REIMAGINE RENO

Community Profile Report

January 2016

Draft

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REIMAGINE RENO

planning for the future

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About the Process

In the spring of 2015, the City of Reno launched a multi-year, community-based effort to prepare a new master plan. In the almost 20 years since the City last undertook a major master plan update effort, the City, community, and region have changed and evolved. The City's current population (236,883) represents an increase of more than 56,000 people since 2000 and is forecast to increase by an additional 72,000 people over the next twenty years—reaching nearly 310,000. The ReImagine Reno process is an opportunity to assess where Reno is today, and to explore trends and key issues that influence the City's future. It is also an opportunity to articulate a vision for the future, to explore potential trade-offs associated with that vision, and to ensure the updated Master Plan is an effective tool to help guide the community toward its desired outcomes.

Purpose of this Report

The purpose of this report is to examine the current and future trends and forces affecting the City of Reno. Specifically, the report discusses statistics, trends, and current plans, reports, and studies related to population, housing, the economy and employment, water, sewer and wastewater, transportation, education and schools, health, and hazards and public safety. This report, along with the Master Plan Assessment and Phase I Public Input Summary Report, are the foundation for Phase II of the ReImagine Reno process, serving as a jumping-off point for subsequent discussions with the community and as a basis for exploring strategies to address the issues and opportunities these trends present. While the City of Reno is limited in its ability to influence some of the trends and forces discussed in this report, such as those influencing education and public schools, they were included due to their importance to the public, as expressed through the Phase I Community Survey and Focus Groups.

This Community Profile report is one of several work products included as part of the Phase I Summary Report to help guide potential next steps for the ReImagine Reno process:

- **Master Plan Assessment:** this section contains observations from the consultant team based on our review and assessment of the current City of Reno Master Plan, interviews with numerous stakeholders, discussions with City staff and elected and appointed officials, and the results of extensive community input received as part of Phase I outreach. These observations also draw from our

INTRODUCTION

professional experience and research of best practices from around the country as to the most innovative and effective comprehensive plans.

- **Public Input Summary Report:** this section provides an overview of Phase I public engagement activities and summarizes the input received from the nearly 6,000 people who participated.

This report will be refined as needed based on input received from City Council and Planning Commission in January 2016.

How this Report is Organized

The report is divided into sections based on the topics addressed by the Report. For each, the discussion is organized into three parts:

- **Where we are today:** Examines current statistics, past trends, and projections for the future. Data included here was collected from a variety of sources, including the US Census Bureau (the Decennial Census and the American Community Survey), the University of Nevada Reno, Economic and Planning Systems (EPS), and the State of Nevada. Plans and related studies are also referenced where needed.
- **What does it mean?:** Explains why these trends are important to consider in the ReImagine Reno process, and what they mean for Reno. Statistics are also synthesized with those from other sections where appropriate in order to highlight the inter-relatedness of many of the topics discussed in this report. In addition, links to national trends in planning and related fields are drawn to help the community better understand how the trends and forces facing Reno relate to those facing cities across the country.
- **Moving forward:** Briefly discusses initial ideas for how the City could respond to the trends and forces identified in the future through the Master Plan update. Bringing in results from the ReImagine Reno Phase I Public Input Summary Report, the discussion in this section also recommends areas where additional input from the community will be necessary to further understand the community's preferences and desire for the future during Phase II.

Highlights

The following provides an overview of the major trends and forces discussed in the sections that follow:

Population & Demographics: Reno's population in 2015 was estimated to be 236,883 and is expected to reach 309,583 by 2034. The timing of this growth is uncertain, as recent economic development efforts could mean the region will see a much larger influx of new residents in the next five years than previously expected. In addition, the population of the City is changing; while Reno's median age is becoming younger, the percentage of Reno residents over the age of 65 is expected to grow at more than twice the rate of the population as a whole, and the City is also becoming more ethnically diverse.

Housing: The housing and real estate markets were particularly hard hit in the aftermath of the Great Recession. New housing starts dropped sharply, approved projects remained unbuilt, and the values of existing homes decreased from a peak in 2006. However, there are signs of recovery. Recent years have seen an increase in building permits, home values appear to be stabilizing, and employment in construction has increased faster than any other industry. While housing remains relatively affordable in Reno, it is a growing concern for many residents experiencing increasingly unsustainable portions of their income going towards housing.

Economy & Employment: Following job losses over the past 10 years and a high unemployment rate, Reno is now experiencing a period of sustained job growth. Unemployment is down, although not quite to levels seen prior to the Great Recession. Large firms, such as Tesla, Switch, and Ebay have already announced their relocation to the Reno area, with more expected. Despite a push to attract more technology and manufacturing jobs to the City, most are in service sector industries, especially those related to gaming and casinos. Other major employers include the Washoe County School District, University of Nevada-Reno (UNR), and Renown Regional Medical Center.

Water: While a recent period of prolonged drought has raised concerns about the City's water supply, the Truckee Meadows Water Authority (TMWA), the main water utility in the region, has enough water in its system to meet the current needs of residents and businesses in the Truckee Meadows, as well as the anticipated needs of the region to 2034. The recent final approvals of the Truckee River Operating Agreement are expected to improve storage capacity and flexibility in how Reno and the region use this precious water resource. However, water services are not available in some places within the Truckee Meadows Service Area, particularly in the North Valleys, raising potential barriers to the future growth and development of these areas.

