Date: 25 May 2015
To: Bob Rindy, DLCD
From: Terry Moore
Subject: WHITE PAPER ON MARKET TRENDS [1]

House Bill 2254 requires the LCDC to establish new rules by which cities can determine and justify their needs for urban land, and for Urban Growth Boundary expansions that would provide that land. In establishing those rules, it must consider "significant changes occurring or expected to occur in the markets for urban land uses in … major region[s]of the state." DCLD staff believe this consideration of market changes should be supported by evidence. They commissioned this white paper to provide that evidence.

Conclusions with respect to the LCDC rule-making start on page 20. In summary, I find:

- Many types of changes in urban land markets are already considered by local jurisdictions and the LCDC as part of current UGB amendment procedures.
- In developing simplified amendment procedures. the Rules Advisory Committee (RAC) is considering, at some level, most these market changes.
- Thus, I do not find strong evidence to suggest that the LCDC would need to adjust the suggested rules from the RAC to further consider market changes.

1. Background

Both inside and outside Oregon the most notable feature of the statewide land-use program is the requirement that every city have an Urban Growth Boundary (UGB). The purpose of a UGB is to (1) protect resource lands outside the boundary, and (2) encourage more efficient development patterns inside the boundary.

A fundamental interpretation of the law has been that a UGB must have a supply of buildable land sufficient to accommodate approximately 20 years of development. But cities used differing techniques to forecast growth, development, and buildable land; had different local goals; and had different interpretations of the requirements during the 10 years after the program started, when almost all of the initial UGBs were established.

With UGBs established and almost no new cities being created,[2] UGB procedures and issues for the last 30 years have been exclusively about how to *amend* (expand) UGBs. The legislation that created the Oregon land use program and UGBs in 1973 listed seven principles[3] for establishing and justifying UGBs in less than 100 words. Today there are thousands of pages of court cases, guidebooks, statutes, and administrative rules that try to explain all the details that address

[1] The opinions in this white paper are those of the author and do not necessarily reflect those of the LCDC, DLCD staff, or the members of the UGB Rules Advisory Committee. Thanks to Ali Danko for help with the research

[2] Four in the 40-year history of the program: two were splits from existing UGBs (Keizer and Westfir) and two were in previously rural areas that had increased urbanization (Damascus and La Pine).

[3] Need to accommodate long-range urban population growth; need for housing, employment opportunities, and livability; efficient provision of public facilities and services; efficiency of land uses in and at the fringe of existing urban areas; consideration of environmental, energy, economic and social consequences; retention of agricultural land; and compatibility of the proposed urban uses with nearby agricultural activities.

issues that arose inevitably as the principles were implemented. My generalization of the process has parallels in many other areas of public policy:

- The State adopts statutes with broad statements of purpose and goals, and a little high-level guidance on procedures.
- Cities applying for UGB acknowledgment and DLCD staff reviewing the applications create ad hoc procedures to fill-in the blanks.
- People unhappy with outcomes appeal to the LCDC and, ultimately, the courts. Court decisions sometimes clarify and sometimes confuse the process, but they usually make it bigger and longer. Some boundary reviews take five or 10 years as the process of analysis, findings, review, and adjudication repeats itself.
- Occasionally the LCDC adopts administrative rules to try to consolidate and clarify court decisions into procedures that will avoid or reduce further litigation.[4]

The 2013 legislature enacted HB 2254 (codified at ORS 197A) to create simplified methods for growing cities *not in the Portland UGB*[5] to evaluate and justify additions to their UGBs. The law requires the LCDC to adopt rules to establish these methods before January 1, 2016. LCDC appointed a Rules Advisory Committee (RAC) to assist in development of these rules.

Among many other things, HB 2254 requires the LCDC to give guidance to cities on two aspects of their analysis of need for a UGB expansion: (1) converting forecasted population and employment growth into forecasts of land need for housing, employment, and other categories of uses, and (2) determining the supply and development capacity of lands already within an urban growth boundary (i.e., the Buildable Lands Inventory). In both cases, HB 2254 says that *the LCDC must establish factors by rule that "reflect consideration by the commission of any significant changes occurring or expected to occur in the markets for urban land uses in that major region of the state."* Though there are many references to "market conditions" throughout HB 2254, they all refer to these two issues.

DCLD staff believe this consideration of market changes "expected to occur" should be supported by evidence. It commissioned me (Terry Moore) to provide that evidence in this white paper. The white paper has three sections in addition to this introduction and some appendices:

> **Section 2, Framework.** What are land markets, how do they work, how do they fit in the context of the requirements of HB 2254.
>
> **Section 3, Land Markets: Conditions and Potential Changes.** Trends and expectations for factors relating to land markets (e.g., population and employment growth, demographics, income, public services).

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[4] Recent changes to the legal process associated with UGBs (1) lowered the court's standards of review, and (2) eliminated requirement for LCDC review—all decisions go to LUBA, with the Court of Appeals required to respond to appeals of LUBA decisions in a timely way.

[5] The Portland region has its own process for amending the regional UGB.

Section 4, Implications. Comments about the implications of the information in Sections 2 and 3 for the two questions posed in HB 2554: (a) implications for converting population forecasts to land consumption (i.e., likely changes in density), and (b) implications for the supply and development capacity of lands already within an urban growth boundary (i.e., the Buildable Lands Inventory).

Appendices. My scope of work specifies a white paper of approximately 10 – 20 pages. I kept it to 25 pages only by summarizing from other research, and by putting detailed information in appendices. My assessment was that it would be useful to look at research at a national level regarding development trends (Appendix A), and also at research done for Oregon communities (Appendices B and C). Appendix D gives some recent information about development markets in Oregon, but I do not find it very useful for the purposes of HB 2254.

2. Framework

2.1 Land markets in general

UGBs define land that state policy requires and local policy will allow to be developed to urban densities. Land is, of course, essential to that development. It is a *factor of production* in any model of economic activity. It is the base on which all real estate products (houses, stores, factories, schools, etc.) are built. It is fundamental to basic theories of urban and regional economics, and to how urban real estate markets find prices to match supply to demand.

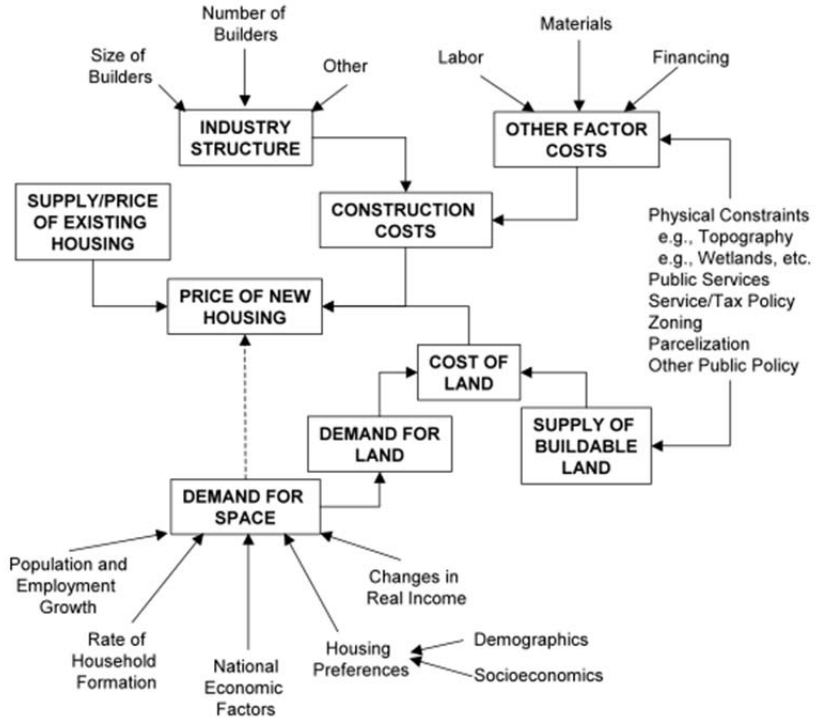
For some people land has intrinsic value. For the purposes of market analysis and this white paper, however, one can think of land as factor necessary for fulfilling broader demands: for residential, commercial, and industrial space; for recreation; for ecosystem services; and more. Economists use the term "bundle of goods" to reflect the idea that the value of land derives from all the goods and services it offers to fulfill those demands. Those demands are affected by many factors. In my prior work I have grouped these factors as "the six Ps" which I illustrate using residential demand:

- **Population.** Even if none of the subsequent factors changed, housing demand will change, all else being equal, if population (i.e., the *number of households*) changes. Population grows either when people move to a region (in-migration) or through natural increase (births minus deaths). The *demographic characteristics* (e.g., age) of new population affect housing demand.
- **Purchasing power.** Even without population growth, if an existing population were to suddenly get richer, it would spend more on housing—housing demand would increase. The amount that a household can spend on housing is predominantly dependent on household *income* and *wealth*.
- **Preferences.** Households have preferences about: (1) *types of housing* (e.g., single-family detached or apartments), (2) *size of house and lot*, (3) *housing amenities* (e.g., fireplaces or multiple-car garages), and (4) and *locational amenities* (e.g., distance from work, quality of schools, or access to shopping). Housing preferences are linked to demographic characteristics and purchasing power.

- **Prices (and costs) of housing.** Households have money to pay for housing, and preferences about the kind of housing they want to pay for. Prices tell them how much of what they want they can afford to get. If there are reasons to believe, for example, that the real price of residential land or housing construction will be rising, then one would expect housing developers and purchasers to begin to economize on lot size (land) or built space. *Development costs* describe the costs of building a house, including construction costs, land costs, and public services and infrastructure. Costs are strongly related to prices, but are not identical. For example, in a strong market with excess demand, a developer may be able to command a price that is in excess of development costs and a standard rate of return. In addition, certain advances in the technology of building housing or infrastructure may reduce costs. M*ortgage financing* also affects housing choice.
- **Prices of housing substitutes.** One important substitute for housing is *transportation*. For example, historical choices to purchase housing in suburban locations were influenced by the price of travel: if it had been very much higher, fewer households could have afforded to move to suburban locations. *Telecommunications* is a substitute for proximity and is a technology whose prices have dropped substantially in the last three decades.
- **Policy.** Governments affect the housing market through policies and actions that encourage or discourage development of certain types of housing in certain locations.

The relative importance of many of these factors to different households is different. Some like the excitement, diversity, and opportunities of an urban location; others like the quiet and feeling of security of a suburban cul-de-sac. Some may want a big yard; some want no maintenance responsibilities. Children and pets make a difference. Similar tradeoffs apply for own vs. rent; close-in vs. far out; amount of space vs. price; and quality vs. price.

Exhibit 1. Factors affecting the price of housing and residential land



Source: Terry Moore, ECONorthwest

Those are a lot of factors and sub-factors to consider just for residential real estate markets. Exhibit 1 illustrates the point.

To the previous points add these:

- Housing markets have several different product types (combinations of building type, size, density, lot size, and price).
- There are more uses for urban land than housing (office, retail, and industrial development; public facilities; open space).
- Land markets are not the same across regions or cities (by size or location) in Oregon.
- Land markets also have a temporal dimension: what they looked like in the past, look like now, and might look like in the future will be different.

Taken together, these points lead me to this conclusion: describing urban land markets in Oregon for all types of uses, by region, is beyond the scope of a 10-to-20-page white paper. The way I condense the paper is to focus on the two specific requirements of HB 2254 to consider market factors when making rules relating to (1) converting forecasted population and employment growth into forecasts of land need, and (2) determining the supply and development capacity of lands within UGBs.

2.2 Land markets in the context of HB 2254

The previous points are context and support for this one: the RAC, DLCD, and the LCDC have to make a decision about the scope of the HB 2254 requirement that the LCDC consider future market conditions as part of its rule-making. Such consideration could be a multi-year research effort, but it need not be. The fact that DLCD has asked me to write this white paper is evidence that the decision about scope has been made: this white paper, when reviewed and approved, will be the fact basis for "…consideration by the commission of any significant changes occurring or expected to occur in the markets for urban land uses in … major region[s] of the state."

The decision to have a white paper to meet the requirement does not, however, specify its content, length, or format. I had to make decisions about how to balance competing goals: longer, broader, and more detailed might be better for fully addressing the legal requirement and technical issues, but shorter and focused is likely to be more manageable and useful for the LCDC when it gets to rule-making. There is also a choice about whether this white paper is providing just the data for the LCDC to consider, or conclusions about those data. The advantage of the latter is that the white paper, by itself, becomes the DLCD / LCDC documentation that such consideration has occurred in establishing its rules.

Here is another important consideration. People familiar with the Oregon planning process in general and the UGB process in particular are used to thinking of market considerations as things that change over time. If a city does some planning and then updates its plan a few years later, it would be expected to update its market information. But for HB 2254, the LCDC is making a one-time effort related to setting the required rules. The implication is that this white paper has a one-time purpose, and that it can be written not as "data for your information" but as documentation for DLCD / RAC recommendations to the LCDC about how this review of market conditions should influence the LCDC rule-making in 2016.

Thus, this white paper is not a comprehensive description of all factors affecting all types of urban lands in all regions of Oregon. It focuses on information that I believe is most relevant to the LCDC's rule-making. I think the Commission's thinking should go something like this:

> Cities in Oregon have been doing Housing Needs Analyses, Economic Opportunity Analysis, and UGB amendments for decades. The Commission has clarified those processes with rules. State and local government planners have a lot of experience with the factors that go into estimating needs for residential and employment land: they have a lot of data and generally approved techniques and rules of thumb for converting forecasted population and employment growth into land need.
>
> Now the University of Oregon is providing new and detailed information about how land in cities has been developed. That information can help adjust the old methods to make better forecasts of land needs.
>
> The Commission will use all that historical information to support its decisions about how to meet the fundamental requirement of HB 2254: to simplify and, in doing so, to expedite the process by which cities outside the Portland region get UGB amendments approved by the Commission.
>
> But HB 2254 requires the Commission to also consider that the historical relationships that are the basis for some of the specifics in the new rules may change in response to future market conditions. The DLCD commissioned a white paper to address that point.

In other words, current rules, and almost certainly the new ones that the LCDC will adopt per HB 2254, *already require local governments to consider market forces when adopting UGBs.* Thus, I narrow the question for this white paper to this one:

> Is there evidence strongly suggesting that (1) historical trends (nationally, in Oregon, or in regions of the state) relating to the efficiency of land development (i.e., density)[6] will change in particular direction, (2) those changes cannot or are unlikely to be accounted for as Oregon cities make UGB amendments in the future, and (3) the change would be of a type and magnitude that it should affect the rules that the LCDC will adopt relating to (a) converting population and employment forecasts into "land needs" both for small cities (Section 4 below) and large cities (Section 5), and (b) determining the supply and development capacity of lands already within its urban growth boundary (i.e., the Buildable Lands Inventory)?

2.3 Methods for this white paper

In summary, I (1) searched of recent academic and popular literature relating to real estate development and trends, (2) reviewed Oregon studies (many of which I had available; some of which were sent to me at my request) that talk about potential changes in real estate market conditions, (3) assembled some information on recent development activity in Oregon, (4) reviewed recent work by the University of Oregon on historical trends in land absorption in

[6] Section 3.2, following, discusses the HB 2254 definition of "land use efficiency" and its problems.

Oregon, and (5) thought about the implications of that information for the requirements of HB 2254 that this white paper is supposed to address.

Because HB 2254 requires that "a city's determination of the amount of buildable lands needed for housing, employment and other urban uses must be based on the population and employment growth forecast to occur over a 14-year period," I did not go out farther into yet greater speculation about how markets might change in the longer run. Most of the literature on real estate market analysis is short run (two to five years). I looked at that literature and at planning literature that has a longer horizon (five to 20 years).

3. Land Markets: Conditions and Potential Changes

3.1 Introduction

Section 2 makes that points that (1) markets for urban land are composed of factors relating to supply and factors relating to demand, (2) these factors can change over time, and (3) the interaction of these factors results in market-clearing prices and absorption. My discussion of market conditions and potential changes follows that logic:

- Section 3.2. Supply: vacant and buildable land in Oregon UGBs
- Section 3.3. Demand for land: population and employment growth in Oregon
- Section 3.4. Possible changes in urban land markets
- Section 3.5. Recent land absorption in Oregon.

On the one hand, I acknowledge that (1) HB 2254 applies only outside Portland, (2) Portland has roughly half of the state's development, and thus (3) reporting state averages for market conditions will suggest faster and denser development for other parts of the state than is likely. On the other hand, (1) data at the regional level are harder to come by, (2) the amount of work in collecting, evaluating, (3) reporting them is beyond the scope of work for this white paper, and (4) the recent report from the University of Oregon suggests no strong correlation between urban density and region of the state. My compromise is to try to comment occasionally on the implications for different types of regions in the state.

3.2 Supply: vacant and buildable land in Oregon UGBs

The HB 2254 requirements regarding market conditions apply to only two decisions: (1) a demand-side consideration about converting official population and employment forecasts into an estimate of land needs, and (2) a supply-side consideration about the development capacity of lands already within UGBs. This section deals only with the second, supply-side consideration about "development capacity" (section 3.2 and 3.3 deal with demand-side considerations).

The issue for UGBs and HB 2254 is not *total* land in Oregon. The issue is land that is *buildable* and *within UGBs*.[7]

As a first approximation the land supply problems for local UGBs are what state policy intended. By that I mean though Oregon planning law restricts urban land supply within UGBs, it also requires that cities maintain a 20-year supply of buildable land inside UGBs.

Moreover, the current work for DLCD by the University of Oregon provides empirical evidence for the existence of vacant land. Exhibit 2 shows that for a sample of 120 cities in Oregon,[8] 28% of the land that is inside city limits *and* inside UGBs is vacant (unimproved), and most of that land is buildable (in the sense the it does not have "prohibitive constraints").

Exhibit 2: Residential acreage by improvement status by city size, Tier 3 Cities, 2012

		Residential (Class 1XX) Acres						
City Size	**Number of Cities**	**Total**	**Improved**		**Unimproved**		**Unimproved Unprohibitive**	
<1,000	20	2,053	1,272	62%	781	38%	761	37%
1,000-4,999	45	14,551	10,180	70%	4,371	30%	4,232	29%
5,000-9,999	27	21,988	14,956	68%	7,033	32%	6,843	31%
10,000-24,999	17	24,467	16,963	69%	7,504	31%	7,403	30%
25,000-49,999	4	10,037	8,410	84%	1,627	16%	1,592	16%
50,000 or more	7	51,358	38,336	75%	13,022	25%	12,603	25%
All Cities	**120**	**124,455**	**90,116**	**72%**	**34,338**	**28%**	**33,434**	**27%**

Source: From Rebecca Lewis, co-author of *Analysis of Land Use Efficiency in Oregon Cities: A Report to the HB 2254 Rulemaking Committee*. University of Oregon Community Service Center, final draft May 2015.

Note that Exhibit 2 understates, probably substantially, the total amount of vacant and buildable land in UGBs because it does not count some amount of land that is most likely to be vacant: land inside UGBs but *outside* city limits.

Exhibit 3 shows data for the same cities, but organized by region instead of by city size. On average, about 1/3 of the land inside city limits and inside UGBs in cities in every region except Central Oregon is vacant.

[7] I acknowledge that there is a supply of land outside UGBs that is used for residential purposes (in residential exception areas, which includes unincorporated communities; and on farm or forest land, since landowners and developers have found multiple ways to develop houses on resource land). This white paper does not address those markets.

[8] Tier 3 Cities are ones that have populations greater than 1,000, are growing, and have data adequate to support the kind of analysis the U of O is doing.

