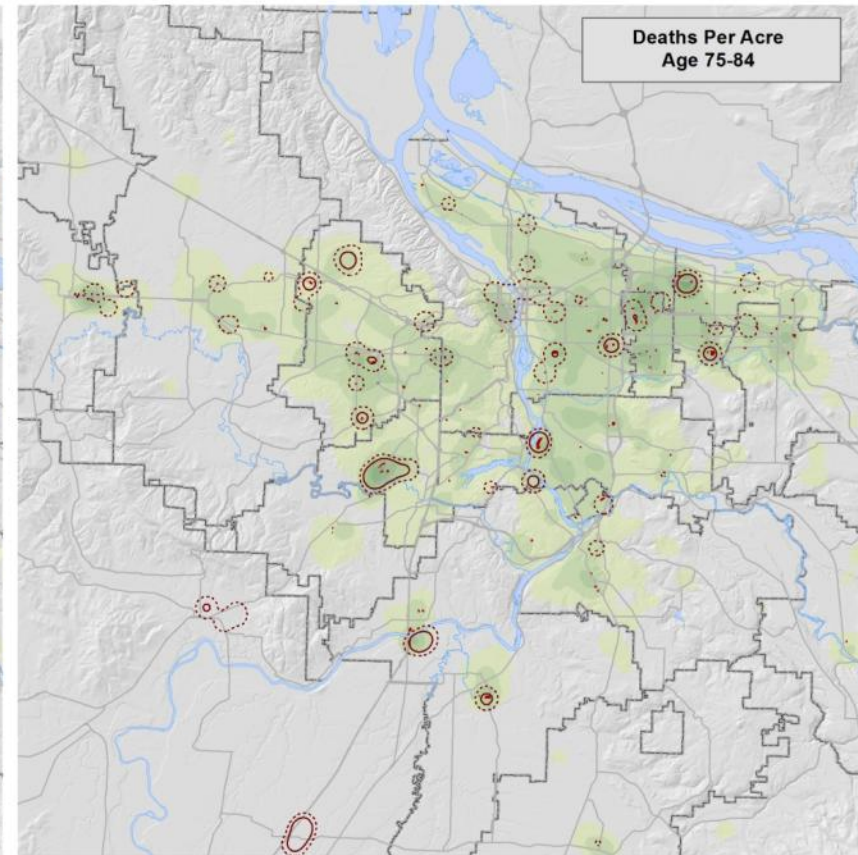
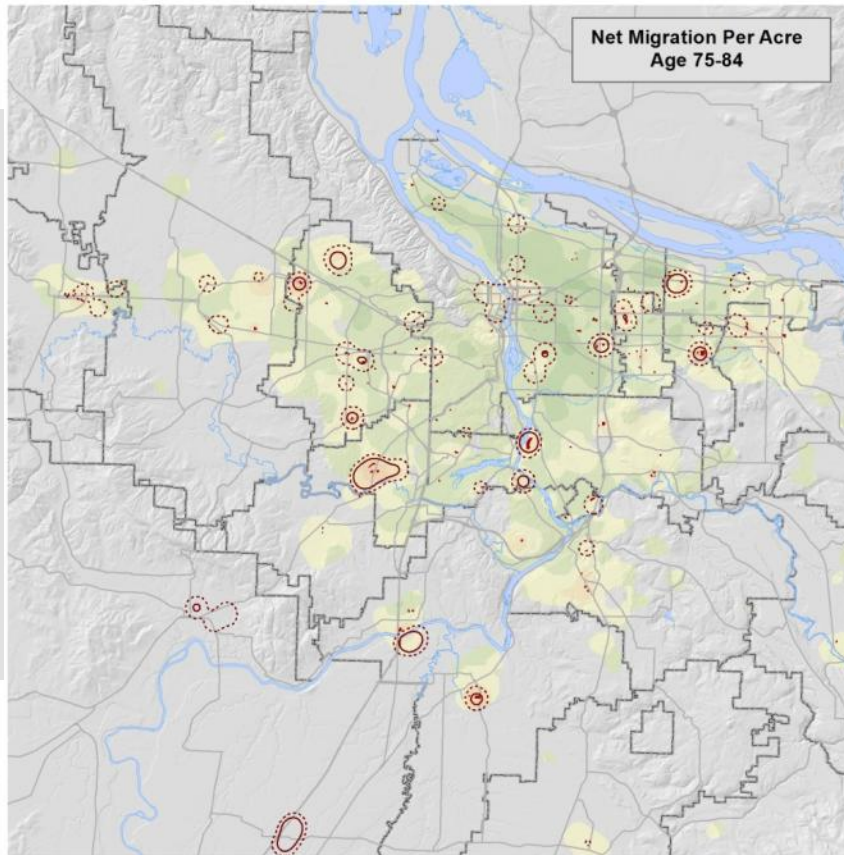
The following analyses are based on the block level data and are not completely consistent with the prior analyses of net migration based on national mortality rates.