Sewer & Wastewater: Unlike water, sewer and wastewater services are provided by the City of Reno, City of Sparks, and Washoe County, and there is a high degree of cooperation and coordination between these three entities in providing services. While the wastewater facilities in the region all have spare operating capacity, constraints, such as water quality regulations governing discharges into the Truckee River and the reuse or disposal of reclaimed water, could create barriers to future development in the City well before the capacity of these facilities is reached.

TRENDS & FORCES

Transportation: The automobile is the predominant mode of transportation in the City of Reno, and residents value the ease with which they can travel around the City. However, as the region's roadways reach and exceed their designed-for capacities, traffic and congestion are becoming larger issues. In addition, population growth and changing commuting patterns could exacerbate these trends—already workers in the City have seen their average commute times increase over the past 15 years. In response, the Regional Transportation Commission (RTC) has shifted a focus to providing more public transit service in the region, and both RTC and the City of Reno have invested in new bike lanes and sidewalks in order to promote greater use of alternative modes of transportation. However, funding for transportation projects are limited, and will not be enough to address all of the region's needs.

Education & Schools: Residents of Reno generally have higher levels of educational attainment than their peers elsewhere in Nevada or the United States, thanks in large part to the presence of UNR and Truckee Meadows Community College in the City. However, the Washoe County School District is facing a series of challenges related to a lack of funding for the construction of new facilities to accommodate the region's growing population, as well as funding for completing needed repairs, maintenance, and upgrades in its existing facilities. While not something that the City of Reno has direct influence over, schools and concerns about school quality are important values held by the community, as seen in the ReImagine Reno Phase I Public Input Summary Report.

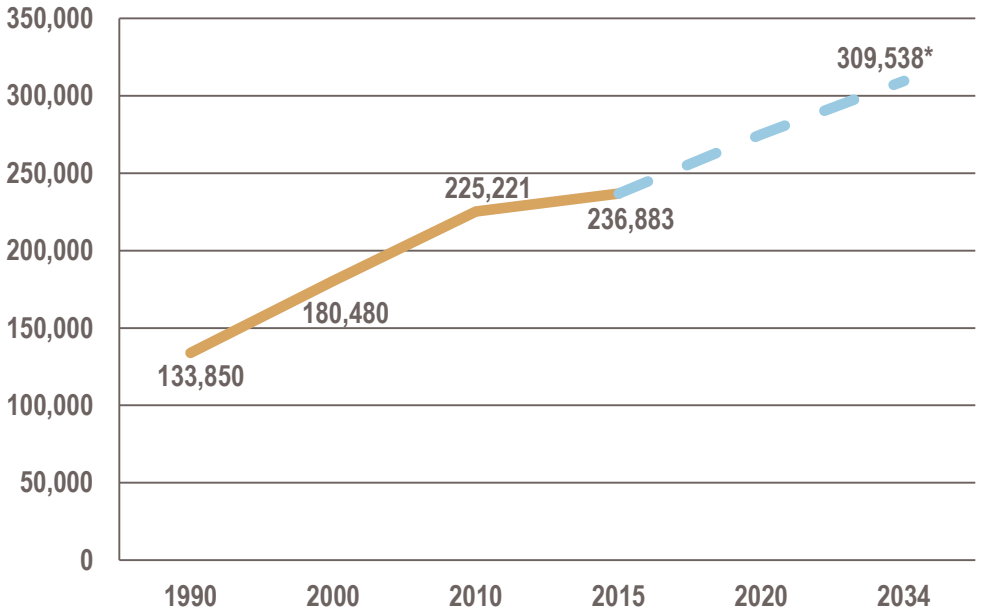
Health: While the population of Washoe County is generally in good health, over half the region is considered overweight or obese, and the majority of residents do not engage in the recommended amount of physical activity. Access to health providers and services is also a growing concern. Over 30 percent of the region lives in a designated health professional shortage area, and all of Washoe County is considered to have a shortage of mental health professionals. In addition, Reno suffers periods of impaired air quality, and is considered to be a non-attainment area for air quality standards set for coarse particulate matter (PM10), creating health risks for residents.

Hazards & Public Safety: In recent years, the City of Reno has seen a decrease in crimes and an increase in public perceptions of safety. However, concerns remain about drugs, gangs, and theft, as well as panhandling and graffiti in certain areas of the City. The Reno Fire Department has seen a decrease in the number of calls for service between 2013 and 2014, and had an average response time of seven minutes and 18 seconds in 2014, on par with national averages. While Reno is at risk from a variety of natural and man-made hazards, the City, in collaboration with partners in the region, has recently updated its hazard mitigation plan, and is involved in a number of mitigation projects, such as the recent Virginia Street Bridge project.