Exhibit 3: Residential acreage by improvement status by region, Tier 3 Cities, 2012

City Size	Number of Cities	Residential (Class 1XX) Acres: Total	Improved		Unimproved		Unimproved Unprohibitive	
Central Oregon	9	13,178	11,143	85%	2,035	15%	2,027	15%
North Coastal Oregon	12	7,262	4,540	63%	2,723	37%	2,656	37%
Northeast Oregon	12	7,525	4,860	65%	2,665	35%	2,635	35%
South Coastal Oregon	6	5,984	3,676	61%	2,308	39%	2,280	38%
Southeast Oregon	6	3,720	2,358	63%	1,362	37%	1,357	36%
Southern Oregon	17	22,776	16,373	72%	6,403	28%	6,229	27%
Willamette Valley	58	64,009	47,166	74%	16,842	26%	16,250	25%
All Cities	**120**	**124,455**	**90,116**	**72%**	**34,338**	**28%**	**33,434**	**27%**

Source: From Rebecca Lewis, co-author of *Analysis of Land Use Efficiency in Oregon Cities: A Report to the HB 2254 Rulemaking Committee*. University of Oregon Community Service Center, final draft May 2015.

The data suggest that there is no absolute shortage of vacant land in cities. Other research I have done suggests that the number of new residential building permits per year in moderately growing cities average around 1% of the existing housing stock. Recent U of O research demonstrates that new units are built at a higher average density than that of existing stock. That evidence, together with the high percentage of vacant land that is buildable (not prohibitively constrained), suggests that *the amount of potentially buildable land in UGBs is high relative to the annual conversion of vacant (unimproved) land to developed (improved) land.*

But critics of UGBs argue that UGBs do not provide *enough buildable land that is readily available at reasonable prices*. Supporters of UGBs argue that a 20-year supply of *vacant* land should provide enough *buildable, serviced, and marketed* land for at least a few years of demand, and that should be enough market choice to keep prices from rising (or from rising "too much").[9]

Definitions and threshold values of all of the underlined terms in the previous paragraph are at the heart of debates about UGB policy in Oregon. Moreover, data about some of these terms are scarce: without any systematic measurement of availability and price of parcels, it is hard to assess their readiness and reasonableness.

Basic principles of urban economics are (1) for a given level of demand, if land supply is more scarce, the price of land will increase (other things being equal); and (2) as the price of land increases it will make sense for developers to substitute capital for land: i.e., to build more

[9] Neither Oregon-based policy analysis nor the professional literature is definitive about what the proper amount of *buildable, serviced, and marketed* land (a subset of all vacant land that I will call *ready* land) is to allow a land market to function without big increases in price due to land scarcity. Everyone agrees that the supply of ready land should be greater than what is needed for one-year of development: if not, at the end of 9 months there is almost not choice left in the market and land owners can charge higher prices to ration short supply against constant or growing demand. At the low end, I have heard some land economist argue for a 2 – 3 year supply. I think most would agree that a five-year supply of ready land would be adequate to avoid monopsony power. I admit these are my impressions—I can find no literature to cite, and am aware of no studies in Oregon addressing this issue. Finally, even if a five-year supply of *ready* land were the right answer (approximately), no studies have addressed consolidated information about *buildable* land and *ready* land to make estimates of the relationship between the two (i.e., how many years of vacant does a city need to make sure that it has a five-year supply of ready land?), though there are some studies in Oregon (typically of industrial land) that may have the data to address this question.

intensively / densely (unless regulations or public objections prohibit or restrict it). Increasing density is the equivalent of increasing "development capacity;" it also seems to be consistent with the HB 2254 focus on increasing the efficiency of land use.[10]

Or is it? Back to economic principles: government can cause any good to be used "more efficiently" (less input per unit of output) by adopting policies that make it more scarce or its use more expensive. In cases where there are obvious and big external costs (e.g., water pollution), such regulation can improve efficiency in the way economists think about it: the *total* cost of producing a specific output is reduced (or the value of the output is increased for a given amount of cost).

But for economists, using less of something in a production process does not necessarily mean that the production process is more efficient. Efficiency is achieved by having prices right and then letting the market find an efficient (optimal) balance of factor inputs based on those prices. If such regulation provides small benefits but has big costs to development, however, then the cost increase to use an otherwise plentiful resource means, in economic terms, that the overall production function has become less efficient (as other factors get substituted for the now-more-expensive factor) and the use of that resource has become less efficient.

Economic efficiency in a market setting is unlikely to be achieved by setting regulatory limits on the use of certain factors of production. In a market economy, a better role of policy and regulation is usually to identify costs that are significant to society and that are not being counted by businesses in their production (i.e., *external costs* or *externalities*), and to set policies that compel businesses to include those costs. If the regulations are "efficient" they will cause prices of some factors of production to increase to reflect external social costs. Then it is up to businesses to look at these new prices and find an efficient mix of types and amounts of factors for their production functions.

That sounds theoretical because it is. But it has implications for the LCDC's rule-making because it raises the possibility that increased density is not necessarily the proper prescription for getting land use efficiency. There is an extensive literature on both sides of the issue about whether strong regulatory policy in land use increases the cost of housing. In my opinion, it almost certainly does: in attempting to internalize external costs it would be the rare regulation that made the internal costs cheaper.

But the real question—and the harder one to answer—is about whether the increased costs are worth it; about whether the regulation is efficient. That is not a question I risk answering here. I'm only noting that, just as when density gets very low it is easier to see that it is an inefficient

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[10] "Land use efficiency" is a term used frequently in HB 2254. It is not explicitly defined, but the connection to density is clearly implied. Section 4 (2) (b) says the commission shall design its methods so that "the urban population per square mile will continue, subject to market conditions, to increase over time on a statewide basis and in major regions of the state." The empirical work being done by the University of Oregon for DLCD on land use efficiency operationalizes the term as "density."

way to provide urban-level services, there can also be inefficiency when required density is much higher than what market conditions suggest real-estate users want.[11]

As often happens when one parses legislative language, ambiguities emerge. The development capacity of any particular parcel of land will tend to increase as supply is constrained (other things being equal). But if supply is constrained "too much" without "offsetting" benefits (the magnitudes of the italicized terms are uncertain and debated) then prices may rise to the point where development just does not happen on many parcels: the theoretical capacity may have increased, but the practical capacity (at least in the short run) has decreased.

Related to this point are ones about public policies regarding incentives and fees for infrastructure and development. Those incentives and fees affect the cost of buildable land, the cost affects price, and the price affects the intensity of development capacity and the feasibility of development. In other words, the development capacity of *buildable land* may be more sensitive to incentives, fees, and regulations than it is to the total supply of buildable land.

In summary, regarding the supply of vacant and buildable land in UGBs in Oregon:

- There is no absolute shortage of vacant land in Oregon cities, on average.
- The amount of potentially buildable land in UGBs in Oregon cities is high relative to the annual conversion of vacant (unimproved) land to developed (improved) land.
- More difficult to measure is whether UGBs provide enough buildable land that is readily available at reasonable prices. That depends on perceptions and predilections of property owners and developers and on public policy (especially regarding zoning, permitting, and infrastructure provision and pricing). I have assembled no evidence, but I would expect that at least some cities in Oregon have supplies of buildable land that are small relative to a five- or 10-year estimate of market demand.
- For the purposes of this requirement of HB 2254 to consider "any significant changes occurring or expected to occur in the markets for urban land uses," I conclude that there is nothing exceptional *on the supply side* of the market that is not already being considered through current UGB practices or through the simplified practices now being considered by DLCD and the RAC.

3.3 Demand for land: population and employment growth in Oregon

The need for and absorption of urban land result primarily from a demand for built space and public facilities. Both in theory and in planning practice, the demand for built space is assumed

[11] As is common with public policy in general and land-use policy in particular, more analysis can create less certainty rather than more. In *Zoned Out* (2006, RFF Press) professor Jonathan Levine argues, with supporting data, that local government regulation has been inefficient because it has *discouraged* density that the market would otherwise provide. Oregon can point to the Goal 10 and Metro housing rule as a regulation that tried to undo the inefficiency of local regulations that did not permit density. But finding just the right point of regulation is difficult: what if a government requires more density than the market wants to provide? Levine's answer, and that of many urban economists, is that "Use regulation to correct clear price distortions and control obvious externalities, and then let the market produce the development that makes sense given those (correct) prices and (efficient) regulations."

to be well correlated with the growth of population (households needing housing) and employment (as a proxy for economic activity). The correlation, though good, is not inevitable. On the housing side for example, changes in the rate of household formation, household size, and income can all change the demand for new housing even if there were no population growth. On the commercial and industrial side, changes in technology and labor force productivity, or in consumer income, can change the demand for space even without changes in economic output or employment.

Nonetheless, the evidence is that population and employment growth are correlated with urban land absorption, and they are measurable historically and typically the subject of official forecasts. Thus, they are a good place to start a discussion of demand for urban land.

Exhibit 4 shows *historical* **population** growth in Oregon. Different parts of the state have grown at different rates. Exhibit 5 shows the *forecasted* population growth. Key points:

- The Metro region accounted for **44%** of total population in Oregon in 2013, and for **44%** of total population growth in Oregon from 1940-2013. It is forecasted to account for **44%** of total Oregon population in 2035 and for **47%** of total population growth in Oregon from 2015-2035.
- The Valley region accounted for **48%** of the rest of Oregon's population (per HB 2254, the rest of the state does not include the Metro region), and accounted for **52%** of population growth in the rest of Oregon from 1940-2013. It is forecasted to account for **49%** of the rest of Oregon's population in 2035 and for **53%** of total population growth in the rest of Oregon from 2015 to 2035.

Exhibit 4: Historical population for Oregon by region, 1940-2013

						% of Population	Change	% of Change	AAGR		
Region	1940	1960	1980	2000	2013	2013	1940-2013	2013	1940-2013	1980-2013	2000-2013
Metro	451,423	728,088	1,050,418	1,444,219	1,709,394	43.50%	1,257,971	44.29%	1.84%	1.49%	1.31%
Rest of State (Per HB 2254)	638,261	1,040,653	1,582,738	1,977,180	2,220,671	100.00%	1,582,410	100.00%	1.72%	1.03%	0.90%
Valley	239,781	440,811	738,159	936,387	1,062,701	47.85%	822,920	52.00%	2.06%	1.11%	0.98%
Northwest	72,480	93,349	124,563	147,931	158,255	7.13%	85,775	5.42%	1.08%	0.73%	0.52%
Southwest	115,009	241,302	366,098	441,310	483,412	21.77%	368,403	23.28%	1.99%	0.85%	0.70%
Central	26,206	39,660	86,832	153,558	207,914	9.36%	181,708	11.48%	2.88%	2.68%	2.36%
East	184,785	225,531	267,086	297,994	308,389	13.89%	123,604	7.81%	0.70%	0.44%	0.26%
Oregon	1,089,684	1,768,741	2,633,156	3,421,399	3,930,065		2,840,381		1.77%	1.22%	1.07%

Source: Portland State University Population Research Center, United States Census. Retrieved February 22, 2015. Analysis by ECONorthwest.

Exhibit 5: Forecasted population for Oregon by Region, 2015-2035

Region	2015	2020	2025	2030	2035	% of Population 2035	Change 2015-2035	% of Change 2015-2035	AAGR 2015-2035
Metro	1,732,521	1,852,141	1,976,683	2,096,166	2,204,994	44.14%	472,473	47.55%	1.21%
Rest of State (per HB 2254)	2,269,078	2,399,959	2,539,518	2,671,835	2,790,208	100.00%	521,130	100.00%	1.04%
Valley	1,086,965	1,155,049	1,227,847	1,298,230	1,363,478	48.87%	276,513	53.06%	1.14%
Northwest	162,246	169,273	176,532	182,924	188,031	6.74%	25,786	4.95%	0.74%
Southwest	491,510	517,531	545,809	571,161	591,925	21.21%	100,415	19.27%	0.93%
Central	210,640	228,442	247,035	265,104	281,713	10.10%	71,073	13.64%	1.46%
East	317,718	329,664	342,296	354,415	365,061	13.08%	47,343	9.08%	0.70%
Oregon	4,001,600	4,252,100	4,516,200	4,768,000	4,995,203		993,603		1.12%

Source; State of Oregon Office of Economic Analysis.
http://www.oregon.gov/DAS/OEA/Pages/demographic.aspx#Long_Term_County_Forecast. Analysis by ECONorthwest. Retrieved February 22, 2015.

Exhibits 6, 7, and 8 show historical and forecasted **employment** in Oregon, by region. Key points:

- The Metro region accounted for **51%** of total employment in Oregon in 2013 and **89%** of total employment growth in Oregon from 2005-2014. It is forecasted to account for **51%** of total Oregon employment in 2022 and for **56%** of total employment growth in Oregon from 2012-2022.
- The Valley region accounted for **49%** of the rest of Oregon's total employment, and accounted for **64%** of employment growth in the rest of Oregon from 2005-2014. It is forecasted to account for **52%** of the rest of Oregon's employment in 2022 and for **56%** of total employment growth in the rest of Oregon from 2012-2022.

Exhibit 6: Historical employment for Oregon by Region, 2005-2014

	2005	2007	2009	2011	2013	2014, Q3	% of Employment 2014	Change 2005-2014	% of Change 2005-2014	AAGR 2005-2014
Metro	807,118	848,845	795,096	811,124	851,792	874,716	51.14%	67,598	88.87%	0.90%
Rest of State (per HB 2254)	827,100	858,787	793,305	785,736	806,943	835,565	100.00%	8,465	100.00%	0.11%
Valley	404,697	421,220	391,652	388,174	398,042	410,156	49.09%	5,459	64.49%	0.15%
Northwest	53,013	55,171	52,324	51,431	52,448	54,157	6.48%	1,144	13.51%	0.24%
Southwest	176,458	178,672	161,187	159,148	163,273	166,261	19.90%	-10,197	-120.46%	-0.66%
Central	76,321	82,837	71,481	70,622	75,291	80,783	9.67%	4,462	52.71%	0.63%
East	116,611	120,887	116,661	116,361	117,889	124,208	14.87%	7,597	89.75%	0.70%
Oregon	1,634,218	1,707,632	1,588,401	1,596,860	1,658,735	1,710,281		76,063		0.51%

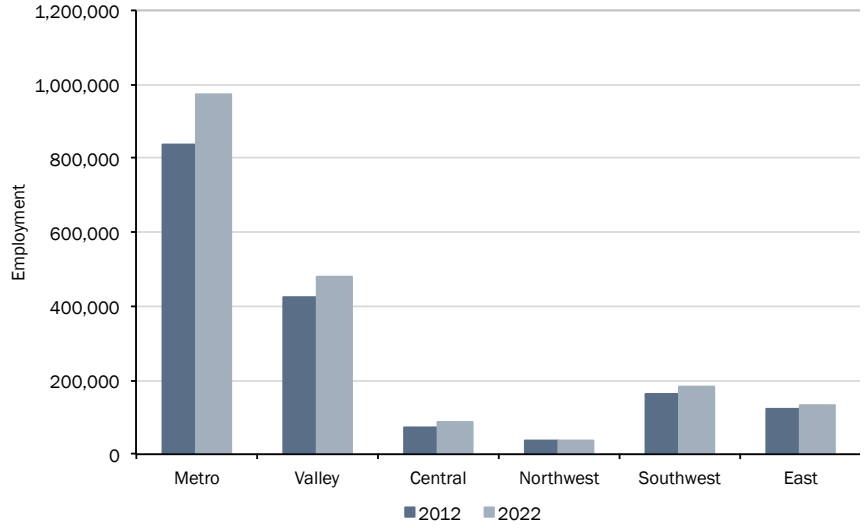
Source: State of Oregon Employment Department. Retrieved February 22, 2015. https://www.qualityinfo.org/ed-ewind/?at=1&t1=0~4101000000~00~5~0000~00~00000~2014~03.

Exhibit 7: Forecasted employment for Oregon by Region, 2012-2022

Region	2012	2022	% of Employment 2022	Change 2012-2022	% of Change 2012-2022	AAGR 2012-2022
Metro	837,290	974,410	51.38%	137,120	55.97%	1.53%
Rest of State (per HB 2254)	814,360	922,210	100.00%	107,850	100.00%	1.25%
Valley	422,470	481,440	52.21%	58,970	54.68%	1.32%
Northwest	35,100	39,210	4.25%	4,110	3.81%	1.11%
Southwest	162,150	181,990	19.73%	19,840	18.40%	1.16%
Central	73,620	85,760	9.30%	12,140	11.26%	1.54%
East	121,020	133,810	14.51%	12,790	11.86%	1.01%
Oregon	1,651,650	1,896,620		244,970		1.39%

Source: State of Oregon Employment Department.
https://www.qualityinfo.org/documents/10182/92203/Oregon+Employment+Projections+2012-2022?version=1.0.
Retrieved February 22, 2015.

Exhibit 8: Forecasted employment for Oregon by Region, 2012-2022



Source: State of Oregon Employment Department.
https://www.qualityinfo.org/documents/10182/92203/Oregon+Employment+Projections+2012-2022?version=1.0.
Retrieved February 22, 2015.

With respect to the requirements of HB 2254, there is nothing in these data about population or employment growth rates to suggest special adjustments for market conditions: the future is expected to closely follow past trends.

I noted in section 2.1 that it is not just *population* growth that drives demand for housing and retail space: the *purchasing power* and *preferences* of the population matter as well.

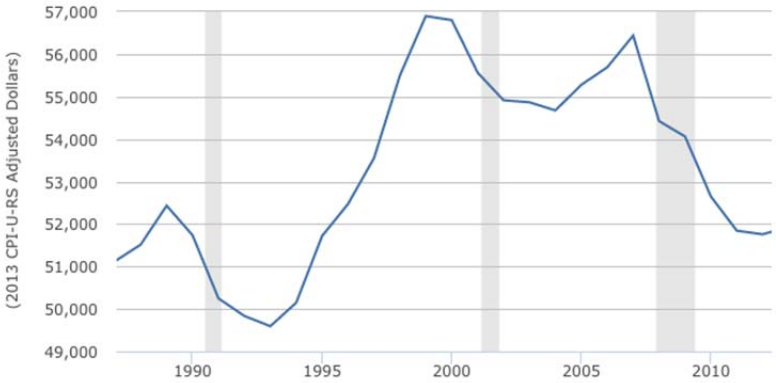
Regarding purchasing power (income), average real incomes (i.e., incomes adjusted for inflation with constant purchasing power) have not grown much nationally or in Oregon. The St. Louis Federal Reserve keeps data on hundreds of economic indicators. Exhibit 9 shows that income real median household income in the nation is about the same now as it was 20 years ago.

Data for Oregon (U.S. Census ACS 1-year survey) show all measures of real income (median household, median family, and per capita) essential flat since 2005, and below national averages (http://www.deptofnumbers.com/income/oregon/). Short-run (three year) forecasts by the State

Economist are for personal income to increase by around 5% per year (in nominal, not real, terms…that would mean a smaller annual growth [1 – 2%] of real income).

In short, there are no expectations of big gains or drops in purchasing power that would cause any significant shifts in consumer demand (for housing most importantly, and retail secondarily).