# Mapping of Net Migration and Deaths per Acre

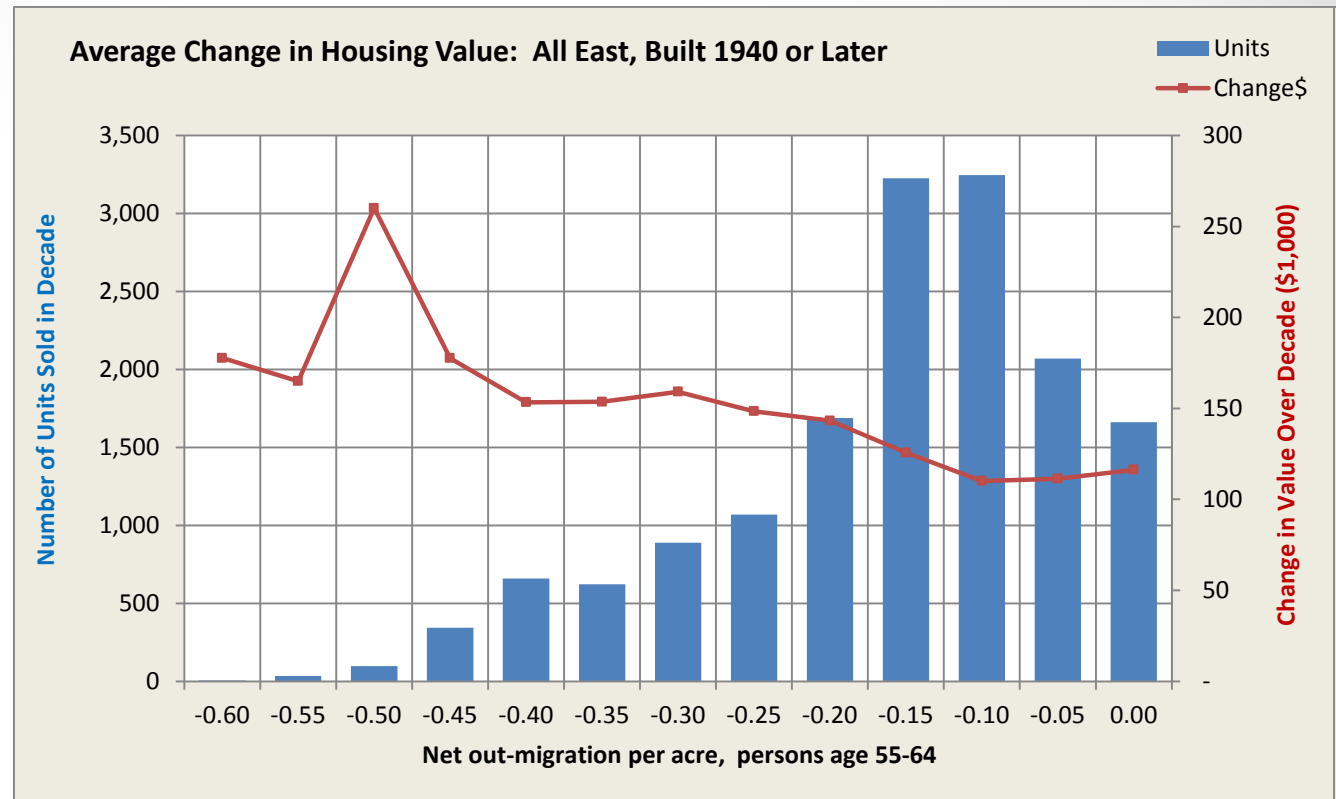


Same as prior slide but for three county area





# Was the net migration density related to property value changes?



# Conclusions

- **Senior shedding.** The presentation illustrates the impacts of gentrification on neighborhood level age structure and subsequently on school enrollment. The deaths and out-migration of seniors provided many of the vacancies for the in-migrating thirty-something families and their children.
- **The role of the *older moms*.** The mix of housing turnover, gentrification, and school enrollment changes may be unique to this particular place, but the impact of the affluent *older moms* households" moving to the central city likely occurs in most large U.S. cities, shaped by local real estate markets.
- **The impact of housing price changes.** The data suggest that the rate of out-migration of the 55-64 age population was higher in areas where the increase in housing prices was greater. In the *older moms area* the income of the age 25-44 households was nearly double that of the age 65 plus households. The older households likely were not driven out so much by rising taxes (limited rate of increase under Oregon law) as motivated by the opportunity to cash in on equity.
- **The use of block level mortality day.** For analysis of mortality and migration at the neighborhood level the block level data adds detail that is missed using national or regional mortality rates. Recent research shows significantly lower mortality rates for more educated and more affluent populations, as is the case for the gentrifying OMA areas.
- **Housing choices of seniors.** The study of gentrification and turnover tends to focus more on the in-migrants as the active force, but the choices made by seniors create many of the housing opportunities. Displacement of the disadvantaged has received considerable attention; the decision to leave by those not disadvantaged, not so much. The complex decisions that older households need to make about residence as they age and their needs change was not thoroughly investigated and further consideration of these issues might help to quantify the rate of turnover of senior housing.
- **Grid cell base demography.** Analysis of demographic data using grid cell based analysis allows the researcher to easily combine data for disparate geographies. We are interested in examining the possibilities for developing grid cell based population forecasting models.

# Senior Shedding



Mortality and Migration of Seniors  
Creates Vacancies for Gentrifying  
Neighborhoods

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