CREATIVE COMMONS
PHOTO CREDIT: RENOTAHOE

Population and Demographics

Reno Population Growth: 1990 - 2034



Source: US Census Bureau, Truckee Meadows Regional Planning Agency

Where We Are Today

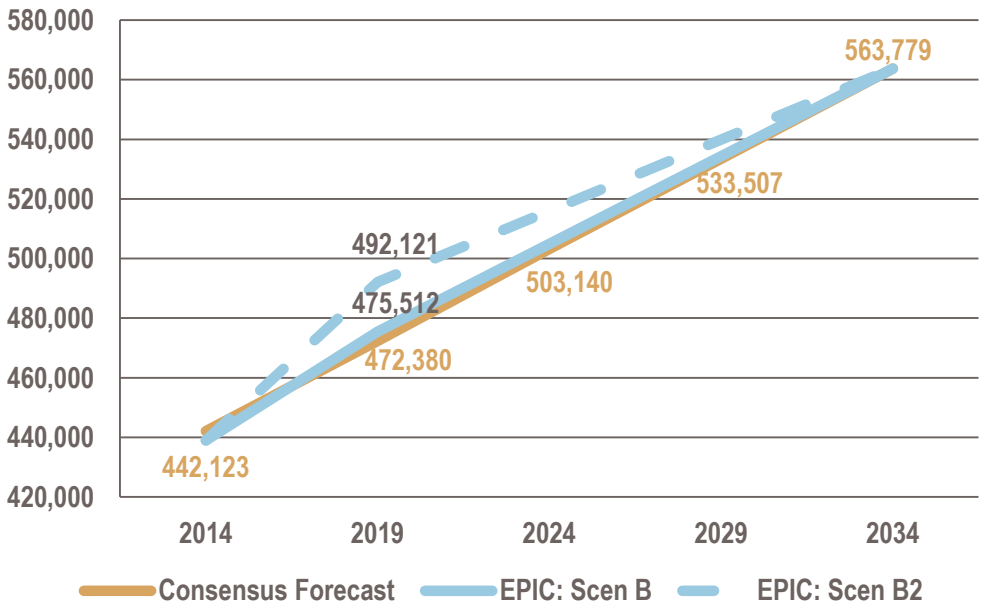
Growing population. According to data from the US Census and the Nevada State Demographer, Reno's population is growing, having increased by 56,403 residents since 2000 to a population of 236,883 in 2015. This represents an annual average rate of growth of 1.8 percent, approximately the same as the annual average rate of growth in Washoe County, and faster than the 0.9 percent annual growth rate experienced in the United States over the same period. Reno's population is expected to continue to grow in the future, however, forecasts differ as to the timing of when this growth will occur. Moving forward, the ReImagine Reno process expects to make use of both the Consensus Forecast and the EPIC Report to capture a range of possible future growth scenarios.

- **Steady Growth (Consensus Forecast):** According to the most current Consensus Forecast released by TMRPA covering the years between 2014 and 2034, Reno's population will increase from 232,243 residents in 2014 to 309,538 in 2034. This amounts to a total increase of 77,295 people or an average rate of growth of 1.4 percent. Overall, Reno is forecast to grow faster than the County, which is expected to increase at an annual rate of 1.2 percent.

- **Accelerated Growth (EPIC Report):** According to the preferred scenarios (Scenarios B and B2) from the 2015 EPIC Report, Reno could see between 17,000 and 24,700 additional residents over the next 4 to 5 years. Overall, the projected population of Washoe County by 2019 under the B2 scenario is 492,121, approximately 20,000 more people than predicted by the Consensus Forecast.

Slowing rates of growth. While the average annual population growth rate in Reno between 2000 and 2015 was 1.8 percent, the rates of growth experienced in the past have varied by decade. Reno's population grew at an average annual rate of 2.2 percent between 2000 and 2010, but saw its average annual growth rate slow to just 1 percent between 2010 and 2015. Washoe County and Nevada have also experienced similar trends in population growth. In addition, the EPIC Report notes that although it

Washoe County Consensus Forecast & EPIC Report Forecasts: 2014 - 2034



Source: Truckee Meadows Regional Planning Agency

predicts increased rates of population growth to 2019, this growth will be slower than was experienced by the region prior to the Great Recession.

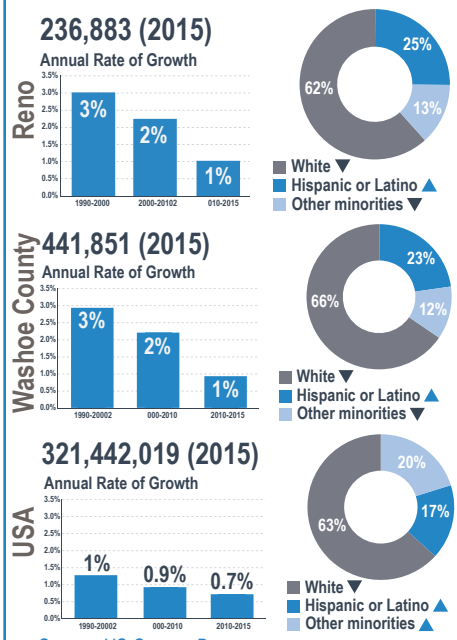
Increased diversity. According to the US Census, in 2013 Hispanics and Latinos accounted for 25 percent of Reno's population, higher than the percentage of Washoe County's population (23 percent) or the percentage of the population of the United States (17 percent). Across all three jurisdictions, the share of the population made up by residents identifying as Hispanic and Latino has increased since 2000.

Younger median age. Reno's median age in 2013, as reported by the US Census, was 34.4 years, younger than the median age for Washoe County's population (37.2 years) and the population of the nation as a whole (37 years). Reno's median age in 2000 was 34.5 years, 0.1 years older than in 2013. Washoe County's and the United States' populations were both older in 2013 than in 2000, as evidenced by increases in their median age over the same period.

More millennials. In 2013, nearly 1 in 4 residents living in Reno was between the ages of 20 and 34 (commonly referred to as millennials). By comparison just 21 percent of people living in Washoe County fell into this age group in 2013, slightly more than the percentage of millennials living in the United States during the same period. All three had a similar percentage of population between the ages of 20 and 34 in 2013 as in 2000.