Exhibit 9: Real median household income in the US, 1993-2013



US. Bureau of the Census, Real Median Household Income in the United States[MEHOINUSA672N], retrieved from FRED, Federal Reserve Bank of St. Louis

One exception is that behind the averages (medians and means) is a different story. Incomes for the top 10% of households have been growing, while incomes for many other groups have been declining. Housing has historically been a good place for wealthy households to park increasing wealth. They get mortgage interest tax deductions, untaxed capital gains on appreciation, and the pleasure of enjoying more and higher-quality space. Combined with rising costs for and prices of new housing units, *these trends suggest increasing difficulties for building new housing affordable to middle-income households, and a continued demand for (1) new, high-end units, both single-family and condo, and (2) vacation homes*. In short, *the recent trends and current conditions are likely to continue: demand for smaller (less expensive units) and demand for larger, single-family units, with the share of single-family on smaller lots increasing.*

The topic of housing price and affordability is a central one to debates about Oregon's UGBs. Of the several indices, the Case-Shiller index is probably the one cited most my economists and market analysts. It typically works with data available in metropolitan areas and, thus, reports on affordability in larger cities. A recent version of the index shows Portland to be right at the average of a 20-city composite index, and Seattle at the same place, but large California cities (LA, SF, SD) much higher (less affordable).[12]

Additionally, the National Housing Conference's Center for Housing Policy completes a national Housing Landscape each year to assess housing affordability by state. The Housing Landscape reports the percentage of severely cost-burdened working households in each state (a cost-burdened household is one that spends more than half its income for housing costs). The 2014 Housing Landscape reported that 20 percent of Washington's, 25 percent of Oregon's, and 32 percent of California's working households were severely cost-burdened.[13]

To further compare housing affordability among regions in Oregon and among Oregon, Washington, and California, I created my own index. I used recent county and city level data to

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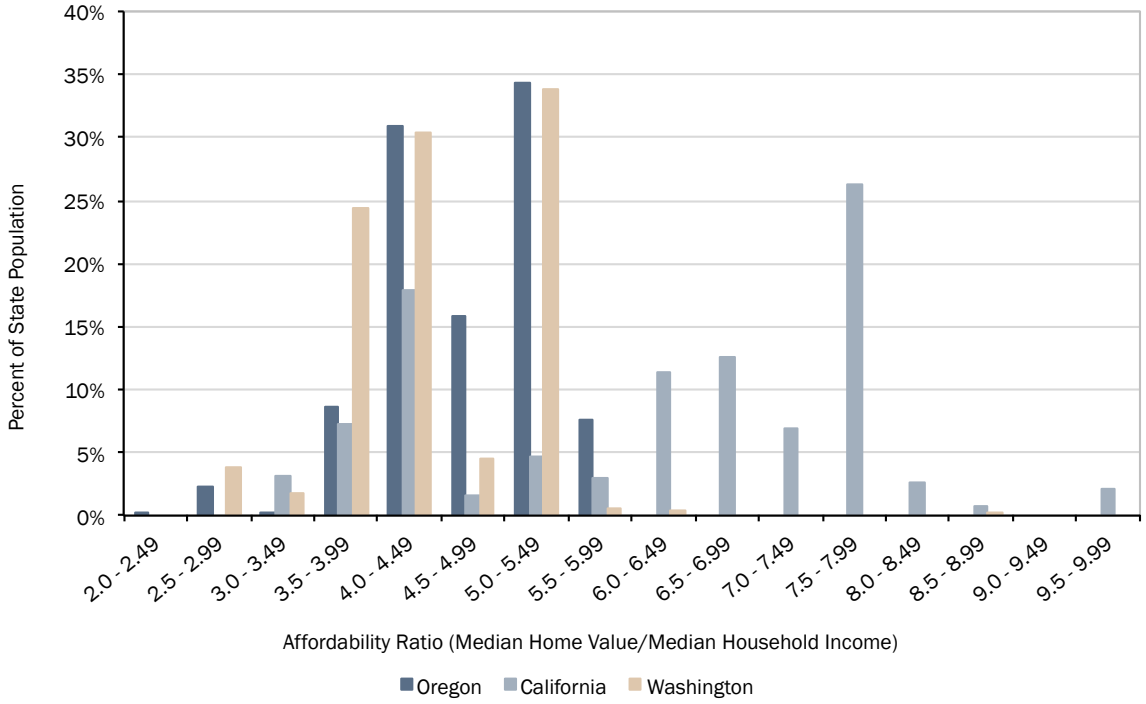
[12] S&P-Case-Shiller 20-City#CCE63D

[13] National Housing Conference, Center for Housing Policy. 2014 Housing Landscape. http://www.nhc.org/media/files/Landscape2014.pdf

divide median home value by median household income. showing housing affordability by county. The higher the number, the less affordable the housing.[14]

I used this ratio to address some common questions. Exhibit 10 addresses affordability in Oregon compared to other west coast states.[15] It shows the percent of the population in each state living in counties with different affordability ratios.

Exhibit 10: Distribution of affordability ratio by percent of state population for Oregon, California, and Washington



Source: 2013 5-Year American Community Survey, Analysis by ECONorthwest.

Exhibit 11 rolls up the data into statewide averages.

Exhibit 11: Weighted affordability ratio by population for Oregon, California, and Washington

State	Weighted Median Household Income	Weighted Median Home Value	Weighted Affordability Ratio
Oregon	$51,193	$238,797	4.67
California	$62,150	$390,373	6.15
Washington	$60,413	$272,508	4.45

Source: 2013 5-Year American Community Survey, Analysis by ECONorthwest.

My conclusions:

- California is clearly less affordable than Oregon or Washington on this measure.

[14] Data was obtained from American Community Survey 5-year data, 2009-2013. We use this estimate of median household income and median housing price as an approximate midpoint of the five years, 2011.

[15] The ratio is built from county-level data, by state, and weighted by population.

- Though Oregon and Washington look similar, Washington is more affordable because it has a larger percentage of people in the 3.5 to 3.99 category, and a smaller percentage in the 4.5 6to 4.99 category.
- My index ranks states consistently with the 2014 Housing Landscape reported above.

Exhibit 12 looks at affordability in more detail in Oregon.[16] The East is the most affordable region. The other regions are relatively clustered and I see little reason or practical way for the LCDC to include speculations about future housing affordability by region into adjustments to its new UGB rules.

Exhibit 12: Weighted affordability ratio by region in Oregon

Region	Median Household Income	Median Home Value	Affordability Ratio
Metro	$58,988	$281,711	4.81
Valley	$46,857	$210,424	4.51
Northwest	$47,059	$232,528	5.03
Southwest	$41,145	$206,307	5.02
Central	$48,311	$232,781	4.80
East	$43,482	$161,268	3.70

Source: 2013 5-Year American Community Survey, Analysis by ECONorthwest.

I looked at data on affordability because housing affordability is one of five to 10 issues that are almost always brought up in debates about Oregon UGBs. My conclusions:

- Given forecasted changes in the U.S. and Oregon economies in general, potential in-migration to the U.S. and Oregon, Oregon and local housing policies, and other factors, the problem of housing affordability is more likely to get worse than better.
- Goal 10 already requires cities to provide housing of all types for all income levels. In their UGB findings cities have to make the case that they are doing that.
- If my speculation that measures of housing affordability in Oregon may get worse in the future is correct (and it may not be), what does that mean about the LCDC rule-making for HB 2254? I can create several ad hoc arguments:
    - Contributing to the cost of housing is the cost of land and permitting. Simplifying the rules is likely to make housing more affordable.
    - A counterpoint: if simplification means that cities no longer have to be explicit about what they are going to do to provide affordable housing, then that could be bad for affordable housing.
    - Counterpoint to the counterpoint: what gets done directly for affordable housing through a UGB amendment process is modest. The main thing a state can do, which is important, is to put pressure on local governments to allow and provide land for multi-family housing. Multi-family housing of some types is more affordable, other things being equal, because it has less land and (usually) less built space. But multi-

[16] Each value was calculated by a weighted average of each county within the region by population. Larger counties within each region had a greater influence on the region's affordability ratio.

family housing can also be expensive (e.g., downtown or vacation condominiums). Oregon backed away from requirements for inclusionary zoning; other states (e.g., New Jersey) have not. Further, any new housing, without subsidy, is unlikely to be affordable to a large segment of the population with lower household incomes.

I think the market information about affordability can be used to make either of two opposite cases: (1) that the state should do less (simplify the rules), or (2) that the state should do more (e.g., more planning requirements for affordable housing; more state resources to subsidize affordable housing). *Regarding affordable housing, if there is an implication for the LCDC rule-making on HB 2254 it seems to be equivocal: the LCDC should decide how it wants to address affordable housing in its rule-making: the market data are open to different policy prescriptions.*

Regarding current regional variations in affordability by region in Oregon (Exhibit 12): (1) those are current conditions, not forecasts, and this part of HB 2254 is about forecasted market conditions; and (2) even if we forecasted current affordability by indices to remain relatively the same or to change, I don't see any clear recommendation for how that should influence DCLD's rule-making.

3.4 Possible changes in urban land markets

This section summarizes key information about possible changes in urban land markets contained in Appendices A, B, and C. To make this section a little more readable, I skip the citations: they can be found in the appendices. It addresses the three broad land use types that cover most of private, market-based land development: residential, commercial, and industrial.

In all cases I am talking about broad trends and general tendencies. Even if, for example, "Boomers are downsizing" or "Millennials prefer urban environments" in general, there will be hundreds of thousands of households in the U.S. for whom this will not be true. I think the correct interpretation is about the direction of change, not that there will be a quick and huge flip. Market prices and changes in public policy and investment will dampen the swings.

In this section I just summarize what my research found other researchers saying about future land markets. I discuss implications in Chapter 4.

3.4.1 Residential land markets

- **The Baby Boomers are aging.** Seniors (age 65 and over) made up between 20 and 25 percent of the U.S. population in 1970, and are expected to make up over 40 percent by 2040. The 78 million boomers, born between 1946 and 1964, are projected to account for about 20% of the U.S. population, up from 12% in 2000. While many Boomers will choose to remain in their houses as long as possible, many will seek to downsize to smaller single-family homes or multifamily homes, rent, or live in retirement communities or assisted living homes. One survey found 72 percent of Boomers would trade a large home for a shorter commute, and 51% prefer mixed-use walkable communities.
- **Generation X can't buy all the Boomers' homes.** Most of Generation X, a much smaller generation born between 1961 and 1981, have plateaued in their careers and were those who were hit the hardest during the recession. On average those between 45 to 54 years

old saw a decrease in their real median incomes of 6 percent over 10 years. This decline in household income contributes to declining household net worth which, along with having children, decreases available funds for down payments on the Boomers' single-family homes. Because Generation X is a smaller generation, this further decreases the demand for the Boomers' single-family houses. Some analysts predict the an excess of suburban single-family houses as Boomers choose or are compelled to downsize.

- **Millennials are entering their prime earning years.** Millennials (or the Echo Boomers, the majority of whom are born between 1982 and 1995) will all be older than 25 by 2030, with the majority being between 35 and 48 years old. Thus, the Millennial generation will enter their prime earning years in the next fifteen to twenty years, and would be the generation expected to purchase the Boomers' houses.
- **Millennials prefer urban environments (at least now).** The suburban lifestyle is less attractive to Millennials, whose preferred residential characteristics include multiple and high-quality transit options, walkability, parks, technology, excitement, and cool and fun factors. In one survey, fifty-four percent of Millennials stated they would give up a larger home for a shorter commute, 62% prefer mixed-use communities, and 52% prefer mixed-income communities. Since 2000, 37% more college-educated people age 25-34 are living within three miles of a city center, and 25% more live in major metropolitan areas. Urban characteristics will continue to draw people to urban areas. The big debate about Millennials is whether their choices are driven by underlying and lasting changes in values, or are a practical response to the fact that they have less income.
- **Millennials still want to own a house, eventually.** While Millennials are moving to urban areas, studies and surveys show that many Millennials are still likely to seek homeownership down the road. The delay is due to several factors including delays in marriage and starting families, student debt, the Great Recession. In a survey from the Demand Institute, 75% of Millennial respondents cited homeownership as a long term goal. Given their higher preference for urban areas (compared to the same age group 20 years ago) it is reasonable to expect that Millennials that do go to the suburbs will place more value on places that are walkable, have open space, and have gathering places.
- **The changing family and changing energy prices will decrease demand for single-family homes.** Many of the suburban single-family homes were built when the nuclear family was typical and energy prices were low. With increases in a family structure variety, race and ethnic diversity, and energy prices, the demand for large single-family houses is expected to decrease.
- **Continued increases in the immigrant population will increase demand for multifamily housing and eventually homeownership.** Recent immigrants are likely to choose more affordable multifamily housing initially. Homeownership increases, however, for second-generation immigrant households. The growth in the Hispanic population (resulting from immigration and natural increases) is projected to result in the country's Hispanic and Latino population increasing to 20% of the U.S. population by 2020, up from 13% in 2000.

3.4.2 Commercial land markets

Office Space

- **Telecommuting has become more accepted, and even encouraged, especially in large and congested metropolitan areas**. Remote work will continue to become a larger percentage of all office work.
- **More efficient use of office space is leading to downsized offices.** Traditionally, most employees have an assigned office or desk, leading to a 50 percent utilization rate. Now, companies are moving towards office-sharing, tolerating less underutilized or wasted space in the office. This shared office space has, in some cases, increased office utilization rates to 95%. With increased office utilization rates, companies are able to downsize their rented office space to decrease costs.
- **Increased efficiency and utilization has increased employment density**. About ten years ago, 250 square feet per office employee was the norm. Now, the average is closer to 195 square feet or less per office employee. Can that decrease in space per employee continue—can they be packed any tighter? The answer is that these averages are not based on the employment density of a typical day at the office, but are derived by dividing estimates of total office space by total employees. Shift work and telecommuting can allow that average space per employee to continue to drop.
- **Young employees are attracted to modern office space**. The same Millennials who seek an urban lifestyle are more attracted to newer and more modern office spaces with natural light, more technology, and an increased sense of collaboration.

Retail

- **As the Millennials replace the Boomers as shoppers, priorities will shift.** . Both luxury stores and value stores are expected to do well, but mid-priced stores will lose market share as consumers "trade up and down."
- **Continued increases in online sales will lead to increased mall and retail vacancy rates.** Long-term leases on large retail spaces will make it difficult for businesses to downsize when faced with decreased sales, forcing them to locate in less desirable areas, which will further increase online shopping. Hundreds of retail stores are closing around the country after facing decreased sales. In 2013, sales dropped over five percent, following a continued downward trend.
- **Some retail sectors will do better than others.** Sectors like health, beauty, and home are expected to be stronger than sectors like music, books, and video in the future, because personal interaction is more likely to be required before purchase.

3.4.3 Industrial land markets

- **Recent technological improvements in industrial robots and automation will affect manufacturing and industrial markets.** In previous years, robots have been used in the more dangerous or precise processes of manufacturing, but have been excluded from performing human tasks. New technologies have made it realistic for relatively

inexpensive robots (who do not require wages or healthcare) to perform those human tasks. The relative inexpensiveness of robots like this will reduce industry costs and continue to make manufacturing in the United States more economically feasible.

- **Additive technology has potential to reduce manufacturing costs.** 3D printing is highly customizable, so can reduce development costs, customize goods for specific consumers, reduce waste, and simplify manufacturing processes.
- **Outsourced production will begin to be brought back to the United States.** With increased technological innovation in the coming years that will reduce production costs and make domestic production economically feasible, re-shoring is expected to occur.

3.5 Recent land absorption in Oregon

One way to think about the future conversion of vacant land to developed land is to look at factors that create a demand for development, how they have changed in the past, and how they might change in the future. That is what I did in Sections 3.3 and 3.4. But another way to predict future land conversion is to look at past land conversion. In the absence of direct data about land conversion (such data exist for some cities, but they are not comprehensive and consistent), one can look at data that are indirect and partial: namely, at the construction / absorption of new housing units.

There are good reasons to be ambivalent about using recent absorption to forecast future absorption. On the negative side (1) short-run absorption may be low or high because of business cycles, and (2) even long-run trends can change in response to fundamental changes in economic, demographic, technological, and regulatory conditions. On the positive side, the trend of absorption can be very stable for jurisdictions over the long run, and all jurisdictions need some solid, empirical basis from which to start their thinking about future absorption.

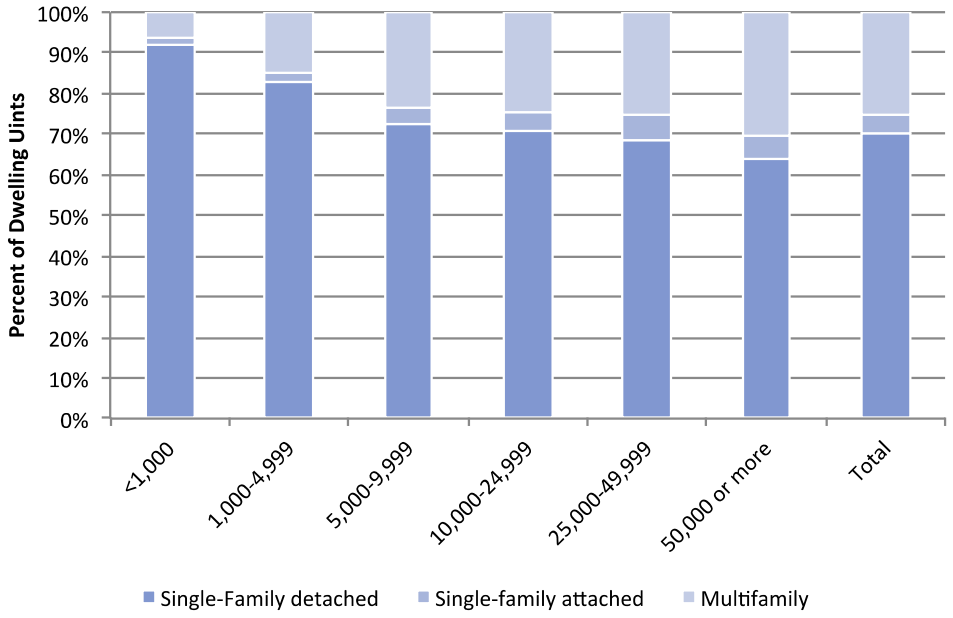
I provide some information about recent trends in Appendix D, but I do not find it of much use for this assignment. Short-run information available from standard real-estate sources tells the expected story that real-estate markets are better now than they were when the bursting real-estate bubble triggered a multi-year recession in 2008. It does not provide information about longer-run trends in product mix or density, and it is those longer-run trends that are more germane to the HB 2254 questions.

I did not assemble data on long-run trends in the absorption of employment land. To get a sense of the longer-run trends in residential product type and density in Oregon, I turned to the recent work by the University of Oregon done for DLCD.[17] Detail is available in the report.

Exhibits 13 shows the current housing mix for non-Metro cities in Oregon, and the expected correlation: the larger the city, the larger the percent of housing that is multifamily.

[17] Analysis of Land Use Efficiency in Oregon Cities: A Report to the HB 2254 Rulemaking Committee. University of Oregon Community Service Center, final draft May 2015.

Exhibit 13: Housing mix by city size, all non-Metro cities in Oregon, 2012

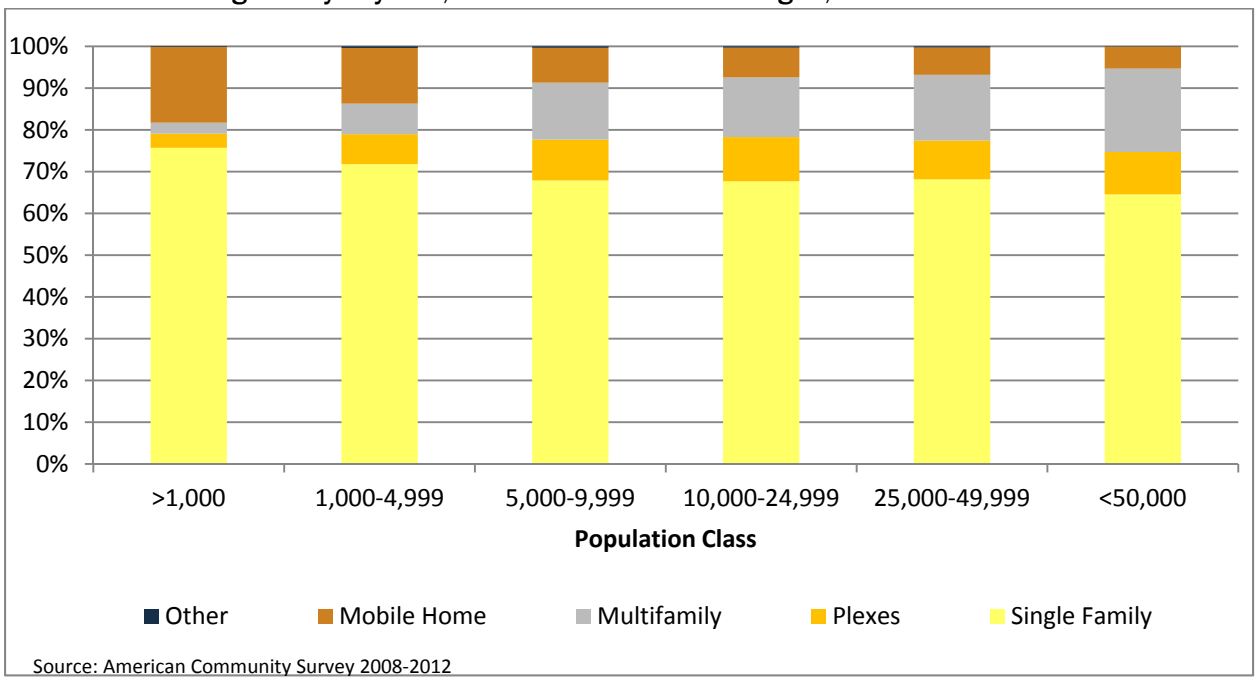


Source: From Rebecca Lewis, co-author of *Analysis of Land Use Efficiency in Oregon Cities: A Report to the HB 2254 Rulemaking Committee*. University of Oregon Community Service Center, final draft May 2015.

Exhibits 14 shows the recent trend in absorption, by housing type, for non-Metro cities in Oregon, and the expected correlations: the larger the city, the larger the percent of housing that is multifamily, and the smaller the percentage that is mobile home.

I discuss my ideas about the implications of these data for the LCDC's HB 2254 rule-making in the next section.

Exhibit 14: Housing mix by city size, all non-Metro cities in Oregon, 2008-2012



Source: From Rebecca Lewis, co-author of *Analysis of Land Use Efficiency in Oregon Cities: A Report to the HB 2254 Rulemaking Committee*. University of Oregon Community Service Center, final draft May 2015.

4. Implications

4.1 Regarding the logic of the requirement

A lot goes into writing rules. They are complicated. HB 2254 is about simplification and it is complicated. Inconsistencies and unintended consequences are inevitable. I would not want to be a rule writer.

I was on the DLCD committee that reviewed work in progress as the language that eventually became HB 2254 was being drafted. I don't remember a lot of discussion about the "changes in markets for urban land" section. It probably seemed logical to everyone: yes, the LCDC should have some flexibility to adjust its rules based on future changes to urban land markets.

The rule did not foresee this situation: I am writing a white paper about market forces that will go the RAC. The RAC and DLCDC staff might consider the evidence I have presented as it creates the rules it will recommend to the LCDC for consideration. In other words, it is possible (likely) that the rule that goes to the LCDC will already have considered much of what is important about market changes, and that additional adjustments made by the LCDC would be unnecessary and, perhaps, redundant.

I cannot know now the extent to which that hypothetical will prove true. I note it to remind DLCD staff to evaluate that point as it prepares it recommended rules for the LCDC.

4.2 Regarding supply and development capacity

What are the implications for the HB 2254 requirement that the LCDC consider urban land markets when determining the supply and development capacity of lands already within an urban growth boundary (i.e., the Buildable Lands Inventory)? My conclusions:

- There is no absolute shortage of vacant land in Oregon cities, on average.
- The amount of potentially buildable land in UGBs in Oregon cities is high relative to the annual conversion of vacant (unimproved) land to developed (improved) land .
- More difficult to measure is whether UGBs provide enough buildable land that is readily available at reasonable prices. That depends on perceptions and predilections of property owners and developers and on public policy (especially regarding zoning, permitting, and infrastructure provision and pricing).
- For the purposes of this requirement of HB 2254, I conclude that there is nothing exceptional *on the supply side* of the market that is not already being considered through current UGB practices or through the simplified practices now being considered by DLCD and the RAC.

4.3 Regarding forecasting land need

What are the implications for the HB 2254 requirement that the LCDC consider urban land markets when converting forecasted population and employment growth into forecasts of land need? My conclusions:

- Regarding population and employment forecasts, the primary drivers of demand for new development and the land to build it on, there is nothing in the data about historical or forecasted rates of population or employment to suggest a need for special adjustments for market conditions: the future is expected to closely follow past trends.
- Regarding housing cost, price, and preference, trends suggest increasing difficulties for building new housing affordable to middle-income households (much less low-income households). That problem suggests one solution: reducing cost by reducing floor space and lot size (i.e., increasing density). Recent trends are consistent with the speculation that national housing markets and Oregon land-use policy are shifting in the same direction: slowly toward an increased share of new housing that is multifamily and small-lot single family. But I expect a continued market demand for (1) new, high-end units, both single-family and condominium, and (2) vacation homes.
- I found no data to make a compelling argument for regional differences in policy based on market conditions, and certainly not for ones that go beyond whatever DLCD staff and the RAC are already considering.
- If the LCDC wants to address affordable housing in its rule-making, the market data are open to different policy prescriptions. I don't see any clear recommendation for how the evidence I presented should influence LCDC's rule-making.

4.4 Closing comments

In general, I expect that the work of DLCD staff and the RAC, as they work on drafting rules over the next six months for the LCDC to deliberate, will considered (explicitly or implicitly) all of the market factors I discuss in this white paper. In other words, the consideration of these factors that HB 2254 requires of the LCDC is likely to have been mainly done and incorporated into the draft rules that DLCD and the RAC forward too the LCDC.

If DLCD staff reject that version of my conclusions and believe that the LCDC will need to do more review , then I have presented evidence to limit that review.

- No market information I reviewed about the *amount of land* or the *amount of population and employment growth* make a compelling case the LCDC needs to make special adjustment to its rules. I do not expect DLCD staff and the RAC to get stuck on recommendations about rules of land supply (which is mainly factual and does not have to be forecasted), population growth (which now has PSU implementing a standardized procedures), or employment growth (staff at DLCD and the Oregon Employment Department are working out standard procedures now).
- The more likely area for difficulty is the conversion of expected (and agreed upon) population and employment growth into land need—in other words, the problem will be assumptions about future density.

The University of Oregon has done what its budget will allow regarding historical residential density. That provides a good base for discussion. But after that, one can make theoretical arguments on why future development might occur at densities different from those of current development. In theory, there are arguments for less density. But (1) the market arguments for greater average density are, in my opinion, stronger than those for less density, (2) HB 2254 implies, and all the RAC discussions have been explicit, that the idea of "land use efficiency" should mean that most cities in Oregon have to be, at least modestly, increasing their densities.

Thus, the RAC debate over the next few months will be about how to balance the goals of simplification and uptake (in other words, the goal is to have a rule that a lot of cities use—no matter how simple it is, if jurisdictions do not use it because they think it requires them to plan for unmarketable and unachievable densities, then simplification has no practical effect) against the goal of increasing density. Most RAC members, myself included, probably already have opinions about how far to push density, and we can probably find something in this white paper to support those opinions.

APPENDIX A: Review of the Literature on Factors Affecting Markets for Urban Development

To find a wide variety of sources, I conducted various internet searches, typically via Google. Keywords included "market demand forecasts and projections" for all three categories: residential, commercial, and industrial land markets. For each category, I moved into more targeted searches once general articles were found. Potential sources included news articles, academic journals, the Brookings Institute, and the Urban Land Institute. Many articles, especially from real estate agencies, provided forecasts for the coming year, but not 10 years out.

I report the literature in three categories: (1) residential land markets, (2) commercial land markets, and (3) industrial land markets. The bibliography at the end of the appendix is organized the same way.

Summary of the literature

Residential land markets

Reports from various news sources, publications, and journals discuss possible changes in future absorption in United States residential land markets. Over the next five to ten years, large changes could potentially occur in two generations: the Baby Boomers and the Millennials.

The Baby Boomers, comprised of 78 million Americans born between 1946 and 1964, have made a large impact on the development of American residential land markets (Greenblatt, 2011). Between 1990 and 2010, the Boomers were at the "peak of their family size and peak income," resulting in high demand for large-lot single-family suburban homes (Badger, 2013). However, as the aging Boomers continue to grow the senior population, from 2013-2020 the total senior population is expected to grow by 14.2 million (Pendall, et al. 2012). Seniors (age 65 and over) made up between 20 and 25 percent of the population in 1970, and are expected to make up over 40 percent of the total population by 2040 (Myers, 2015).

Although many seniors stay in single-family housing, studies show that seniors in general "release much more housing than they absorb," creating a net release of housing (Greenblatt, 2011). The Boomers will follow this trend and be looking to sell their single-family homes that they likely acquired in the 1980's and 1990's for several reasons. First, the retiring Boomers', with their children moved out, will begin to look to downsize (Leinberger 2011). Also, with age comes more difficulty in maintaining a home and living independently (Pendall, et al. 2012). Finally, for many Boomers, their house is their largest asset. Selling it and downsizing or renting will provide the necessary money that they lost during the recession or may not have saved during retirement (Meehan, 2014). A survey also showed that Boomers were looking to "age in place," corresponding to better transit, walkable communities, technology, and housing. As the total senior population is expected to increase, we can expect a net release of single-family housing at the end of the decade, known as the "Great Senior Sell-Off" (Eisenberg 2013).

As the Boomers look to sell their single-family homes, who will buy them in the next five to ten years? The consensus is not enough people, leading to an oversupply of suburban housing (Boyd 2010). Generation X, born between 1961 and 1981, won't likely fuel the demand. Many have plateaued in their careers, were hit hard by the recession, have children to care for, and seen declining household net worth. This all leads to limited funds to dedicate towards down payments on the Boomers' homes (Meehan 2014).

Like Generation X, the roughly 80 million Millennials (born between 1980 and the early 2000's) may not buy the Boomers' single-family homes. The suburban lifestyle is less attractive to Millennials. According to surveys, the preferred characteristics of a residence include multiple high-quality transit options, walkability, good schools, parks, technology, "cool," and fun (Flint, 2014 and Miller, 2014). In a study released by the Rockefeller Foundation and Transportation for America last year, 66 percent of surveyed Millennnials in ten cities cited high quality transportation access as one of the top three criteria in deciding where to live, and almost half would consider giving up their car if they had transportation options (Rockefeller Foundation 2014). Since 2000, 37 percent more college-educated people age 25-34 are living within three miles of a city center, and 25 percent more live in major metropolitan areas (Miller 2014). For now, the excitement and adventure paired with short commutes, transit, and walkability will continue to draw people to urban areas. As the only United States city rated on the Monocle's top 25 cities in their Quality of Life Survey in 2014 (which includes many livability factors including green space, transit, and culture), Portland surely will continue to attract Millennials from around the country (Monocle 2014).

While Millennials are generally not currently looking to own a single-family home, they will eventually desire them, showing that the younger generations make choices about housing throughout various life stages. Multiple studies have suggested that Millennials desire homeownership someday, especially after marriage and children. One reason for this delay in the desire for homeownership is the increased age of marriage (Davidson, 2014). In a survey of Millennial households (ages 18-29) in 2013, 74 percent planned to move in the next five years. The top reasons for this move were for a better living situation (71%), more privacy (59%), to establish one's own household (50%), and to own, not rent (48%). Seventy five percent of survey respondents cited homeownership as an important long-term goal. (Burbank and Keely, 2014). While 64% planned to be married in five years, we must also keep in mind that Millennial households may be older respondents, that is those already living in a household. Thus, high-school and college students may be underrepresented in the Millennial survey, However, Millennials will be more attracted to suburbs that have open space, are walkable, and have gathering spaces (Heckmann 2014).

Intergenerationally, the definition of an American family has and will continue to change. Over time and across generations, there has been an increase in single-parent families, and increased divorced rates. Thus, the need for large single-family homes will continue to decrease due to single-parent families but could increase with increased divorced rates (Bloomberg and Matthews 2014). Additionally, recent immigrants are likely to choose more affordable multifamily housing initially. Homeownership increases, however, for second-generation immigrant households. The growth in the Hispanic population (resulting from immigration and

natural increases) is projected to result in the country's Hispanic and Latino population increasing to almost 20% of the U.S. population by 2020, up from 13% in 2000 (Pendall et al. 2012 and US Census, 2012).

Commercial land markets

Commercial land markets can be split into two separate and very different classifications: office and retail. With increased technology come changes in office settings and demand around the country. Just as we saw book and video stores go out of business, we can expect to see changes in office spaces due to increased connectivity and digital technology.

Major trends in office work have and will affect the office market. While economic incentives caused downsizing, especially during the recession, technology is arguably a larger driving factor. First, we see that remote work is rapidly growing and will continue to become a larger percentage of all office work. Traditionally most employees had their own assigned office or desk, leading to a 50 percent utilization rate. As remote work and telecommuting have become more accepted, and even encouraged, companies have downsized offices and altered the layout of their office spaces.

Trends show that many companies have moved towards office-sharing as opposed to individual offices. Tolerating less underutilized or wasted space in the office, firms that have moved in this direction show higher (more efficient) utilization rates of up to 95 percent. (O'Connell, 2014). When space can be used more efficiently, companies are able to downsize their office and rent less office space. The increased efficiency and utilization has lead to increased employment density in office spaces. About ten years ago, 250 square feet per office employee was the norm. Now, the average is closer to 195 square feet or less per office employee (Heschmeyer 2013).

These new office spaces not only provide a more efficient use of desk space, but make the space more attractive to the next generation of employees: the same employees who are looking to live in walkable urban settings. The newer and more modern office spaces have more natural light, are more technology based, and promote a feeling of collaboration (Heschmeyer 2013). This new atmosphere is not only good for the employees, but for the companies themselves. By fostering creativity, community, collaboration, and innovation, companies see increased productivity and profitability in the healthier workspace (Donnaly 2014).

However, these changes in more efficient office space apply to larger publically traded corporations, and less to smaller office tenants (5,000 square feet or less) who still prefer private offices rather than shared office space. Additionally, uncertainty has caused a shift towards shorter office spaces leases (Heschmeyer 2013).

If forecasts for office markets do not incorporate and address changes in the office space trends themselves, the forecasts will not properly reflect the anticipated changes. If all else were held constant, including office space layout and technology, we could assume that an increase in new business and employment would yield a specific increase in office space demanded in the future. However, if we anticipate increasing employment density and remote work, the forecast becomes less clear.

While green office spaces are expected to do well, the office market will remain tough with decreased demand for office space. (See below).

Retail markets also continue to be affected by improving technology. With Y2K came increased anticipation of e-commerce, eventually leading to the formation and burst of the dotcom bubble. Still, the internet has continued to provide online shopping opportunities as an alternative to the traditional shopping experience in stores. Benefits of online shopping and online sales include ease of purchase, customization, availability, and low prices and shipment. Consequentially, traditional retailers are facing increasingly limited options to compete with online shopping (Kleinberger and Hendren 2012).

Expectations for retail in 2020 (in an white paper written by IBM and New York University) show major changes. First, there is an expected customer shift from Boomers to Millennials, who have different priorities. Both luxury stores and value stores are expected to do well, but mid-priced stores will lose market share as consumers "trade up and down" (Kleinberger and Hendren 2012).

Retail space in the United States was built faster than retail sales growth itself between 1980 and 2010. With an increase in online sales, the mall and retail vacancy rates are expected to continue to increase. Long-term leases on large retail spaces will make it more difficult for those "brick and mortar" retailers to downsize when faced with decreased sales. Thus, the locations will be in less-desirable areas, causing a greater shift to online shopping (Kleinberger and Hendren 2012).

Hundreds of retail stores are closing around the country, and there is no doubt why: offline sales are down. According to Business Insider, sales dropped over five percent in 2013, following a downward trend (Smith 2014).

Facing increased technology and online shopping, new retail models will provide "unique shopping experiences for their guests" (Dan 2014). It is expected that sectors like health, beauty, and home will be stronger than sectors like music, video, and books because of the often required personal interaction with the product before purchase (PwC 2014).

However, as online shopping increases and shipping time decreases, there will be an increased need for warehouses in the United States closer to the customers (PwC 2014).

Before the introduction of e-commerce, it was much simpler to calculate the necessary changes in retail space. In a given area, a household is assumed to have a given amount of disposable income, which provides them with purchasing power. What the household chooses not to save is then spent. Before internet and e-commerce, consumption was mainly local except for vacations. Local consumption included groceries and retail. Thus, in a city, we could calculate total consumer spending per square foot of retail space per year. We could use this relationship to calculate necessary future retail space increases due to forecasted population increase. Knowing how many employees were needed per square foot of retail space, we could then estimate the resulting increase in employment in the retail sector. Online shopping has changed

this somewhat simple methodology. Now, increases in population in a city may not significantly increase the need for retail space in that city, as consumption does not stay local.

Industrial land markets

Since 1990, employment in the manufacturing sector has dropped from 18 to 12 million. As a result, more people have entered the service industry (Wilson 2014). The future of manufacturing the United States will be dependent on whether the industries can adapt to and embrace available technologies. The country's technological innovation continues to be high, as the number of patents issued has "increased substantially since the 1970s" (Baily and Bosworth 2014, 19).

Recent technological improvements in industrial robots and automation will affect manufacturing and industrial markets. In previous years, robots have been used in the more dangerous or precise processes of manufacturing, but have been excluded from performing human tasks. However, new technologies have made it realistic for relatively inexpensive robots (who do not require wages or healthcare) to perform those human tasks (Baily and Bosworth 2014). The price of robots has decreased relative to the price of labor since 1990. For example, Baxter is a $22,000 robot manufactured by an American firm that is safe and easy to operate. The relative inexpensiveness of robots like this will reduce industry costs and continue to make manufacturing in the United States more economically feasible (Economist 2013).

In addition to robots, we are continuing to see advances in additive technology, like 3D printing. Additive technology has great potential to reduce manufacturing costs. Because production can be highly customizable, it can reduce development costs, customize goods for specific customers, reduce waste, and simplify manufacturing processes. Additionally, increased computer technology will allow for increased digital modeling, development, and testing. Internet connections also will also allow for remote management and smart motors, increasing efficiency (Baily and Bosworth 2014).

Companies originally outsourced production because it was less expensive to do so. With increased technological innovation in the coming years, it is expected that many companies will begin to bring production back to the United States if it is economically feasible to do so (Northam 2014).

While increased robotics in the manufacturing industry will replace part of the labor force, it could be compensated by the reshoring trend. Others suggest that increased manufacturing in the Untied States due to increased technology will broaden the supply create new demand for inputs (Economist 2013).

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APPENDIX B: Factors Affecting Residential Development

This appendix is abstracted from other reports ECONorthwest has done on residential land and development markets.[1] This summary focuses on Eugene as an example.

1. Factors affecting housing choice

In the context of housing markets, what one observes when looking at past and current housing conditions is *the intersection of the forces of housing supply and demand at a price of housing.* Analysts typically focus a description of housing demand on the characteristics of households that create or are correlated with *preferences* for different types of housing, and *the ability to pay* (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

One way to forecast housing demand is with detailed analysis of demographic and socioeconomic variables. If one could do the measurement fine enough, one might find that every household has a unique set of preferences for housing. But no city-wide housing analysis can expect to build from the preferences of individual households.[2] Most housing market analyses that get to this level of detail try to describe *categories* of households on the assumption that households in each category will share characteristics that will make their preferences similar.

The main demographic and socioeconomic variables that may affect housing choice include: age of householder, household composition (e.g., married couple with children or single-person household), size of household, ethnicity, race, household income, or accumulated wealth (e.g., real estate or stocks). The literature about housing markets identify the following household characteristics so those most strongly correlated with housing choice are: age of the householder, size of the household, and income. [3]

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[1] *Anchorage Housing Market Analysis* 2012; *Demographics and Their Affect on Housing Demand in Eugene*, 2010.

[2] Not only could one not measure the preferences of all existing households (now and in the future); one could not know what specific households would be migrating to the region.

[3] The research in this memorandum is based on numerous articles and sources of information about housing, including:

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- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life. For example, a person may choose to live in an apartment when they are just out of high school or college but if they have children, they may choose to live in a single-family detached house.
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person households and people in their middle years are more likely to live in multiple person households (often with children).
- **Income** is the household income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, or a building with more than five units) and to household tenure (e.g., rent or own). A review of census data that analyzes housing types by income in most cities will show that as income increases, households are more likely to choose single-family detached housing types. Consistent with the relationship between income and housing type, higher income households are also more likely to own than rent.

2. Factors affecting housing mix

The previous section described the three household characteristics that are most closely correlated with household choice. This section describes the demographic and socioeconomic trends in Eugene and Lane County related to these characteristics by describing the characteristics of households currently in Eugene. The majority of Eugene's population growth, however, is expected to be the result of in-migration.[4] It is difficult (if not impossible) to accurately project the characteristics of households that may move to Eugene over the next 20 years, beyond the projections for changes in population by age group. To some degree, projecting future housing preference relies on estimating the ways that the characteristics of new households in Eugene will be different and make different housing choices than existing households.