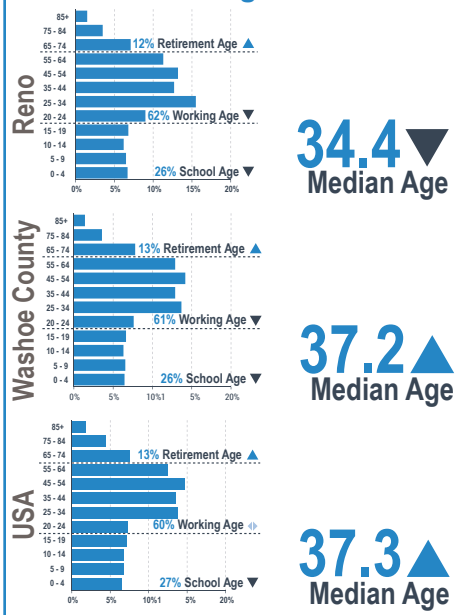
Growing retirement-age population. 12.1 percent of Reno's residents were over the age of 65 in 2013, lower than the percentage of residents in this same age group both in Washoe County (12.8 percent) and the United States (13 percent). Despite the relatively stable median age, the overall share of the City's population in this age group has increased since 2000, when 11.4 percent of the population was over the age of 65. The number of retirement-age residents (age 65+) in Washoe County will increase from 14 percent of the population in 2014 to 18 percent in 2034. In addition, this age group will grow at an average annual growth rate of 2.6 percent, much higher than the

Population



Source: US Census Bureau
Year: 2013 (unless other year given)
▲Increase since 2000 ▼Decrease since 2000

Age



Source: US Census Bureau
Year: 2013;
▲Increase since 2000 ▼Decrease since 2000
◆No change since 2000

Sources:

- US Census Bureau
- Economic & Planning Systems
- Truckee Meadows Regional Planning Agency
- EDAWN
- State of Nevada

Population Forecasting in the Truckee Meadows

The Consensus Forecast updated regularly by the Truckee Meadows Regional Planning Agency (TMRPA) is the primary source for population, employment, and income forecasts for the Truckee Meadows Region. It draws from four different long-term population forecasts for Washoe County:

- Global Insight
- Woods and Poole
- Truckee Meadows Water Authority's Population and Employment Econometric Model (or PEM)
- Nevada State Demographer

The Consensus Forecast takes the predictions from these four sources and averages them to arrive at a the final prediction for population, employment, and income. The use of a "consensus" forecast is a common practice that attempts to control for different approaches and methodologies used by forecasters. Research suggests that consensus forecasting consistently outperforms individual forecasts in accuracy, as well as minimizing the risk of large forecast errors.

TMRPA is required to update the Consensus Forecast every even numbered year.

Forecasts Used by TMRPA

Forecast Source	2034 Population
Global Insight	528,509
TMWA	556,952
Woods & Poole	609,325
State of Nevada	560,331*
Consensus Forecast	**563,779**

Source: TMRPA

*Note: NV State Demographer forecast is only projected to 2032. Predictions for 2033 and 2034 were derived by TMRPA through extrapolation based on the average annual population growth during 2014-2022

rate of growth of 1.2 percent expected for the county's overall population. The number of people over the age of 80 is expected to increase even faster, rising from 13,336 people in 2014 to 29,865 people in 2034 at an annual rate of 4.1 percent.

What Does It Mean?

A university city. The presence of the University of Nevada Reno (UNR), with a 2015 student enrollment of 20,898, helps to explain why Reno has a higher percentage of young people (ages 20-34) and a lower median age compared to Washoe County and the United States. Nationally, the demographic trends seen in Reno are unusual, as the median age for Americans is older than that for residents of Reno. In addition, while Reno's median age remained almost unchanged between 2000 and 2013, the median age for Americans increased from 35 years to 37 years.

Demand for new services. The expected growth in the number of residents over the age of 65, especially those over 80, will result in a greater need for services and amenities oriented towards older adults. This "greying" of the population, common in communities throughout the United States, impacts many aspects of City services and the built environment, from an increased need for housing options that are both affordable and accessible to older residents (especially those with impaired mobility), to a need for additional transportation options for those who are no longer able to drive cars.

Uncertainty about future growth. The diverging predictions of future growth found in the EPIC Report and the TMRPA Consensus Forecast illustrate the uncertainty inherent in forecasts for population growth. The current economic opportunities in the region may drive increased growth in population in the short term, but the sustainability of this rate of growth is dependent on the region's ability to continue to attract new jobs and residents and to provide the infrastructure needed to support new growth. In contrast, the Great Recession showed how impactful economic down turns can be on Reno, especially if the region continues to rely on its past economic base (i.e., tourism and gaming) and real estate development to support its economic and fiscal health.

Housing future population growth. At full build-out, the number of approved development projects within the municipal boundaries of the City of Reno would provide enough housing units to accommodate approximately 85,700 additional residents; 8,500 more than the amount of residents predicted to live in the City by 2034. According to initial analysis by TMRPA[1], Reno has approximately 20,541 vacant unbuilt acres of residential land, which accounts for around half of all vacant residential land within the Truckee Meadows Service Area (TMSA). Assuming similar average densities for each development type, this vacant land has the potential to accommodate approximately 130,000 additional housing units, providing even more opportunities to house the City's growing population.

Moving Forward

Addressing the needs of a changing population. Reno's population is growing older, and becoming more diverse. Moving forward, it will be important for the ReImagine Reno process to consider what impacts these changes could have on the City, especially in terms of the types of services, amenities, housing and living situations, and transportation options available to residents now and in the future. Understanding

1. TMRPA is currently in the process of conducting a detailed residential lands inventory for the Truckee Meadows. This information will be updated to reflect their findings as such data becomes available.

what choices we can make now to better meet our predicted needs will be key.