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ECONorthwest's analysis of 2000 Census Public Use Microdata Sample (PUMS) data for Oregon and counties within Oregon.

U.S. Census data for 1990, 2000, and American Community Survey data.

[4] The Portland State University Population Research Center's annual estimate of population shows that about 75% of Lane County's population growth between 1990 and 2007 is the result of in-migration. We assume that in-migration will continue to account for the majority of growth in Lane County over the planning period.

The national demographic trends that will affect housing demand across the U.S., as well as Oregon and Eugene are:

- **Aging of the baby boomers.** By 2029, the youngest baby boomers will be 65 years old. By 2030, people 65 years and older are projected to account for about 20% of the U.S. population, up from about 12% of the population in 2000.
- **Growth in echo boomers.** Echo boomers are a large group of people born from the late-1970's to early 2000's, with the largest concentration born between 1982 and 1995. By 2030, echo boomers will all be older than 25 years old, with the majority between the ages of 35 to 48 years old. The echo boomers will form households and enter their prime earnings years during the 20 year planning period.
- **Growth of immigrants.** One of the fastest growing groups in the U.S. will be immigrants, with Hispanics the fastest growing groups. By 2030, Hispanics are projected account for about 20% of the U.S. population, an increase from about 13% of the U.S. population in 2000.
- **Increase in diversity.** One of the fastest growing ethnic groups in the U.S. are Hispanics and Latinos. By 2030, Hispanics and Latinos are projected account for about 20% of the U.S. population, an increase from about 13% of the U.S. population in 2000. Growth in Hispanics and Latinos will be the result of natural increase (more births than deaths) and immigration from other countries.
- **Other trends.** Eugene's housing market will be affected by other demographic trends, such as:
    - **Growing student population.** The University of Oregon projects growth of about 3,700 students over the 2009 to 2019 period (from 20,300 students in 2009)[5] and plans to build an additional approximately 1,500 bed spaces over the 2007 to 2017 period.[6]
    - **Change in household composition.** The composition of households is changing, in part as a result of the aging of the population, growth of immigrants, and increase in diversity. Traditional household composition (e.g., households with children and married couples) are becoming less common and non-traditional household composition (e.g., single-family households an non-family households) are becoming more common.

The following demographic and socioeconomic trends may affect housing choice in Eugene over the next 20 years:[7]

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[5] University of Oregon Draft Academic Plan, 1/12/09. Accessed on 2/9/2009 from: http://provost.uoregon.edu/files/provost/uploads/Academic_plan_1_12_09.pdf

[6] University of Oregon memorandum, Strategic Housing Plan Consultant's Report, March 26, 2008. Accessed on 2/9/2009 from: http://uplan.uoregon.edu/projects/Project%20Sums%20for%20Web/HousingPlan/UO%20HSP%20FINAL%20MAIN.pdf

[7] Table 1 discusses the characteristics of the householder. A householder is the head of household, as identified by the Census.

Table 1. Demographic trends and their affect on housing demand in Eugene

		Affect of trends on household choice			
	Demographic trends	**Age of household head**	**Household size and composition**	**Household income**	**Potential Affect on Housing Demand**

Baby boomers
Age in 2010
46 to 65 years old
Age in 20300
66 to 85 years old
	Baby boomers are the fastest growing segment of Lane County's population.
	• People over 65 years are forecast to grow from 13% of Lane County's population in 2000 to 21% in 2030.
	• Growth in people over 65 years old in Lane County will result in growth of nearly 47,000 people in this age group in Lane County or 44% of population growth over the 2000 to 2030 period.
		Eugene's older householders are more likely to be homeowners.
		• Homeownership peaks for householders 45 to 74. More than 70% of householders 45 to 74 in Eugene are homeowners
		• Homeownership begins to decrease for households over 75 years old. About 66% of householders over 75 in Eugene are homeowners.
		• About 67% of people over 65 years live in a single-family house (either detached or attached), with 54% of people over 75 years living in a single-family house.
		• About 20% of people over 65 live in a multifamily unit.
		• A majority of people over 45 years old express an interest in remaining in their home or in their community as long as possible.[7]
			Household size decreases with age after age 65 in Eugene.
			• About 56% of households 65 to 74 have two or more persons.
			• About 43% of households 75 years and older have two or more persons.
			• More than one-quarter of households 65 years and older are single-person households.
			• Growth in households 65 years and older will result in growth in single-person households.
				Eugene's household income peaks around age 55.
				• Household income decreases after age 65. About 60% of Eugene's households over 65 had income of less than $50,000, compared with 45% of households 45 to 64.
				• Households with householders over 65 years have a lower than average household income, at about 80% of Eugene's median household income.
				• Lower income does not necessarily result in greater problems with housing affordability or lower homeownership rates for people over 65 years because:
				  • Nearly three-quarters of the lowest income householders (making less than $20,000 in the year 2000) over 65 were homeowners.
				  • Some householders over 65 have paid off their mortgage. For households who have paid off their mortgage, lower income does not necessarily result in lower disposable income or affect their ability to continue to own their home.
				  • Older households may have more accumulated wealth, such as the value of their house or investments.
					The major impact of the aging of the baby boomers on demand for new housing will be through demand for housing types specific to seniors, such as assisted living facilities. Baby boomers will make a range of housing choices in Eugene:
					• Many will choose to remain in their houses as long as they are able.
					• As their health fails, some will choose to move to group housing, such as assisted living facilities or nursing homes.
					• Some may downsize to smaller single-family homes (detached and attached) or multifamily units. These will be a mixture of owner and renter units.[8]
					• Some may choose to move to retirement or age-restricted communities.

		Affect of trends on household choice			
	Demographic trends	**Age of household head**	**Household size and composition**	**Household income**	**Potential Affect on Housing Demand**
Echo boomers **Age in 2010** **15 to 28 years old** **Age in 2030** **35 to 48 years old**	Echo boomers are one of the fastest growing segments of Lane County's population • By 2030, the State projects that there will be nearly 140,000 people 25 to 49 years in Lane County, up from nearly 115,000 people in 2000. • Growth in people 25 to 49 years year old will result in growth of about 25,000 people in this age group or 24% of total population growth over the 2000 to 2030 period.	• About 95% of people under 25 years old and 71% of people 25 to 34 years old were renters. • Homeownership rates increase for householders 35 to 44 years old; 55% of these households are owners. • Nearly three-quarters of people 15 to 24 years live in a multifamily unit, compared with 44% of people 25 to 34 years or 25% of people 35 to 44 years.	Household size increases slightly until age 44. • More than 70% of households between age 15 and 44 years have two or more persons. • About 30% of households between 15 to 24 years are single-person households, compared with 22% of households 35 to 44 years. • Seventy-seven percent of households with two or more persons younger than age 34 are renters.	Younger households have lower income on average. • About two-thirds of households under 25 years (which includes college students) had income less than $25,000. About 56% of households between 25 and 44 had income of less than $50,000. • About 78% of householders under 25 years have an income of $25,000 or lower, in comparison 26% of all of Eugene's households have income of $25,000 or less. • Households between 25 and 44 years have higher than average income, at about 115% of Eugene's median household income. • Younger households generally have less accumulated wealth, such as housing equity. • More than 80% of younger households with income more than $45,000 (in 2000) were homeowners, with more than three-quarters owning single-family detached dwellings.	Growth in echo boomers will result in increased demand for all housing types in Eugene. Some recent research hypothesizes that echo boomers may make different housing choices than their parents as a result of the on-going recession and housing crisis. They suggest that echo boomers will prefer to rent and will prefer to live in multifamily housing, especially in large cities.[9] Other studies suggest that the majority of echo boomers' housing preference is to own a single-family home.'[10] Our conclusion based on review of recent research is that it seems unlikely that the majority of echo boomers will make fundamentally different housing choices than previous generations as they age and have families. • It seems likely that echo boomers are likely to choose to rent when they are under 30 years, most frequently a multifamily unit. This choice may be made from preference but is likely to be necessitated by lower income. • As they establish their careers, their income increase, and they form families, it seems likely that a large share of echo boomers in Eugene will choose to live in an owner-occupied single family house. Some echo boomers may prefer to rent or own a multifamily unit in or near Eugene's downtown. • Recent articles suggest that echo boomers who prefer single-family units may prefer (or only be able to afford) smaller single-family units. • Eugene is a suburban market, with urban amenities that may appeal to echo boomers who prefer not to live in a large city. Eugene itself does not have distant suburbs but nearby smaller cities have filled the role of distant suburbs for Eugene. Echo boomers may choose to live in Eugene's suburban neighborhoods, rather than in nearby smaller cities, if housing in Eugene is affordable.

[9] Examples of such research include *Housing in America: The New Decade* from the Urban Land Institute or *The Rise of the Non-Traditional Household* from Multifamily Trends.

[10] A national survey of Echo Boomers in 2010 shows that: two-thirds of Echo Boomers expect to own their home by 2015, that nearly two-thirds expect to live in a single-family home, one-quarter expects to live in an apartment or condominium. These results are from the Urban Land Institute study *Generation Y: America's New Housing Wave*.

		Affect of trends on household choice			
	Demographic trends	**Age of household head**	**Household size and composition**	**Household income**	**Potential Affect on Housing Demand**
Growth of immigrants and change in ethnic composition	Immigrants are a growing segment of Eugene's population. At the same time, Eugene is becoming more ethnically diverse, with growth in the Hispanic and Latino population (both from immigration and from current residents in Eugene). • About 73% of Lane County's population growth between 1990 and 2009 was the result of in-migration to the County. • Eugene became more ethnically diverse, with Hispanic and Latino population growing by more than 250% between 1990 and 2007, an addition of 7,900 Hispanic or Latino residents. • Eugene became more racially diverse between 1990 and 2007, with the doubling of the population of Asian and Pacific Islanders, from nearly 4,000 people in 1990 to more than 8,000 people in 2008.	Hispanic and Asian populations in Eugene have a different age structure than Eugene's overall population: • About 68% of Eugene's population is between age 18 to 64 years, with 18% younger than 18 years and 14% older than 65 years. • Asian residents of Eugene are less likely to be over 65 years. About 79% of Asians are 18 to 64 years, 14% are younger than 18 years and 7% are older than 65 years. • Hispanic residents of Eugene are more likely to be younger. About 57% of Hispanics are 18 to 64 years, 39% are younger than 18 years and 4% are older than 65 years. The following national housing trends are likely to apply to immigrant households in Eugene: • Immigrant households are generally younger than the household average in the U.S. • About 55% of immigrant households own their homes, compared with 76% of native-born households. Reasons for this include: (1) immigrants are younger than the average of the population, (2) some immigrants may expect their stay in the U.S. will be temporary, and (3) immigrant households are more likely to have a lower income and have no established credit record in the U.S.	Hispanic households in Eugene are more likely to have children and to have more persons per household and less likely to be homeowners. • Nearly half of Hispanic households in Eugene have children under 18 years, compared with about one-third of white non-Hispanic households • About 17% of Hispanic households had more than one occupant per room, compared with 2% of all households in Eugene. • Hispanic households in Eugene live in single-family houses (detached and attached) with about the same frequency as non-Hispanic households, with about two-thirds of households living in single-family dwellings. • About one-quarter of Hispanic households are owners, compared with an ownership rate of a little more than 50% for all households in Eugene.	Hispanic households in Eugene have lower than average income. • Immigrant households generally have lower income, in part as a result of their relatively young age and as result of generally lower educational achievement. • Hispanic households in Eugene have lower than average income, with household income at 97% of Eugene's median ($39,640) and family income at 94% of Eugene's median ($57,526)	Growth in immigrants may result in increased demand for multifamily housing in Eugene. • Housing affordability is a problem for many households in Eugene. Affordability is likely to be a more common problem for immigrants, especially recent immigrants, because immigrants have lower income on average. • Recent immigrants are likely to choose multifamily housing, in part because that is what they can afford. • Homeownership increases the longer immigrants stay in the U.S. Longer-term immigrants may become home owners, depending on their ability to afford homeownership. • Homeownerships increase for second-generation immigrant households. • Immigrants associated with the University of Oregon, either as students or faculty/staff, may choose to rent a home if they are in Eugene temporarily and may choose to purchase a home if they will be in Eugene over a long period of time.

APPENDIX C: Market Trends Affecting Housing Markets in Bend

The report that follows was prepared primarily by Leland Associates, under contract to the Angelo Planning Group, for the City of Bend and presented in a memorandum titled "Demographic Characteristics and Trends that will Affect Housing Demand in Bend for the 2008-2028 period" (July 2014). It is another example of an application of thinking about changing market conditions to decisions about UGBs in Oregon.

Memorandum

July 29, 2014

To:	Residential Lands Technical Advisory Committee
Cc:	Bend Staff
From:	APG Consulting Team
Re:	Demographic Characteristics and Trends that will Affect Housing Demand in Bend for the 2008-2028 period

This memorandum provides a summary of demographic characteristics and changes in Bend's population that will affect Bend's housing market over the 2008 to 2028 period. The questions addressed in this memorandum are:

- What are the key demographic changes and trends that may affect Bend's housing market over the 2008-2028 planning period?
- What are the implications of these demographic trends for Bend's housing market, including demand for types of housing, housing tenure, and location of housing in Bend?

The purpose of this analysis is to address issues in the remand related to Bend's proposed mix and density of new housing. These questions will be discussed at the first Residential Lands Technical Advisory Committee (TAC) meeting.

In the 2005 housing needs analysis, Bend proposed that 65% of new housing would be single-family detached housing types and 35% would be multifamily housing types. The remand required Bend to make stronger linkages between forecast growth, the demographic characteristics of current and new residents, the capacity of those residents/households to pay for housing at specific price and rent levels, and housing types that will meet that need.

This memorandum presents information about demographic and other trends to describe the linkages between forecast growth, the demographic and socioeconomic characteristics of Bend's households (current and future), and housing need. The memorandum is organized into the following sections:

- **Demographic and socioeconomic factors affecting housing choice** describes the broad, often national, trends that affect housing choice, presents information about these trends in Bend, and discusses the implications of these trends for housing demand and need in Bend. The information summarized in this section is presented in greater depth in

the full Housing Needs Analysis report, which will be available later in the project. The citations for the analysis in this section are presented as endnotes, at the very end of the memorandum.

- **Appendix A. Research about demographic changes and implication for future housing mix** presents information from the academic literature about demographic and socioeconomic trends that affect housing demand and need the implications of these trends on future housing demand. Appendix presents key findings from the literature, organized by key demographic trend, as well as links to key articles or reports available for optional additional reading.

DEMOGRAPHIC AND SOCIOECONOMIC FACTORS AFFECTING HOUSING CHOICE

In the context of housing markets, past and current housing conditions demonstrate *the intersection of the forces of housing supply and demand at a price of housing.* Housing demand is derived from the characteristics of households that create or are correlated with *preferences* for different types of housing, and *the ability to pay* (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

One way to forecast housing demand is with detailed analysis of demographic and socioeconomic variables. If one could measure housing demand for each household, one might find that every household has a unique set of preferences for housing. But no city-wide housing analysis can expect to build from the preferences of individual households. Most housing market analyses that get to this level of detail describe *categories* of households on the assumption that households in each category will share characteristics that will make their preferences similar.

The main demographic and socioeconomic variables that may affect housing choice include: age of householder, household composition (e.g., married couple with children or single-person household), size of household, ethnicity, race, household income, or accumulated wealth (e.g., real estate or stocks).

The research in this memorandum is based on numerous articles and sources of information about housing. Appendix A presents an analysis of our research of the academic literature about the relationship between demographics and housing demand. The literature about housing markets identify the following household characteristics as those most strongly correlated with housing choice: age of the householder, size of the household, and income:

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life. For example, a person may choose to live in an apartment when they are just out of high school or college but if they have children, they may choose to live in a single-family detached house.
- **Size of household** is the number of people living in the household. Household size is related to household composition, which describes the age and relationships of people living within the household. Younger and older people are more likely to live in single-person households and people in their middle years are more likely to live in multiple person households (often with children).
- **Income** is the income from all people in the household who have income. Income is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family detached, duplex, or a building with more than five units) and to household tenure (e.g., rent or own). A review of census data that analyzes housing types by income in most cities will show that as income increases, households are more likely to choose single-family detached housing types. Consistent with the relationship between income and housing type, higher income households are also more likely to own than rent.

Trends affecting housing choice in Bend

The national demographic trends that will affect housing demand across the U.S., as well as Oregon and Bend are:

- **Aging of the baby boomers.** By 2030, the youngest baby boomers will be over 65 years old. By 2030, people 65 years and older are projected to account for about 20% of the U.S. population, up from about 12% of the population in 2000.[1]
- **Growth in Echo Boomers.** Echo Boomers are a large group of people (Generation Y) born from the late-1970's to early 2000's, with the largest concentration born between 1982 and 1995. By 2030, Echo Boomers will all be older than 35 years old, with the oldest Echo Boomers over 50 years old. The Echo Boomers will form households and enter their prime earnings years during the 20-year planning period.[2]
- **Growth of Hispanic and Latino population.** One of the fastest growing groups in the U.S. will be the Hispanic and Latino population. By 2030, Hispanic and Latino population is projected to account for about 20% of the U.S. population, an increase from about 13% of the U.S. population in 2000. Growth in the Hispanic population will be the result of natural increase (more births than deaths) and immigration from other countries.[3]

Tables 1 through 3 describe the changes in these demographic and socioeconomic trends and their potential affect on housing choice in Bend over the 2008-2028 planning period. These tables discuss the characteristics of the householder, which is the person identified (by the household) as the head of household in the Census. Data in these tables is from the U.S. Census' 2007 American Community Survey, except where noted.

Table 1. Baby boomers (Age in 2008: 42 to 61 years old; Age in 2028: 62 to 81 years old)[4]

Demographic trends		Baby boomers are the fastest growing segment of Deschutes County's population. • People over 65 years are forecast to grow from 13% of Deschutes County's population in 2000 to 24% in 2030.[5] • Growth in people over 65 years old in Deschutes County will result in growth of nearly 40,000 people in this age group in Deschutes County or 35% of population growth over the 2000 to 2030 period.[6]
Effect of trends on household choice	**Age of household head**	Bend's older householders are more likely to own their home. • Homeownership peaks for householders 35 to 64. More than 50% of householders 35 to 64 in Bend are homeowners. • Homeownership begins to decrease for households over 65 years old. Twenty percent of householders over 75 in Bend are homeowners. National studies about the housing preferences of older residents show that the majority express an interest in remaining in their home or in their community as long as possible, a trend that increases with age.[7] • Between about 65% and 80% of people over 65 would like to stay in their homes as long as possible.[8] • The Baby Boomers who want to move generally want to live in a typical community setting, with a mixture of people of different ages, and in a setting where recreational amenities are available.[9] • Of people over 65 who expect to move in the next five years, a smaller proportion of these households expect to live in a single-family home and to be homeowners, compared with households of all ages who expect to move in the next 5 years.[10] • Seniors who moved recently were much more likely to have moved into a smaller home, compared to households of all ages who moved recently.[11]
	Household size and composition	Household size decreases with age after age 65 in Bend. • More than 6% of households 65 years and older were single-person households in Bend. • Growth in households 65 years and older will result in growth in single-person households.

	Household income	Bend's household income peaks around age 45.
		• Household income decreases after age 65. About 50% of Bend's households over 65 had income of less than $50,000, compared with 36% of households 45 to 64.
		• Households with householders over 65 years have a lower than average household income, at about 95% of Bend's median household income, compared with ages 45 to 64 years with 117% of Bend's median household income.
		• Lower income does not necessarily result in greater problems with housing affordability or lower homeownership rates for people over 65 years because:
		  • Some householders over 65 have paid off their mortgage. For households who have paid off their mortgage, lower income does not necessarily result in lower disposable income or affect their ability to continue to own their home.
		  • Older households may have more accumulated wealth, which could include assets like the value of their house or investments.