Retaining an educated workforce. While UNR is a natural draw for millennials, it is not clear how many remain in Reno following graduation. The ReImagine Reno process represents a good opportunity to check-in with students and other millennials in the City to see what influences their decision to stay or leave Reno, and what amenities, job opportunities, and housing types, for example, this population group is looking for. It will also be important for Reno to retain millennials and other young people in the City as a source of new workers, especially given millennials now make up the largest segment of the nation's workforce[2].

Remaining flexible in the face of uncertainty. While both the Consensus Forecast and the EPIC Report predict growth will return to the region, there are questions as to when this growth will occur and what its magnitude will be. While the Consensus Forecast predicts steady population growth to 2034, the EPIC Report predicts an accelerated growth rate in the next 5 years as a result of new large employers moving to the region. In response, the ReImagine Reno process should consider a range of different growth scenarios to ensure the City is prepared to deal with a variety of outcomes.

Preserving our quality of life as we grow. In the face of predicted growth, it will be crucial that Reno sustain the high quality of life that residents currently enjoy. Indeed, this is one of the main reasons why people are attracted to Reno, and why they choose to call the City home. Many of the community values identified in the Phase I Public Input Summary Report, such as affordability, a well-maintained built environment, and a sense of community, could be threatened if the City is not mindful about the impacts of future growth. Building on Phase I of the ReImagine Reno process, it will be critical to further engage with the community to share the initial findings from this report regarding the potential impacts of new growth, and to explore the ways in which where and how we grow might affect quality of life in the future.

Related Plans and Studies

- City of Reno Master Plan (City of Reno)
- Truckee Meadows Regional Plan (TMRPA, 2012)
- 2014-2034 Washoe County Consensus Forecast (TMRPA, 2014)
- EPIC Report (EDAWN, 2015)

What is the EPIC Report?

In light of recent announcements of major expansions or relocations by several companies to the Reno-Sparks metropolitan area, the Economic Development Authority of Western Nevada (EDAWN), in partnership with a variety of local, regional, state, and educational organizations, formed the Economic Planning Indicator Committee (EPIC) in an effort to forecast how many jobs and residents will be located within its study area (Carson City, Douglas, Lyon, Storey, and Washoe Counties) by 2020. The findings, released in a 2015 report (the EPIC Report), suggest that the study area will grow at much faster rates than those seen in the years following the Great Recession but still slower than what occurred in the region between 2000 and 2006.

For the EPIC Report, the Committee developed three job growth scenarios and four population growth scenarios. Of all the scenarios, the Committee chose Scenario B, the mid-growth alternative, as their preferred scenario based on their expectations for what demographic and economic growth would likely be over the study period. An additional scenario, B2, was developed for population projections to provide a "high" range for population growth in the study area.

EPIC Report Scenarios

Scenario	Job Growth (2015-2019)	Pop Growth (2015-2019)
A	56,600	46,200
B	52,400	42,400
B2	52,400	64,700
C	47,400	37,800

Source: EDAWN

EDAWN also tracks the actual population and job growth experienced in the region to compare to the projects in the EPIC Report's Scenarios B and B2. A comparison of actual and projected growth can be found at edawn.org/epic-report/.

2. Fry, Richard. "Millennials surpass Gen Xers as the largest generation in U.S. labor force." Pew Research Center. May 11, 2015. http://www.pewresearch.org/fact-tank/2015/05/11/millennials-surpass-gen-xers-as-the-largest-generation-in-u-s-labor-force/

Housing

Where We Are Today

Housing growth. Between 2000 and 2013, the City of Reno grew by approximately 21,947 housing units. Of the 101,400 housing units in the City in 2013, 11.2 percent were vacant, an increase since 2000 when just 7 percent of all units were vacant, most likely a reflection of the depressed housing market in the aftermath of the Great Recession. However, fewer homes were vacant in 2013 compared to Washoe County and the United States. During this same year, 11.7 percent and 12.5 percent of housing were vacant in Washoe County and the United States, respectively.

Smaller households. In 2013, the average household in Reno had approximately 2.48 members, smaller than in Washoe County (2.56) and the United States (2.60). However, the average household size in Reno increased from 2000, from an average household size of 2.38. While households in Washoe County and the United States also grew over this period, growth in these jurisdictions was considerably less than that seen in Reno (2.53 to 2.56 for Washoe County and 2.59 to 2.60 for the United States).

Prevalence of single-family homes. According to the US Census, most residents of Reno lived in a detached single-family home in 2013. However, just under half (49 percent) of the housing units in the City were single-family homes, while 16 percent of units were attached 1-unit homes or in a multifamily building of 2 to 4 units. 30 percent of units were in a multifamily building of 5 or more units. The remaining 5 percent were some other kind of housing type, such as mobile homes.

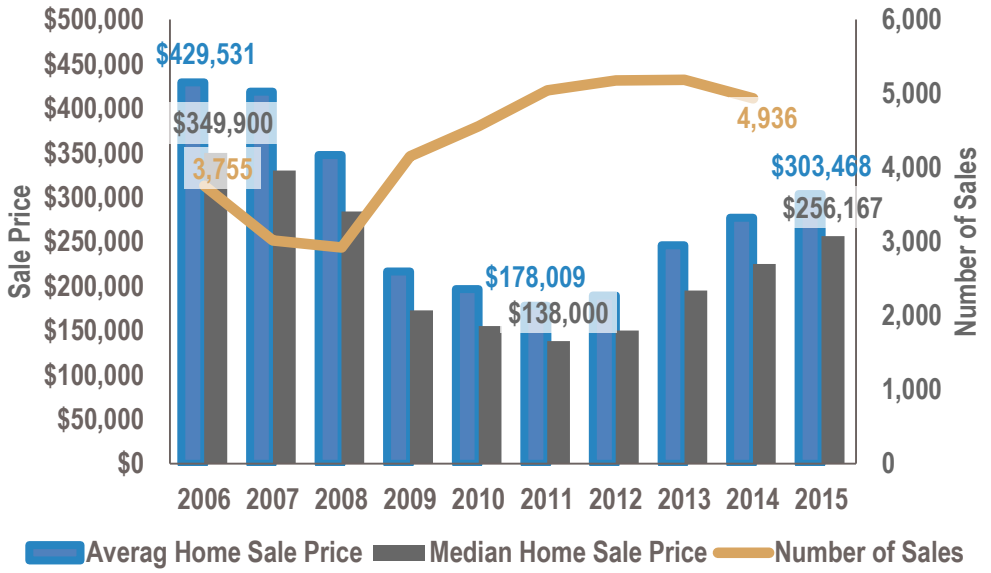
Greater housing diversity. Detached single-family homes were more prevalent in Washoe County and the nation than in Reno. In 2013, 59 percent of housing units in Washoe County and 61.7 percent of housing units in the United States were detached single-family homes. While the percentage of detached single-family homes decreased in both Reno and Washoe County since 2000, the percentage of such units in the nation as a whole was greater in 2013 than in 2000.

Majority renter households. According to the US Census, approximately 53 percent of occupied housing units in Reno were occupied by renter-households in 2013, compared to 47 percent of units occupied by homeowners. The percentage of renter-occupied units has increased slightly since 2000 and was higher than the percentage in Washoe County (42 percent) or the United States (35 percent) in 2013.

Turbulent but rebounding housing market. The average home sale price in Reno in 2015 (through the 3rd quarter) was $303,000. This is up from previous years when the average home sale price in 2011 was $178,000, the lowest in the past 10 years. The housing market was hit hard during the Great Recession, as the average sale prices dropped 60 percent between 2006 and 2011. Despite a rapid increase in prices over the past 4 years, the average home price in Reno is still $126,000 lower than the average price in 2006 of $429,000.

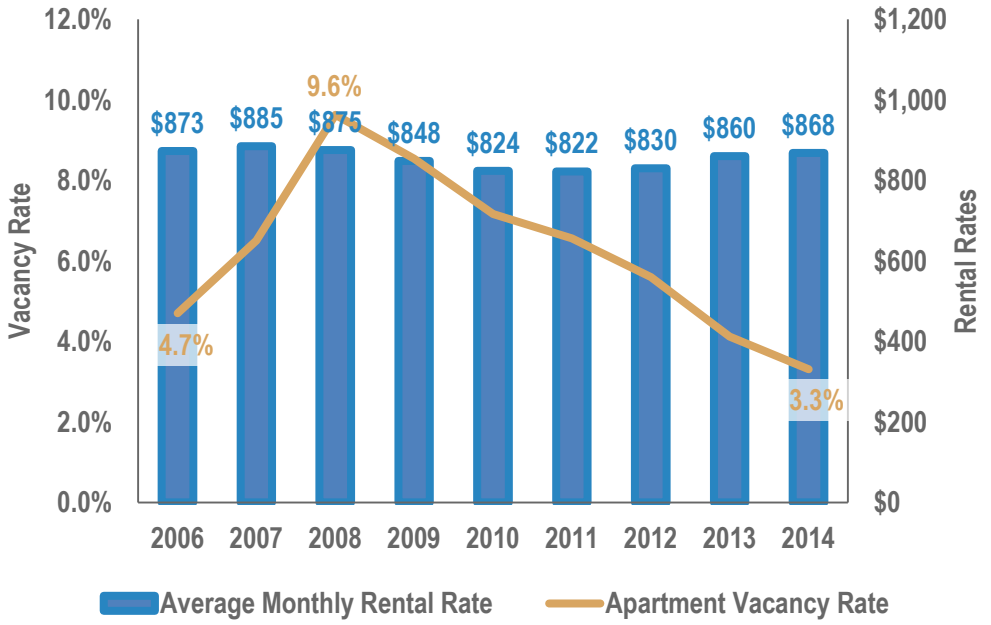
Declining real home values. Data from the US Census indicates that the median value of a home in Reno in 2013 was $200,400, slightly lower than in Washoe County, where the median home value was $201,700. Since 2000, the median value of a home in Reno increased from $158,700 in 2000 to $200,400 in 2013. However, adjusting for inflation, a median value of $158,700 in 1999 dollars is equivalent to approximately

Reno Housing Market Trends: 2006-2015



Source: Reno-Sparks Association of Realtors; Northern Nevada Region MLS

Greater Reno Rental Rates: 2006-2014



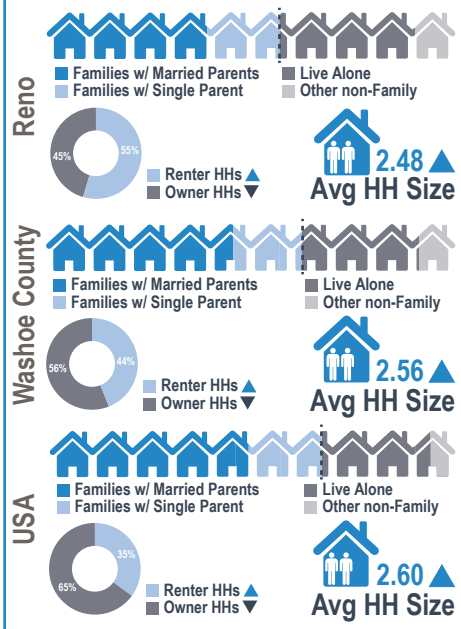
Source: Center for Regional Studies - UNR; Johnson-Perkins Associates

$221,910 in 2013 dollars. Therefore, real home values actually decreased between 2000 and 2013 in Reno by approximately $20,000. Real median home values also decreased in Washoe County.