	Potential effect on housing demand	The major impact of the aging of the baby boomers on demand for new housing will be through demand for housing types specific to seniors, such as assisted living facilities. Baby boomers will make a range of housing choices in Bend: • Many will choose to remain in their houses as long as they are able. • Those that do move are more likely to move into smaller homes, attached homes, or apartments and are more likely to rent than other households headed by other generations. • Some may downsize to smaller single-family homes (detached and attached) or multifamily units. These will be a mixture of owner and renter units. Nationally, of the 20% Baby Boomers that expect to move, 11% plan to move to an apartment, 16% to attached housing, 65% to single family housing, and 6% to a mobile home.[12] • As their health fails, some will choose to move to group housing, such as assisted living facilities or nursing homes.

Table 2. Echo Boomers (Age in 2008: 11 to 24 years old; Age in 2030: 31 to 44 years old)[13]

Demographic trends		Echo Boomers are one of the fastest growing segments of Deschutes County's population • By 2030, the State projects that there will be nearly 70,000 people 25 to 49 years in Deschutes County, up from nearly 43,000 people in 2000.[14] • There will be an increase of about 27,000 people between the ages of 25 to 49 years. This group will account for 24% of total population growth over the 2000 to 2030 period.[15]
Effect of trends on household choice	**Age of household head**	Housing preferences shift for householders as they get older. • Under 25 years old: 94% were renters in Bend • 25 to 34 years old: 63% were renters in Bend • 35 to 44 years old: 43% were renters in Bend • 82% of single-family housing detached housing in Deschutes County was owner-occupied and 95% of multifamily dwellings were renter-occupied
	Household size and composition	Household size increases until age 44 in Bend. • Eighty-five percent of households in Bend between ages 15-34 years have two or more persons. • About 15% of Bend's households between 15 to 34 years are single-person households, compared with 26% of households 35 to 64 years. • Seventy-three percent of households with two or more persons younger than age 34 are renters in Bend.
	Household income	Younger households have lower income and homeownership rates on average. • About 40% of households under 25 years had an income of less than $25,000 in Bend. About 40% of households between 25 and 44 had income of less than $50,000. • Younger households generally had less accumulated wealth, such as housing equity. • Households between 25 and 44 years had higher than average income, at about 112% of Bend's median household income. • Higher incomes generally correlate with homeownership. The median income for homeowners in Bend was $72,800 (in 2007), compared with $43,200 for renters.
	Potential effect on housing demand	Growth in Echo Boomers will result in increased demand for all housing types in Bend. Recent research hypothesizes that Echo Boomers may make different housing choices than their parents as a result of the on-going recession and housing crisis. They suggest that Echo Boomers will prefer to rent and will prefer to live in multifamily housing, especially in large cities. Other studies suggest that the majority of Echo Boomers' housing preference is to own a single-family home. Our conclusion based on review of recent research is that it seems unlikely that the majority of Echo Boomers will make fundamentally different housing choices than previous generations as they age and have families, but their housing choices may be constrained by what they can afford due to student loan debt, and prolonged entry into higher paying positions due to the Baby Boomers putting off retirement. • Echo Boomers are more interested in living within a city (including in a downtown area) or a suburb closer to a city than prior generations.[16] • Echo Boomers are more willing than other age groups to choose to live in a community with a wider range of housing and denser housing, where it is easier to talk to work or nearby urban amenities, and where transportation by automobile is less common.[17] • Echo Boomers are likely to choose to rent and are more likely to rent a multifamily unit than older households. This choice may be made from preference but is likely to be necessitated by lower income. • Echo Boomers who prefer single-family units may prefer, or only be able to afford, smaller single-family units.[18] • As they establish their careers, their incomes increase, and they form families, it seems likely that a large share of Echo Boomers in Bend will choose to live in an owner-occupied single family house. Some Echo Boomers may prefer to rent or own a multifamily unit in or near Bend's downtown. • Bend is a suburban market, with urban amenities that may appeal to Echo Boomers who prefer to live in a smaller city but in an area with a wide range of access to outdoor recreational activities. Bend itself does not have distant suburbs but nearby smaller cities have filled the role of distant suburbs for Bend. Echo Boomers may choose to live in Bend's suburban neighborhoods, rather than in nearby smaller cities, if housing in Bend is affordable.

Table 3. Growth of Latino and Hispanic Population[19]

Demographic trends		Bend is becoming more ethnically diverse, with growth in the Hispanic and Latino population (both from immigration and from current residents in Bend). • Bend became more ethnically diverse, with Hispanic and Latino population growing by more than 100% between 2000 and 2007, an addition of 2,459 Hispanic or Latino residents. • Nationally, growth in Hispanics is driving population growth, both from immigration and from natural increase of Hispanics living in the U.S.[20]
Effect of trends on household choice	**Age of household head**	The Hispanic population in Bend has a different age structure than Bend's overall population. • In 2007, median age for Hispanics (29 years) was lower with the median age for the total population (35 years) in Bend. Nationally, growth in Hispanic population between 2005 and 2015 will help off-set decreases in white householders between the ages of 30 and 49.[21]
	Household size and composition	Nationally, Hispanics households with children grew at a faster rate than other minority populations between 1995 and 2005, resulting in increased demand for housing to accommodate families.[22] • In 1999, 51% of Hispanic households had children, compared with 33% of all households.[23] Hispanic households in Bend are more likely to be larger and less likely to be homeowners. • In 2000, the average size of Hispanic households in Bend was 3.4 persons per household, compared with an average of 2.4 persons per household for all households in Bend.[24] • Hispanic households in Bend live in single-family houses (detached and attached) less often than non-Hispanic households. About one-third of Hispanic households live in single-family dwellings, as compared to about 75% of non-Hispanic households. • About one-third of Hispanic households are homeowners, compared with an ownership rate of a little almost 60% for all households in Bend. In 2007, Oregon's Hispanic households were more likely to be younger homeowners. Seventy-two percent of Hispanic homeowners in Oregon were younger than 45 years old, compared with 38% of non-Hispanic householders[25].
	Household income	Hispanic households in Bend have lower than average income. • Hispanic households in Bend have lower than average income, with household income at 96% of Bend's median ($56,053) and family income at 79% of Bend's median ($66,740). Immigrants generally have lower income than U.S.-born workers but income increases for immigrants the longer they have been in the U.S. and through successive generations. • First generation immigrants may take several decades to earn sufficient incomes to become homeowners[26] and to have income comparable to a person born in the U.S., of a similar age and education. This is true of Hispanic immigrants.[27] • Income generally increases for second-generation immigrants, who have higher educational attainment.[28] This is true of recent Hispanic immigrants.[29] • In 2012, the national median household income for first generation Hispanic households was $34,600, compared to $48,400 for second-generation Hispanic households, compared with the U.S. average of $58,200.[30] Hispanic households suffered steeper drops in household wealth than non-Hispanic white households during the recession, which may affect their ability to own homes, although the desire for homeownership remains strong.[31]
	Potential effect on housing demand	Growth in Hispanic and Latino households may result in increased demand for multifamily and single-family housing in Bend. • Affordability is likely to be a more common problem for Hispanic and Latino households, especially recent immigrants, because they have lower income on average. • Homeownership increases the longer immigrants stay in the U.S. Longer-term first generation immigrants and second-generation immigrants may become home owners, depending on their ability to afford owning a home.[32] • Hispanic population with lower income is more likely to choose lower-cost housing, such as multifamily housing because that is what they can afford. • Hispanics are more likely to rent but when they are homeowners, they are more likely to live in a more urban area, compared with white households.[33] • Growth in Hispanics will increase demand for smaller "starter homes" and entry-level apartments.[34]

Conclusions about how demographic trends may affect housing choice

Identifying future housing need based on expected demographic changes requires making qualitative assessments of the future housing market. Demographic changes are likely to affect housing in Bend's housing market in the following ways over the next 20 years. The future housing mix will probably look different than the recent past. Based on the future demographic trends, the most pressing need is to increase the range (both in size and in pricing) of housing products in walkable neighborhoods.

- **Recession may have delayed some effects of demographic shifts.** The impacts of major demographics shifts are being delayed due to the financial effects of the recession, however, substantial housing demand shifts are underway that will change land use patterns. Baby Boomers are working longer and may not be moving because of a loss of home equity. Echo Boomers have taken on college debt, are having a hard time getting a foothold in the workforce, and are therefore delaying household formation. The extended effects of the recession will mean that more households are renting for an extended period of time before being able to make a home purchase, or will only be financially capable of purchasing a smaller less-expensive home. In summary, this delay means more near-term demand for rental housing or smaller less-expensive ownership housing.

- **Slower demand for large-lot single-family housing.** Gen X (the generation born after the Baby Boomers and before the Echo Boomers), is currently in its prime family raising years, and the demographic group most likely to need larger single-family homes. Gen X is much smaller than either the Baby Boomer or Echo Boomer generations. As the Baby Boomers move out of their existing single-family homes, there will be fewer households to take them over. In recent years, Bend has been attracting retirees who are purchasing (and, in some cases, renting) available single-family dwellings.

  In the future, growth of Echo Boomers and shrinking of the Baby Boomer generation, may slow demand for new large-lot single-family housing. The Echo Boomer's preferences are generally for more walkable communities and they are willing to accept smaller homes in closer proximity to amenities. In addition, Echo Boomer's have lower income and higher debt.

  However, much of Bend's growth results from in-migration of people from outside of Central Oregon, many of whom are attracted to Bend's access to outdoor amenities, open space, and rural quality of life that Bend offers. Interviews with Bend's development community noted that demand for single-family housing that offers ample parking and storage for outdoor equipment is strong. They also noted that incoming retirees are pricing out the second-home move-up market for existing families.

  All of these factors contribute to continued demand for large-lot single-family detached housing but suggest that demand for this type of housing is likely to slow between the 2008 to 2028 period.

- **Demand will increase for a wider range of housing types.** Most of the evidence suggests that the bulk of the change will be in the direction of smaller average house and lot sizes for single-family housing. An aging population, increasing housing costs, and other variables are factors that support the conclusion that the future housing supply will include smaller and less expensive units and a broader array of housing choices. A substantial portion of Bend's residents will live in attached housing, such as townhouses, cottage housing, duplexes, garden apartments, or urban apartments. While most households may prefer to own their home, a growing share of households will be renters, either from choice (e.g., Baby Boomers who prefer to rent smaller units) or by economic necessity. Demand for these uses will be particularly high in close-in areas near Bend's commercial and recreational amenities.

    - **Demand for a wider range of housing types by retirees.** Older households tend to move less frequently than younger households, and a large majority would like to age in place—a desire that grows stronger with age. Being near family, friends, and social organizations in walkable neighborhoods also becomes increasingly important with age. Of those that have moved recently, a third of Baby Boomers and half of the generation older than Baby Boomers have moved to smaller housing units. Those Baby Boomers who do move may be more likely to choose homes in locations with more amenities located near friends and family. Interviews with members of Bend's development community indicated that small lot, cluster, or cottage housing might be appropriate housing types to meet this need.

    - **Housing for families will be in demand.** The two largest growing parts of Bend's population are Echo Boomers and Hispanic households. Echo Boomers will be entering the phase of life when they form families and have children. In addition, Hispanic households have larger than average household size because they live in multi-generational households and have a larger number of children on average. Growth in households with families will drive need for housing with sufficient space for a family.

    - **Housing affordability will continue to be an issue.** More than one-third of Bend's households were cost burdened in 2007. A household is considered "cost-burdened" if they pay 30% or more of their gross household income on housing costs. Bend's rate of cost burden shows that a substantial proportion of Bend's households cannot afford housing in Bend. Interviews with members of Bend's development community suggest a shortage of homes priced for first-time homebuyers, many workers in Bend live in nearby communities because affordable housing is in short supply in Bend, and that the demand for small-lot housing with nearby amenities is increasing. The interviewees also indicate that, while there is demand for urban housing products (particularly rental apartments), the wages in Bend's service and tourism economy may not allow workers to afford rents sufficient to pay for development of these types of housing. For two of the fastest

growing demographics in Bend, the Echo Boomers and Hispanic and Latino population, affordability is more likely to be a barrier to homeownership or higher-cost rental housing.

- **Location of housing will be increasingly important.** The location of housing is becoming increasingly important, with increased demand for housing in walkable neighborhoods near retail and other amenities. Where they can afford it, the Echo Boomers generally prefer housing in walkable areas with retail and other amenities nearby, rather than housing in more suburban areas or in outlying cities. Some Baby Boomers who are downsizing are also choosing to live in similar walkable areas.

- **Design of housing and neighborhoods is important.** Well-designed multifamily and compact single-family located in a desirable neighborhood can provide opportunities for a wider range of housing options. Consumers are more likely to make the tradeoff of a smaller lot and home size when neighborhood parks, schools, and retail amenities are within walking distance. Therefore, there will be steady demand for multifamily housing in close-in locations proximate to Bend's downtown amenities and jobs.

APPENDIX A: RESEARCH ABOUT DEMOGRAPHIC CHANGES AND IMPLICATIONS FOR FUTURE HOUSING MIX

This section provides greater detail on the research conducted on the demographic trends that are summarized in the tables above. For further reading on a given topic, see the relevant report listed in the "Materials for Further Reading" section below.

Key Findings by Topic

Aging Boomers

Question: Are aging Baby Boomers downsizing or staying put?

- **Some are downsizing.** "Thirty-two percent of Americans have moved in the past five years. More than half of the gen Yers report moving, and 31 percent of gen Xers have moved. Baby boomers and the oldest Americans are the least likely to have moved…Baby boomers and war babies/members of the silent generation are the most likely to have downsized in their most recent move. In fact, 50 percent of the oldest Americans report that their new home is smaller than their old one. One-third of baby boomers report moving into a smaller home, and 44 percent say they have moved into a larger home."[1]

Table 1. Recent Movers Change in Home Size

	Recently moved?		Recent Change in Home Size			Expected Homeownership Status	
	Yes	No	Larger	Smaller	Same	Own	Rent
All Adults	32%	**67%**	**48%**	**27%**	**25%**	**73%**	**25%**
Gen Y	53%	47%	48%	25%	27%	69%	31%
Gen X	31%	69%	59%	20%	20%	81%	16%
Baby Boomers	20%	80%	44%	33%	22%	79%	20%
War babies/silent generation	19%	80%	24%	50%	25%	55%	36%

Source: ULI America in 2013, Leland Consulting Group

- **Preference for staying put increases with age.** The AARP conducted a housing preference survey of people age 45 or older and found that 73 percent of them strongly agreed with the statement, *"what I'd really like to do is stay in my current residence for as long as possible".* This preference increases with age. Seventy-eight percent of the respondents over 65 strongly agreed with the statement, whereas only 72 percent of those 50-64 and 60 percent of those age 45-49 strongly agreed with the statement.[2]

[1] *American in 2013 Focus on Housing and Community, Urban Land Institute*
[2] *"Home and Community Preferences of the 45+ Population" November 2010, AARP, Keenan Teresa A.*

"The aging of the population poses a different policy challenge. Most seniors prefer to age in place. While many of these households are currently well housed, their needs will change over time. Meeting those needs will require modifications to existing homes, the expansion of transportation networks and supportive services, and additions to the housing stock aimed specifically at the senior population. Many older Americans are also heading into their retirement years with little financial cushion and may find it difficult to find suitable housing that fits within their budgets. Expanding the range of housing options available to the country's growing senior population will require concerted efforts from both the public and private sectors."[3]

"Despite their shrinking households and declining labor force participation, Boomers do not appear to be altering their housing consumption by abandoning their detached single-family homes…In fact, contrary to the downsizing perception, the percent of Baby Boomers residing in single-family detached homes was at least as high in 2012 as at any time since the onset of the housing crisis. Even the oldest members of the Boomer generation, who have largely exited the childrearing stage and begun to retire in large numbers, show no major shift away from single-family residency….One likely mobility constraint is the substantial decline in Boomers' home values during the housing bust. Between 2006 and 2012, the average value of an owner-occupied single-family detached home with a Boomer householder declined by 13 percent."[4]

- **Being near friends, family, and social organizations grows increasingly important with age.** An AARP Housing Preference survey of householders 45 years and older, found that "Roughly two-thirds of respondents agreed that they want to stay in their home because *I like what my community has to offer me."* In contrast, roughly one-quarter agreed with the statement that they want to stay in their home because *"I cannot afford to move."…*When asked about seven different community aspects and the level of importance they have for them, two-thirds of respondents said that being near friends/and or family and being near where one wants to go (ie., grocery stores, doctor's offices, the library) is *extremely* or *very important* to them. Roughly half noted that being near church or social organizations or being somewhere where it's easy to walk are *extremely* or *very important* to them, while somewhat fewer said the same thing about being near good schools or being near work. Only about one-fifth of respondents report that being near transit (bus or rail) was *extremely* or *very important* to them."[5]

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[3] *Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing, 2013*
[4] *"Are Aging Baby Boomers Abandoning the Single-Family Nest?" June 12, 2014. Fannie Mae Housing Insights, Volume 4, Issue 3.*
[5] *"Home and Community Preferences of the 45+ Population," Keenan Teresa A. November 2010, AARP*

Table 2. Importance of Community Aspects for Staying in One's Community

Extremely or Very Important	Age		
	45-49	50-64	65+
Being near friends and/or family	60%	64%	71%
Being near where you want to go	68%	62%	70%
Being near church or social organizations	42%	43%	57%
It's easy to walk	46%	43%	51%
Being near good schools	64%	38%	31%
Being near work	43%	36%	21%
Being near transit	16%	22%	21%

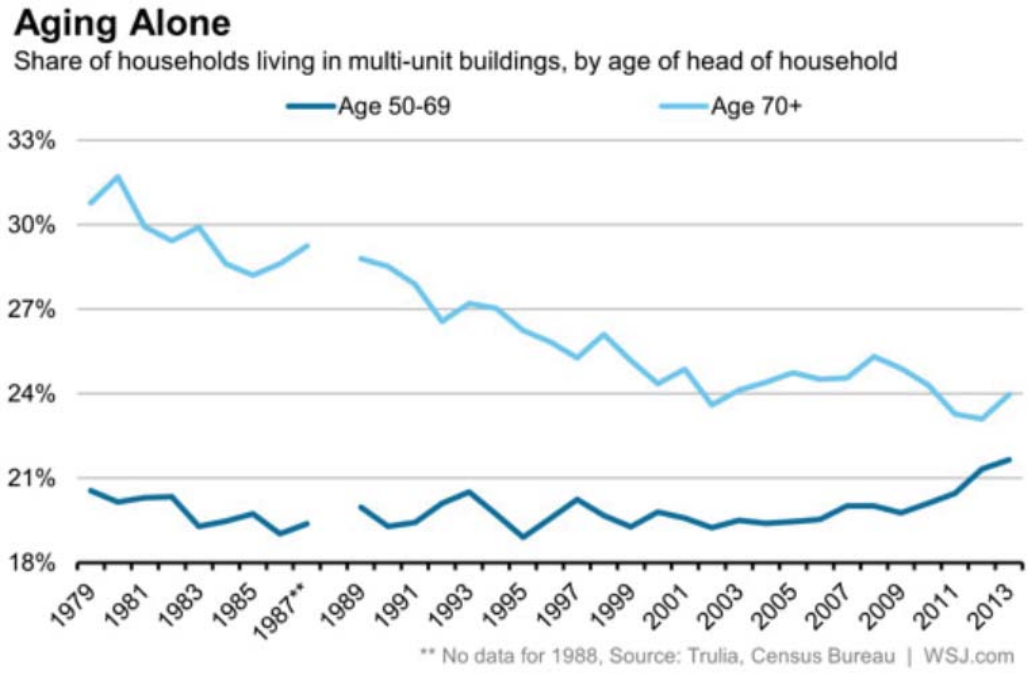
Source: AARP

- **Retiring later.** "To put these trends in perspective, incomes among households under age 35 are back to 1990s levels. The recession had an even bigger impact on households between the ages of 35 and 54, whose incomes are now lower than those of similarly aged households in 1971. Now in what are typically the peak earning years, 45–54 year-olds have instead seen their real median incomes fall 6.0 percent from what they made ten years earlier (when they were aged 35–44). Over the next ten years, these households will be approaching typical retirement age, but the loss of income at such a critical point in their careers will make it difficult for many to save enough to stop working."[6]
- **Affordability for seniors.** "Affordability is a serious problem for seniors, especially for renters. According to a U.S. Department of Housing and Urban Development (HUD) report to Congress earlier this year, 1.33 million elderly renters (where the householder or spouse is age 62 or over, with no children under 18 present) had "worst case" housing needs in 2009. This meant that they earned less than half their metropolitan area's median income, received no government housing assistance and either paid more than half their income for rent, lived in severely inadequate housing, or both. Compared to 2007, the number of older renters in this category had increased by 120,000 (10 percent) – a change that the HUD report attributes to fallout from the foreclosure crisis and recession, as shrinking incomes drove increased competition for already scarce affordable housing. Seventy percent of senior renters spend at least 30 percent of their income on housing costs. Senior homeowners are not immune from affordability problems either: about three in 10 senior homeowners spend at least 30 percent of their income on housing and 17 percent pay at least half their income. Even seniors who own their houses free and clear face rising energy costs and, in some locations, rising property taxes."[7]