Stable rental rates, but growing demand. The median gross monthly rent paid by renter households in 2013 was approximately $867 according to the US Census, lower than the median rent paid by renters in Washoe County ($913 per month) and across the nation ($904 per month). The average rental rate in Reno, according to the most recent apartment survey completed by Johnson-Perkins Associates (Q. 4, 2014)[1], was $868 in 2014 and has not changed since 2006. However, the apartment vacancy rate

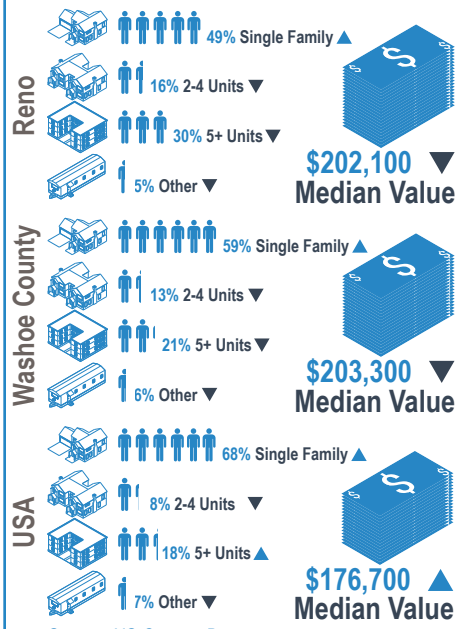
1. Survey includes projects with 80 units or more in the Reno/Sparks service area. To be included in the survey projects needed to charge market rents (no affordable units or student housing was included), have a stabilized occupancy rate of at least 90%, have a competitive on-site management program, and a willingness of the on-site manager to participate in the survey.

Households



Source: US Census Bureau
Year: 2013
▲Increase since 2000 ▼Decrease since 2000

Housing



Source: US Census Bureau
Year: 2013
▲Increase since 2000 ▼Decrease since 2000

Sources:

- US Census Bureau
- Economic & Planning Systems
- Truckee Meadows Regional Planning Agency
- City of Reno
- University of Nevada-Reno
- Johnson-Perkins Associates
- Reno-Sparks Assoc. of Realtors

Future Supply of Housing

According to data maintained by TMRPA, approximately 35,654 unbuilt units remain in approved PUDs. Most of these units are concentrated in just a few PUDs. 10 of the 36 PUDs with remaining unbuilt units account for over 80% of all unbuilt units. These PUDs are:

PUDs with Largest Unbuilt Unit Counts

PUD Name	Unbuilt Units	% of PUD Total
Spring Mountain*	12,000	100%
Evans Ranch*	5,679	100%
Mortensen-Garson*	2,995	99%
South Meadows III	1,726	83%
Silver Star Ranch*	1,599	99%
Butler Ranch	1,550	100%
Caramella Ranch Estates	1,311	99%
Damonte Ranch	769	31%
Rancharrah	691	100%
Pioneer Parkway	645	85%
TOTAL	28,965	--

Source: TMRPA
* denotes PUDs located outside of a water purveyor's service area.

PUDs are not required to determine water supply or sewer/wastewater service provision prior to approval. As illustrated above, many PUDs with large amounts of unbuilt units are not currently located within the service area for one of the region's water purveyors. This means that developers of these PUDs will need to plan and build water infrastructure to service their developments, as well as acquire sufficient water rights before construction on any new units can begin.

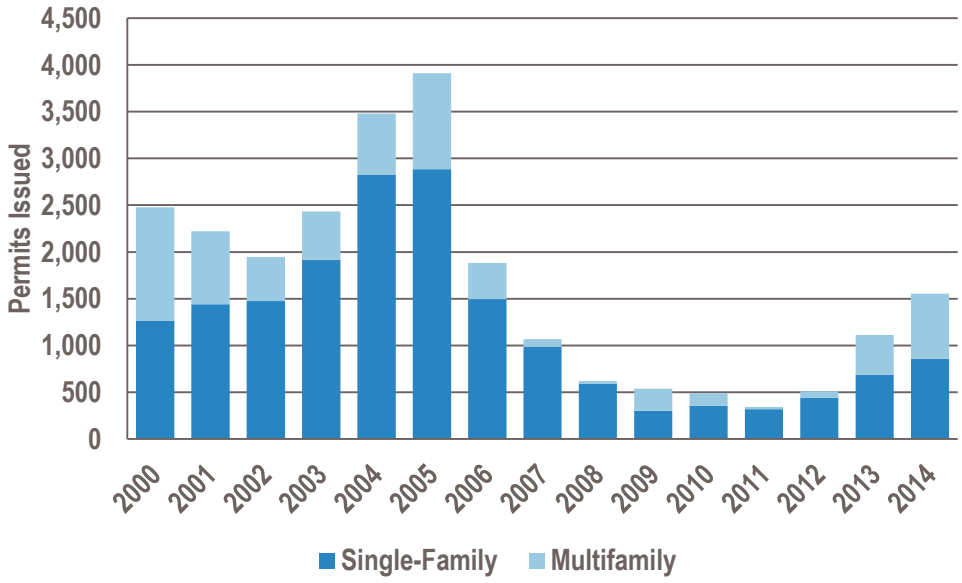
in Reno was as low as 3.3 percent in 2014. Such low vacancy, in combination with a growing demand for rental units in Reno will most likely result in increased rents over the next few years. In addition, increases in employment growth traditionally correlates with an increase demand for rental units.