[6] *Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing, 2013*
[7] *Demographic Challenges and Opportunities for U.S. Housing Markets, March 2012, Bipartisan Policy Center*

- **Housing released by seniors.** "Some seniors occupy newly constructed housing (so the total release of housing exceeds the net release). In 2009, for example, housing built since 2000 accounted for about seven percent of owner-occupied dwellings occupied by seniors and 10 percent of rentals. Seniors' consumption of new housing may rise in the next two decades as Baby Boomers – whose wealth and income are higher than that of today's retirees and who are entering retirement in vastly larger numbers – seek new options to downsize, accommodate disabilities or live in different types of neighborhoods. Just as demand created by Baby Boomers spurred new apartment construction in the 1970s, the sheer size of the Baby Boom generation could cause a dramatic increase in the construction of senior-accessible housing over the coming decades. Baby Boomers' ability to move into new housing, however, will depend on where, when and for how much they will seek to sell their current residences…..Despite potential increases in new construction, most of the houses that seniors will release in coming years were built when energy was inexpensive, nuclear families were the rule, incomes were increasing for most Americans, and mortgages were generally predictable and easy to obtain. Most observers expect the next 20 to 30 years to depart from this historic picture, with more expensive energy, growing diversity in race, ethnicity and in household structure, and more intense international economic competition. All of these factors will likely reduce demand for large single-family homes on large lots far away from established centers of employment and entertainment."[8]
- **Fewer elderly living alone in multifamily buildings.** The percent of people 70 years or older that head households in multifamily buildings has been in decline since 1979.[9]

Table 3. Aging Alone



Source: The Wall Street Journal, Trulia, Census Bureau

[8] *Demographic Challenges and Opportunities for U.S. Housing Markets, March 2012, Bipartisan Policy Center*
[9] *"Baby Boomers Aren't (Yet) Downsizing in Droves", Nick Timiraos, June 27, 2014, The Wall Street Journal*

Delayed Millennial Household Formation

Are Millennials putting off housing formation as a short-term response to the recession or are there other underlying factors that will impact their housing decisions much farther into the future?

- **Student debt.** "For today's younger households, student loan debt may make the transition to homeownership more difficult. According to the Federal Reserve Bank of New York, the number of young adults under age 30 with student loan debt outstanding increased by 39 percent between the start of 2005 and the end of 2012, with the average amount rising from $13,300 to $21,400. However, concerns over rising student loan debt often overlook the fact that the trend also affects older households. The increase was even larger among adults in their 30s, with the number of borrowers up 76 percent and average debt climbing from $20,000 to $29,400. Moreover, of the $600 billion increase in student loans outstanding in 2005–12, fully 38 percent was among households over age 40. Since many of these older households already own homes, the sharp rise in student loan debt could affect their ability to meet their mortgage obligations."[10]
- **Diversity and household formation.** "To estimate the magnitude of the demand that Echo Boomers may (or may not) bring to housing markets in the next 20 years, we developed three scenarios. We began with the 1990, 2000 and 2010 Census results and the Census Bureau's national population projections assuming a constant net rate of immigration at 975,000 people per year. Using the observed and projected population series, we computed national rates of household formation and homeownership for people grouped by age cohort (10-year groups starting at age 15) and by race/ethnicity (white non-Hispanic, black non-Hispanic, other non-Hispanic and Hispanic)…The range of estimates in these scenarios can be attributed to different rates of household formation for Echo Boomers. Under the low scenario, people between 15 and 34 years old in 2010 (a span that includes Echo Boomers plus five years of the Baby Bust generation) would form 15.6 million new households between 2010 and 2020. Other cohorts would account for the formation of an additional 5.4 million households over the same time period. The medium scenario would result in 17.1 million new Echo Boomer households and 6.1 million other households. The high scenario, finally, yields 18.8 million new Echo Boomer households and 6.7 million new households from other generations. Because changes in the number of older households are less sensitive to differences in economic assumptions, the decline in older households is more consistent across the three scenarios, ranging from 10.6 million fewer old households in the high scenario to 11.6 million fewer old households in the low scenario."[11]
- **Education.** "Compared to previous generations at the same age, Echo Boomers are more likely to have completed high school, and more than half (54 percent) have at least some college education, compared to 49 percent of people in the Baby Bust generation and 36 percent of Baby Boomers when they were 18 to 28 years old. In terms of educational

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[10] *Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing, 2013*
[11] *Demographic Challenges and Opportunities for U.S. Housing Markets, March 2012, Bipartisan Policy Center*

achievement, women of the Echo Boom generation have vaulted far above women of previous generations; in fact, among Echo Boomers, more women than men and more women than in any previous generation have attained a college education…The growth in female educational attainment may also portend higher levels of household formation if it results in greater gender equity and gives women more financial independence. Other factors, however, could inhibit household formation and homeownership. Young adults carry high levels of credit card and student loan debt; even young people who already had formed households had higher debt loads in 2009 than people of the same age 10 years earlier.31 Rates of marriage declined in the 2000s from 8.2 per thousand to 6.8 per thousand.32 Finally, while all households lost wealth during the recession, average household wealth fell well below $10,000 for Hispanic and black households. Considering the diversity of the young population, this reduction in wealth among older adults will reduce the purchasing power of a significant fraction of young people who can no longer count on their parents' housing wealth."[12]

- **Household formation.** "At a basic level, changes in the number of adults and the rates at which adults head independent households determine household growth. On the plus side, the number of adults aged 18 and older rose by 18.1 million from 2005 to 2012 and fully 2.4 million in the past year alone. The echo-boom generation (born after 1985) fueled much of this growth, helping to boost the number of adults in their mid-20s—the group most likely to form new households. But while the young adult population has been growing, the rate at which members of this age group head their own households has declined. As a result, household growth has not kept pace with population growth. Going forward, though, even if today's low household formation rates persist, the aging of the large echo-boom cohort into their 30s will raise household headship rates because of lifecycle effects. Indeed, one out of every two 30–34 year-olds heads an independent household, compared with just one in four 20–24 year-olds. Since household headship rates continue to rise (albeit more slowly) through older adulthood, the rates for the echo boomers will likely increase for years to come."[13]
- **Mobility and homeownership.** "While mobility rates have fallen for nearly all household types, the decline was particularly steep for homeowners that have mortgages. Mobility rates for this group fell from 7.1 percent in 2007 to only 4.9 percent in 2011. The reasons for this short-term drop are numerous and include the lock-in effect of home price declines, falling incomes, fewer new employment opportunities, and tightened credit standards making it more difficult to qualify for a new mortgage Mobility rates are highest among renters and young adults. In 2011, fully 28.8 percent of renter households changed residences, compared with just 4.4 percent of homeowners. Young householders are also more mobile, with rates at 52.7 percent for those under age 25—significantly higher than the 19.7 percent for household heads in the next older age group…The oldest echo boomers are just beginning to swell the ranks of young adult movers. Having more young adults in the population may thus change the composition of housing demand in the coming years, given that younger households are more

[12] *Demographic Challenges and Opportunities for U.S. Housing Markets, March 2012, Bipartisan Policy Center*
[13] *Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing, 2013*

likely than older households to move into rentals (82 percent vs. 67 percent) and less likely to move into single-family homes (42 percent vs. 50 percent)."[14]

- **Gen Y has more urban community characteristic preferences.** "Gen Y expresses preferences that differ from those of the other generations in interesting ways. Gen Y is the least likely to value neighborhood safety or space between neighbors, but the most likely to want high-quality public schools, a short distance to work or school, walkability, and proximity to amenities like shopping and transit…Among gen Yers, 54 percent—representing nearly 39 million people—would trade a larger home for a shorter commute. Among all generations, gen Y is the most attracted to living in a neighborhood close to a mix of shops, restaurants, and offices. Sixty-two percent of gen Yers (representing more than 44 million people) prefer this type of mixed-use community over one where shops, restaurants, and offices are farther away. Gen Y is also the only age cohort that shows a preference for living in a neighborhood where there is a mix of housing types. Fifty-nine percent of gen Yers—representing more than 42 million people—would like to live in a community where there is a range of housing. Similarly, 52 percent of gen Yers (representing more than 37 million people) would like to live in a community where there is a range of incomes."[15]

Table 4. Community Characteristics

Importance of Community Characteristics	Homeownership status		By Generation				
Percentage ranking each characteristic 6 or higher in importance on a scale of 1 to 10	Owners	Renters	All Adults	Gen Y	Gen X	Baby boomers	War babies/ silent generation
Neighborhood safety	94%	88%	**92%**	88%	97%	92%	92%
Quality of local public schools	77%	83%	**79%**	87%	82%	74%	68%
Space between neighborhs	75%	68%	**72%**	69%	79%	70%	70%
Short distance to work or school	66%	76%	**71%**	82%	71%	67%	57%
Distance to medical care	68%	65%	**71%**	73%	63%	72%	78%
Walkability	75%	79%	**70%**	76%	67%	67%	69%
Distance to shopping/entertainment	63%	71%	**66%**	71%	58%	67%	69%
Distance to family/friends	59%	70%	**63%**	69%	57%	60%	66%
Distance to parks/recreational areas	63%	64%	**64%**	68%	62%	63%	60%
Convenience of public transportation	44%	67%	**52%**	57%	45%	50%	56%

Source: Urban Land Institute

[14] *Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing, 2013*
[15] *American in 2013 Focus on Housing and Community, Urban Land Institute*

Housing choices of Hispanic and Latino households

Does the growing Hispanic population have different housing needs/preferences than the average household and how will this impact Bend's housing supply in the future?

- **Growth in home ownership.** "U.S. Census data over the past 12 years shows that despite suffering significant losses during the recent foreclosure crisis, Hispanics have achieved homeownership gains in all but two of those years. During the same 12-year period, the number of Hispanic homeowners grew from 4.24 million in 2000 to 6.69 million in 2012, a remarkable increase of 58 percent at a time when the rest of the U.S. population saw a net increase of only 5 percent. In 2012, home prices increased significantly in most markets across the country for the first time in half a decade. Hispanic household growth and home purchases were arguably the most important drivers of the housing recover."[16]
- **Recession and home value drop.** "Between 1995 and 2004, rates of homeownership among blacks rose by seven percentage points; among Hispanics, homeownership grew even more quickly – from about 40 percent in 1993 to 50 percent in 2005–2006. Between 2004–2006 and 2010, however, homeownership rates dropped sharply, and more so for Hispanic and black households than for white non-Hispanics. The overall homeownership rate of 65.1 percent in April 2010 was 1.1 percentage points lower than 10 years earlier. While the housing crisis has hurt people of all races and ethnicities, it has been devastating for many Hispanic and black families, reducing their median wealth by one half to two-thirds and significantly increasing the number of households with negative net worth."[17]

  "The recession-induced drop in home values has been especially damaging to minority and low-income households. On average, real home values for Hispanic owners plummeted nearly $100,000 (35 percent) between 2007 and 2010, while the decline for black owners was nearly $69,000 (31 percent). By comparison, average values for white homeowners fell just 15 percent over this period…Moreover, white homeowners still had $166,800 in home equity on average in 2010—about twice the amount that blacks and Hispanics held…Over the next decade, minorities will make up an increasing share of young households and represent an important source of demand for both rental housing and starter homes. While their housing aspirations are similar to those of whites, minorities face greater constraints in pursuing those goals because of their lower incomes and wealth."[18]
- **Hispanic population is younger.** "Hispanics are also a much younger demographic averaging a full 10 years younger than the overall population…Every month 50,000 young Hispanics reach the age of 18**…**With a median age of 27, the Hispanic population is 10 years younger than the total U.S. median age of 37 years. In particular, Hispanics are heavily represented in the 26 to 46 age range involved in most home sales."[19]

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17 Demographic Challenges and Opportunities for U.S. Housing Markets, March 2012, Bipartisan Policy Center
18 Joint Center for Housing Studies of Harvard University, The State of the Nation's Housing, 2013
19 State of Hispanic Homeownership Report, National Association of Hispanic Real Estate Professionals (NAHREP), 2012

- **Hispanic households are larger.** Hispanic households are typically larger than the households of non-Hispanic Whites….Sixty-one percent of all Hispanic households consist of a married couple with children younger than 18."[20]
- **Hispanics believe that home ownership is a good investment.** "Despite being hit hard by the housing market downturn, three-in-four (75%) Latinos agree that buying a home is the best long-term investment a person can make in the U.S. This compares with 81% of the general population who say the same….Fully 83% of Latino homeowners say owing a home is the best long-term investment, while 70% of renters say the same. All of these demographic and cultural characteristics make Hispanics ideal homebuyers in the housing market. In fact, Hispanics are expected to comprise half of all new homebuyers by 2020"[21]
- **First-time homebuyers.** "Forward thinking companies are already changing their strategy to reflect this shift. Case in point: D.R. Horton, the nation's largest residential homebuilder, achieved huge profits in 2012 by constructing low-priced homes. Rather than focus on the move-up market, Horton cornered the entry-level market—the market most heavily represented by minority Hispanic and Asian first-time homebuyers…By virtue of their population growth, rate of household formation and purchasing power, Hispanics are expected to drive demand for small starter homes in vibrant, high-density communities."[22]
- **Multigenerational.** "Indeed, as the Hispanic share of the U.S. population continues to grow, a substantial increase in demand is being created for building new homes that meet the structural housing needs of large and multi-generational Hispanic families…Some builders are already creating products that meet the shifting demand and needs of these consumer segments who want home with enough space to accommodate parents, adult children or tenants. These new floor plans feature a second, self-contained unit with its own entrance, bathroom and kitchenette—a development that meets both the short- and long-term needs of many Hispanic households."[23]
- **Demand for smaller units.** "Hispanics, in particular, will stimulate demand for condominiums, smaller starter homes, first trade-up homes and the estimated 11 million housing units that will become available between 2010 and 2020 as baby boomers retire."[24]
- **Preference for walkable neighborhoods.** According to the Pew Research Center, Hispanics prefer to live in neighborhoods where houses are smaller and closer together, but schools/stores are within walking distance by 60 percent compared to 44 percent of non-Hispanic Whites.[25]

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20 State of Hispanic Homeownership Report, National Association of Hispanic Real Estate Professionals (NAHREP), 2012

21 Pew Research Hispanic Trends Project, "III. Latinos and Homeownership", January 26, 2012.

[22] State of Hispanic Homeownership Report, National Association of Hispanic Real Estate Professionals (NAHREP), 2012

[23] State of Hispanic Homeownership Report, National Association of Hispanic Real Estate Professionals (NAHREP), 2012

[24] State of Hispanic Homeownership Report, National Association of Hispanic Real Estate Professionals (NAHREP), 2012

[25] 2014 Political Polarization Survey, Table 3.1 Preferred Community, Pew Research Center for the People and the Press, June 12, 2014

Opportunities to provide housing development through infill and redevelopment

Are Bend residents really willing to trade single-family homes on larger lots for urban walkable neighborhoods?

- **Shorter commute for a smaller home.** According to the ULI, "among older Americans, many of whom have spent substantial time in the workforce and may continue working beyond the traditional retirement age, the preference for a shorter commute is very strong, even if it means living in a smaller home. Seventy-two percent of baby boomers, or nearly 53 million people, would make that tradeoff. Similarly, 65 percent of war babies and members of the silent generation—nearly 23 million people—would trade a larger home for a shorter commute. Almost 51 percent of these older Americans (representing 18 million people) also show a slight preference for living in areas close to a mix of shops, restaurants, and offices, reinforcing their preference, particularly as they age, for walkable communities near amenities."[26]

Table 5. Community Attribute Preferences

Community Attribute Preferences	Homeownership status		By Generation				
Percentage preferring listed attribute	Owners	Renters	All Adults	Gen Y	Gen X	Baby boomers	War babies/ silent generation
Shorter commute/smaller home	63%	56%	**61%**	54%	54%	72%	65%
Close to mix of shops, restaurants, and offices	49%	60%	**53%**	62%	50%	49%	51%
Mix of incomes	50%	53%	**52%**	52%	53%	53%	47%
Public transportation options	44%	62%	**51%**	55%	45%	52%	48%
Mix of homes	43%	57%	**48%**	59%	47%	42%	44%
Percentage choosing three or more of these compact development attributes	-	-	***54%***	*59%*	*49%*	*57%*	*51%*

Source: Urban Land Institute

- **Likelihood of moving and anticipated new housing.** "Many Americans report that they are likely to change homes during the next five years. *"America in 2013"* found that 42 percent of Americans—representing 98 million people—are likely movers. Making up that 42 percent are 25 percent who are very likely to move and 17 percent who are somewhat likely. Gen Yers are the most likely to move: 63 percent say they expect to move during the next five years. America's oldest generations are the least likely to move. Lower-income people are more likely to move than those with higher incomes. Fifty-one percent of the people making less than $25,000 report that they are likely to move in the next five years, compared with 43 percent of those making more than $75,000. Most movers—73 percent—believe they will own the primary

[26] *American in 2013 Focus on Housing and Community, Urban Land Institute*

residence they move into; one-quarter expect to rent. Gen Yers and the oldest Americans are the most likely to expect to rent their new home, and gen Xers are the least likely to expect to rent. Just 20 percent of the baby boomers expect to rent…Most movers in Generation X—87 percent—expect to live in a single-family home. For the oldest generations, 30 percent of movers expect to move to apartments or compact homes like townhouses or rowhouses."[27]

Table 6. Recently Moved and Change in Home Size

	Recently moved?		Recent Change in Home Size		
	Yes	No	Larger	Smaller	Same
All Adults	32%	**67%**	**48%**	**27%**	**25%**
Gen Y	53%	47%	48%	25%	27%
Gen X	31%	69%	59%	20%	20%
Baby Boomers	20%	80%	44%	33%	22%
War babies/silent generation	19%	80%	24%	50%	25%

Source: Urban Land Institute

Table 7. Likelihood of Moving and Expected Type of New Home

	Likely to Move		Expected Homeownership Status		Movers' Expected Type of Home			
	Likely to move	Not likely to move	Expect to own	Expect to rent	Single-family	Apartment	Duplex, townhouse, rowhouse	Manufactured/ mobile home
All Adults	42%	**57%**	**73%**	**25%**	**65%**	**15%**	**14%**	**2%**
Gen Y	63%	36%	69%	31%	60%	21%	17%	1%
Gen X	41%	59%	81%	16%	87%	6%	4%	1%
Baby Boomers	31%	68%	79%	20%	65%	11%	16%	6%
War babies/silent generation	22%	76%	55%	36%	58%	17%	13%	0%

Source: Urban Land Institute

[27] *American in 2013 Focus on Housing and Community, Urban Land Institute*

- **Community preference.** "Americans prefer walkable communities, but only to a point. In most comparisons tested, a majority prefers the community where it is easier to walk or the commute is shorter. But when comparing a detached single-family house to an apartment or townhouse, the detached home wins out—even with a longer commute and more driving.
    - A majority prefers houses with small yards and easy walks to schools, stores and restaurants over houses with large yards but where you have to drive to get to schools, stores and restaurants (55 percent to 40 percent).
    - An even larger majority prefers houses with smaller yards but a shorter commute to work over houses with larger yards but a longer commute to work (57 percent to 36 percent).
    - A neighborhood with a mix of houses, stores and businesses that are easy to walk to is preferred over a neighborhood with houses only that requires driving to stores and businesses (60 percent to 35 percent).
    - Nevertheless, when given a choice between a detached, single family house that requires driving to shops and a longer commute to work and an apartment or condominium with an easy walk to shops and a shorter commute to work, a strong majority prefers the single family home –even with the longer commute (57 percent to 39 percent)."[28]

Table 8. Current Community Versus Preferred Community

	Where You Live Now	Where you Prefer to Live
City -Near mix of offices, apartments, and shops	16%	15%
City - Mostly residential neighborhood	19%	13%
Suburban neighborhood with a mix of houses, shops, and businesses	27%	30%
Suburban neighborhood with houses only	15%	11%
Small Town	11%	14%
Rural Area	11%	16%

Source: National Association of Realtors, 2013 Survey

[28] *National Association of Realtors, National Community Preference Survey, 2013*

- **Housing demand will shift.** According to the Director of the Metropolitan Research Center at the University of Utah, Arthur Nelson, housing demand is shifting from large lot homes to small lot, townhomes and attached housing and the current supply of housing will not meet future needs.[29]

Table 9. US Housing Demand Shift 2010-2030

House Type	2010 Supply 2030 Demand	2030 Demand	Difference
Attached/Other	26%	34%	8%
Townhome	6%	18%	12%
Small Lot	11%	50%	39%
Large Lot	69%	34%	-35%

Source: Arthur C. Nelson, Presidential Professor & Director, Metropolitan Research Center, University of Utah

- **Political influence on housing preference.** "Given the choice, three-quarters (75%) of consistent conservatives say they would opt to live in a community where "the houses are larger and farther apart, but schools, stores and restaurants are several miles away," and just 22% say they'd choose to live where "the houses are smaller and closer to each other, but schools, stores and restaurants are within walking distance." The preferences of consistent liberals are almost the exact inverse, with 77% preferring the smaller house closer to amenities, and just 21% opting for more square footage farther away."[30]

- **Fewer households with children.** "Currently, only one third of U.S. households have children, and over the next two decades only 12% of new households being formed will have children. Childfree households are prime candidates for locating in denser areas of cities, within walking range of commercial services and entertainment. Households with two working parents are also increasingly seeking to live in urban areas to simplify their lives, taking advantage of child-care services and after-school educational opportunities available in urban areas."[31]

- **Recent movers prefer walkable communities.** "There is a wider divide among those who have moved in the last three years or are planning to move in the next three years. Recent movers prefer the walkable community by 20 points (58 to 38 percent), almost identical to the walkable community preference expressed by those who plan to move in the next three years (+18 points, 57 to 39 percent)."[32]

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[29] *"Reshaping America's Built Environment", Arthur C. Nelson*
[30] *Pew Research, Center for the People and the Press, Political Polarization in the American Public, Section 3: Political Polarization and Personal Life. June 12, 2014*
[31] *Business Performance in Walkable Shopping Areas, November 2013, Robert Wood Johnson Foundation.*
[32] *National Association of Realtors, National Community Preference Survey, 2013*

Materials for further reading

The following list provides examples of key articles used in the research for this memorandum, with web links where available, for further reading.

Joint Center for Housing Studies of Harvard University

State of the Nation's Housing
http://www.jchs.harvard.edu/research/state_nations_housing

http://www.jchs.harvard.edu/research/publications/state-nations-housing-2007

American Association of Retired Persons (AARP)

Home and Community Preferences of the 45+ Population
http://www.aarp.org/home-garden/livable-communities/info-11-2010/home-community-services-10.html

Approaching 65: A Survey of Baby Boomers Turning 65 Years Old
assets.aarp.org/rgcenter/general/approaching-65.pdf

Fixing to Stay: A National Survey of Housing and Home Modification Issues
http://www.aarp.org/home-garden/housing/info-2000/aresearch-import-783.html

Beyond 50: A Report to the Nation on Livable Communities: Creating Environments for Successful Aging
http://www.aarp.org/home-garden/livable-communities/info-2005/beyond_50_05_a_report_to_the_nation_on_livable_communities__creating_environments_for_successful_aging.html

Pew Research Center

Second-Generation Americans: A Portrait of the Adult Children of Immigrants
http://www.pewsocialtrends.org/2013/02/07/second-generation-americans/

Latinos and Homeownership
http://www.pewhispanic.org/2012/01/26/iii-latinos-and-homeownership/

The Brookings Institute

Who Lives Downtown
http://www.brookings.edu/research/reports/2005/11/downtownredevelopment-birch

The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities
http://www.brookings.edu/research/reports/2001/03/demographics-riche

Urban Land Institute (ULI)

America in 2013 Focus on Housing and Community
http://uli.org/wp-content/uploads/ULI-Documents/America-in-2013-Compendium_web.pdf

Research by Other Organizations

Demographic Challenges and Opportunities for U.S. Housing Markets
http://www.urban.org/UploadedPDF/412520-Demographic-Challenges-and-Opportunities-for-US-Housing-Markets.pdf

State of Hispanic Homeownership Report
http://nahrep.org/downloads/state-of-homeownership.pdf

National Community Preference Survey
http://www.realtor.org/reports/nar-2013-community-preference-survey

Are Aging Baby Boomers Abandoning the Single-Family Nest?
http://www.fanniemae.com/resources/file/research/datanotes/pdf/housing-insights-061214.pdf

2004 National Community Preference Survey
http://www.smartgrowthamerica.org/2004/10/20/survey-finds-lengthening-commutes-are-driving-the-growing-demand-for-walkable-neighborhoods-near-cities/

Endnotes

[1] U.S. Census Bureau, *U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin*, Table 2a. Projected Population of the United States, by Age and Sex: 2000 to 2050. (2004).
[2] U.S. Census Bureau, *U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin*, Table 2a. Projected Population of the United States, by Age and Sex: 2000 to 2050. (2004); available from http://www.census.gov/population/projections/data/national/usinterimproj.html.
[3] U.S. Census Bureau, *U.S. Interim Projections by Age, Sex, Race, and Hispanic Origin*, Table 2a. Projected Population of the United States, by Age and Sex: 2000 to 2050. (2004).
[4] Data in Table 1 is from the U.S. Census, 2007 American Community Survey, except where otherwise noted.
[5] Oregon Office of Economic Analysis, *Forecasts of Oregon's County Populations and Components of Change, 2000 – 2040*, [Excel Workbook] (April 2004); available from http://www.oregon.gov/DAS/oea/Pages/demographic.aspx#Long_Term_County_Forecast.
[6] Oregon Office of Economic Analysis, *Forecasts of Oregon's County Populations and Components of Change, 2000 – 2040*, [Excel Workbook] (April 2004.
[7] Ada-Helen Bayer, Ph.D. and Leon Harper, *Fixing to Stay: A National Survey of Housing and Home Modification Issues* (Washington, D.C.: AARP, 2000).
William H. Frey, *Mapping the Growth of Older America: Seniors and Boomers in the Early*

21st Century, (Conducted for the Metropolitan Policy Program at the Brookings Institution, May 2007).
Teresa A. Keenan, *Home and Community Preferences of the 45+ Population*, (Conducted for AARP, November 2010).
[8] Ada-Helen Bayer, Ph.D. and Leon Harper, *Fixing to Stay: A National Survey of Housing and Home Modification Issues* (Washington, D.C.: AARP, 2000).
Andrew Kochera, Audrey Straight, and Thomas Guterbock, *Beyond 50: A Report to the Nation on Livable Communities: Creating Environments for Successful Aging*, (Washington, D.C.: AARP, 2005).
Stephen Engblom, Greg Ault, and Lisa Fisher, *Boomer Residential Preferences*, (Conducted for the Urban Land Instutution, Multifamily Trends, May/June 2007).
Teresa A. Keenan, *Home and Community Preferences of the 45+ Population*, (Conducted for AARP, November 2010).
[9] Stephen Engblom, Greg Ault, and Lisa Fisher, *Boomer Residential Preferences*, (Conducted for the Urban Land Institution, Multifamily Trends, May/June 2007).
[10] Teresa A. Keenan, *Home and Community Preferences of the 45+ Population*, (Conducted for AARP, November 2010).
[11] Teresa A. Keenan, *Home and Community Preferences of the 45+ Population*, (Conducted for AARP, November 2010).
[12] Teresa A. Keenan, *Home and Community Preferences of the 45+ Population*, (Conducted for AARP, November 2010).
[13] Data in Table 2 is from the U.S. Census, 2007 American Community Survey, except where otherwise noted.
[14] Oregon Office of Economic Analysis, *Forecasts of Oregon's County Populations and Components of Change, 2000 – 2040*, [Excel Workbook] (April 2004.
[15] Oregon Office of Economic Analysis, *Forecasts of Oregon's County Populations and Components of Change, 2000 – 2040*, [Excel Workbook] (April 2004).
[16] *American in 2013 Focus on Housing and Community*, Urban Land Institute
Belden Russonello & Stewart Research and Communications, *2004 National Community Preference Survey*,(Conducted for Smart Growth America and National Association of Realtors, 2004).
Eugenia L. Birch, *Who Lives Downtown*, Living Cities Census Series(Washington, D.C.: The Brookings Institute, November 2005).
[17] *American in 2013 Focus on Housing and Community*, Urban Land Institute
Belden Russonello & Stewart Research and Communications, *2004 National Community Preference Survey*,(Conducted for Smart Growth America and National Association of Realtors, 2004).
[18] Joint Center for Housing Studies of Harvard University, *The State of the Nation's Housing*, 2013
[19] Data in Table 3 is from the U.S. Census, 2007 American Community Survey, except where otherwise noted.
[20] Joint Center For Housing Studies of Harvard University, *State of the Nation's Housing,* (Cambridge, MA: President and Fellows of Harvard College, 2007).

[21] Joint Center For Housing Studies of Harvard University, *State of the Nation's Housing,* (Cambridge, MA: President and Fellows of Harvard College, 2007).
[22] Joint Center For Housing Studies of Harvard University, *State of the Nation's Housing,* (Cambridge, MA: President and Fellows of Harvard College, 2007).
[23] Martha F. Riche, *The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities*, (Washington, D.C.: The Brookings Institution Center on Urban and Metropolitan Policy, March 2001).
[24] U.S. Census, 2000 Decennial Census.
[25] U.S. Census, 2007 American Community Survey
[26] James P. Allen, *How Successful Are Recent Immigrants to the United States and Their Children? Presidential Address delivered to the Association of Pacific Coast Geographers, 68th annual meeting, Phoenix, Arizona, October 22, 2005* (Los Angeles: The Association of Pacific Coast Geographers, 2006)
[27] Pew Research Center report *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, 2013.
[28] Allen, James P. "How Successful Are Recent Immigrants to the United States and Their Children?" Presidential Address delivered to the Association of Pacific Coast Geographers, 68th annual meeting, Phoenix, Arizona, October 22, 2005.
[29] Pew Research Center report *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, 2013.
[30] Pew Research Center report *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*, 2013.
[31] Joint Center for Housing Studies of Harvard University, *The State of the Nation's Housing*, 2013.
[32] Gregory Rodriguez, *Immigrants Today: Where they Come From, Where They Live in the US*, Emergences, Volume 9, Number 2 (Washington, D.C.: Taylor & Francis Ltd 1999).
[33] Martha F. Riche, *The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities*, (Washington, D.C.: The Brookings Institution Center on Urban and Metropolitan Policy, March 2001).
[34] Joint Center For Housing Studies of Harvard University, *State of the Nation's Housing,* (Cambridge, MA: President and Fellows of Harvard College, 2007).

APPENDIX D: Recent Trends in Absorption in Oregon

Literature on recent trends in absorption in Oregon was scarce. The best sources I found in my research were reports from the Portland State University Center for Real Estate Quarterly, which provides a "snapshot of the commercial real estate and housing markets in the region." The following information is from the Center for Real Estate Quarterly.

I report the literature in three categories: (1) residential land markets, (2) commercial land markets, and (3) industrial land markets.

Summary of the literature

Residential land markets

According to Portland State University's Center for Real Estate Quarterly, residential real estate markets are strengthening in Oregon. There were 2,469 residential unit building permits (for new private housing) issued in Oregon in the third quarter of 2014, which is an increase since 2009 but a decrease from the 3,781 units of the third quarter of 2013 (Holden 2014a).

In the Portland Metro area, existing home transactions was 7,179, "showing the best quarter since the second quarter of 2013," with a median sales price reaching $290,000. (Holden 2014a, 37). The marketing time was 43 days, with sellers getting 99 percent of the listed price. Additionally, there were 603 construction transactions of new, detached homes, with a median price of $359,000 for new homes (Holden 2014a).

In Central Oregon, Bend's growth has again spilled over to Redmond. Bend saw 668 transactions (under one acre) in the third quarter of 2014, which increased from 624 in the second quarter of 2014, with a median sales price of $289,100. Transactions have increased in Bend since 2008, where there were only a few over 200 transactions. Over the past 10 years, median sales price for transactions under one acre peaked in 2007 at around $350,000, and reached it lowest price in 2011 at about $175,000. Redmond saw a rise in median price to $197,000, with 253 transactions under one acre. Similar to Bend over the past ten years, median sales price in Redmond peaked in 2007 at a little over $250,000, and reached its lowest price in 2011, at a little over $100,000 (Holden 2014a).

Most of the Willamette Valley's residential real estate market has shown recent improvement from the second quarter of 2014 but remained similar to the third quarter of 2013. Median sales price has increased in all five counties since their lows in 2011 and 2012, but are not back from their pre-recession median existing detached home sales price (Holden 2014a). Over the last 10 years, Salem's peak number of transactions for existing homes was in 2005 and reached its low in 2009. Transactions are the highest they have been since 2009 at 600 transactions, and have reached a level to match 2006. The median price for existing homes in the third quarter in 2014 for Salem was $186,500, with a 100-day average marketing time. Median sales prices reached their peak in 2008 at over $200,000, and reached their low in 2012, below $150,000 (Holden 2014). Eugene/Springfield's residential housing market showed slower recovery, with a median sales price of $217,000, 739 sales, and an average of 59 days on the market in the third quarter of

2014, which is slightly lower than 2013 but still improvement since the recession (Holden 2014a).

In Southern Oregon, Josephine County saw a 4.2 percent increase in sales price, at $173,450 up from $166,500 in 2013, but an increase in average number of days on the market (64 in 2013 to 67 in 2014).

In the multifamily housing market, transactions "continue to be strong" in the Portland area, driven by larger institutions (Holden 2014b, 58). Sales, mainly by these institutions, was estimated to be about 248 for 2014. Before the recession, 2004 showed the highest number of Portland Metro area multifamily transactions, 274, and the lowest in 2009, dipping to 81. Sales volume peaked in 2008 at $889 million, and dropped to its lowest in 2009 at $282 million. The 2014 sales volume was expected to be $1.309 billion, its highest volume over the last 11 years (Holden 2014b). Multifamily building permits showed a 25 percent increase in Washington County and a 26% increase in the City of Portland. Portland's pre-recession building permits peaked in 2007, issuing 2,802. It dipped to its lowest in 2009, issuing only 572. Portland surpassed its pre-recession peak building permit issuance in 2013, and was expected to issue 3,733 permits in 2014. Washington County's pre-recession peak occurred in 2006, issuing 1,364, dropping to its lowest in 2010 with 212 permits. Washington County also surpassed its pre-recession peak building permit issuance in 2014, and was expected to issue 1,942 permits in 2014 (Holden 2014b).

The housing mix in Oregon cities follows the pattern of more people, more multifamily housing. In cities of less than 1,000 people, single-family detached housing made up over 90 percent of the housing mix, with multi-family comprising less than ten percent. The percent of multifamily housing increases as cities increase, comprising over 30 percent of the housing mix in cities with a population of 50,000 or more in non-metro cities (HB 2254, 2014, pg. 19).

Commercial land markets

RETAIL

In the third quarter of 2014, retail vacancy in Portland was 5.0 percent, identical to the second quarter's 5.0 percent and similar to the first quarter's 5.2 percent. Average rental rate, according to Colliers, is $16.67 per square foot for all property types, compared to $16.03 in the third quarter of 2013. Since 2007, average retail market quoted rates were lowest in 2012 (at below $16.00) and highest in 2008 (over $18.00). Since 2012, rates have slowly but consistently increased (Harrison 2014b).

Since 2007, net retail absorption peaked in Portland in the third quarter of 2007 (over 800,000 square feet) and reached its lowest in the fourth quarter of 2009 (less than negative 400,000 square feet). Net absorption in the third quarter of 2014 was 602,690 square feet, which is a significant increase from the second quarter (138,588 square feet) and first quarter (negative 218,546 square feet) (Harrison 2014b).

OFFICE

In the Metro area, the average office vacancy rate for the third quarter of 2014 was 8.6 percent, a decrease from 8.9 percent in the second quarter and 9.5 percent in the third quarter of 2013.

Since 2007, the peak vacancy rate occurred in 2010, reaching almost 12 percent. The lowest vacancy rate occurred in 2008, at a little over 8 percent. Since 2010, vacancy rates have slowly declined.

Rental rates at the end of the third quarter of 2014 were $20.66 per square foot for office space, increasing from $20.55 in the second quarter and $19.66 in the third quarter of 2013.

In the third quarter of 2014, there was a positive net absorption of office space in Portland of 154,715 square feet, a decrease from 187,810 square feet in the second quarter. However, this is an increase from the negative absorption of 109,335 in the third quarter of 2013. Since 2007, net absorption peaked in the fourth quarter of 2007 (over 600,000 square feet) and reached its lowest absorption in the first quarter of 2009 (almost negative 600,000 square feet). Since the second quarter of 2010, Portland office net absorption has been positive with the exception of the third quarter of 2013, where net absorption was almost negative 200,000 square feet (Harrison 2014c).

Industrial land markets

In Portland, industrial vacancy estimates for third quarter of 2014 ranged from 5.6 (Costar and CBRE) to 5.8 percent (Capacity Commercial Group). Both estimates are down from previous estimates in 2013, suggesting decreasing vacancy rates and continuing the downward trend for vacancy rates that has occurred since the peak in second quarter of 2010 (8.7 percent). Over the last 10 years, vacancy rates dropped below lowest pre-recession vacancy rates of 2007 in 2014 (Harrison, 2014a). According to CoStar, flex space had an 11.9 percent vacancy rate, higher than the first quarter of 2014 (10.9 percent) and the fourth quarter of 2013 (11.0 percent). Warehouse projects experienced a 4.9 percent vacancy rate in the third quarter of 2014, down from the 6 percent vacancy rate during the third quarter of 2013 (Harrison 2014a).

In Portland, overall positive net absorption for industrial was 805,585 square feet during the third quarter of 2014, significantly higher than the negative net absorption of 29,368 square feet in the first quarter. The flex market again experienced negative net absorption (65,568 square feet), which is less than the 2013 fourth quarter positive absorption (379, 489). From the first quarter of 2007 through the third quarter of 2008, Portland experienced positive net absorption in the industrial market. Beginning the fourth quarter of 2008 through the second quarter of 2010, Portland experienced negative net absorption, reaching its lowest net absorption in the second quarter of 2009 (over negative 1.5 million square feet). Since the third quarter of 2010, net absorption in the industrial market has been mainly positive, but has not reached pre-recession positive net absorption of over 2 million square feet (Harrison, 2014a).

From 2003 to 2008, Bend experienced positive industrial absorption, with the highest absorption rate in 2005 of just under 300,000 square feet. In 2009 and 2010, Bend experienced negative absorption, before experiencing positive absorption from 2011 forward, with a large increase in 2012 at 278,477 square feet. As of 2013, it was predicted that available industrial space would only last 17 months. Redmond's industrial market also experienced positive absorption in 2012 (36,489) after two years of negative absorption. It was predicted that given current rates, Redmond's supply of industrial space would last 10 years (Ross, 2013).

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