Affordable housing. In 2013, approximately 39 percent of all homeowners and 54 percent of all renters had housing costs in excess of 30 percent of their household incomes. This suggests approximately 26,447 households (or 30 percent of all households in Reno) were paying more than is generally considered affordable for housing. In contrast, just 28 percent of homeowners and 39 percent of renters spent more than 30 percent of their incomes on housing costs in 2000. Cost burden, or housing costs in excess of 30 percent of a household's income, is the largest housing affordability issue for Reno.

Housing forecasts. According to the Consensus Forecast, Reno's population will increase by 77,295 residents between 2014 and 2034. Assuming similar average household sizes as today (2.48), this equates to an additional 31,167 households over the 20-year forecast period, or approximately 1,558 new households per year. Additional predictions for household growth released in Scenarios B and B2 of the EPIC Report suggest that Reno could see between 6,746 and 9,782 new households by 2019 (1,349 to 1,956 households per year).

Approved housing units. As of August 2015, 35,654 unbuilt dwelling units remained in approved planned unit developments (or PUDs) in Reno. An additional 1,686 unbuilt units outside of PUDs had received tentative maps (TMs), for a total of 37,340 unbuilt units. While there are many approved units in Reno, not all of these units are close to coming on the market. Generally, units in projects with tentative maps (or TMs) are much further along the development approval process, and are generally close to beginning construction. In all, there are 4,536 units that have yet to be built in Reno in projects with TMs. In addition, a total of approximately 22,950 unbuilt units are located outside of a water purveyor's service area, particularly in the Cold Springs and Mountain Springs/Winnemucca Ranch areas.

Reno Building Permits: 2000-2014



Source: City of Reno

Affordability Analysis

The affordability of housing is a growing issue nationally and in Reno. The Great Recession had a significant impact on housing tenure and housing costs in Reno. The region experienced high rates of foreclosure and home prices are 30 percent of the prices in 2006 prior to the Great Recession. The housing market is recovering in Reno, which is a good sign of economic vitality, but is bringing housing affordability back to the forefront in Reno.

According to the City of Reno's 2015-2019 Consolidated Plan, incomes in the region increased by 17 percent from 2000 to 2014, but once adjusted for inflation incomes only increased by half of the rate needed to keep pace with inflation. Real incomes in the region are lower today than they were 15 years ago.

Housing is relatively affordable in Reno today, but rising housing prices in the region are starting to impact affordability. As well, Reno has specific demographic groups that are more burdened than others. The median household income in Washoe County, according to HUD, in 2015 is $63,500 (for a household of four persons). A household earning the median income in the County can afford a home priced at $235,000 (assuming 30 percent of income is spent on housing). The average home price in Reno is just over $300,000 currently and the median home price in Reno was $265,000 during the 3rd quarter of 2015 according to the Reno-Sparks Association of Realtors. The median sale price in Reno was just $225,000 one year ago. The growing cost of for-sale homes is making ownership less attainable in Reno. The average worker in Reno earns $43,000 annually (in 2013). At this wage, a person or household would need 1.7 jobs to afford to buy a home at the median home price. The average wage for workers in the accommodations and retail industries, two of the largest in Reno, requires three jobs to afford a home.

The average rental rate in the City is not experiencing the same rate of change as home prices but may be increasing in the future. The average apartment rental rate in the City is $860 per month, which is approximately the same rate found in 2006. However, apartment vacancy rates in Reno were 3.3 percent at the end of 2014, indicating a growing demand for rental units and will likely result in an increase in rental rates. Apartment vacancy rates between five and seven percent indicate market equilibrium and rates below this indicate unmet demand. The average worker in the accommodations and retail industries cannot afford the median rental rate in Reno.

The most common housing problem in Reno is cost burden (defined as spending 30 percent or more of income on housing). Based on HUD estimates, 10,500 renters in Reno are severely cost burdened (defined as spending 50 percent or more of income on housing) and 4,500 homeowners are severely cost burdened. Many of these homeowners are seniors who struggle with the cost of maintaining their home despite not having a mortgage. The majority of the renters who are cost burdened are single person households or households with unrelated roommates. The City of Reno has traditionally had a large transient community, which results in greater housing needs for low income housing and homelessness services. A 2015 count of persons who are homelessness in Reno found that 3,179 individuals live in motels, and 1,098 of these people were living in longer term hotel leases (weekly or monthly rental units). The City estimates that between 3,000 and 9,000 residents are at risk for homelessness. The housing needs analysis completed for the Consolidated Plan indicated the City has a significant lack of housing units affordable to renters earning less than 40 percent of Area Median Income (approximately less than $30,000 annually). The housing needs assessment also indicated that affordable housing for seniors is a significant issue for Reno.

What is Affordable Housing?

The most common method for determing housing affordability is that used by the US Department of Housing and Urban Development (HUD). By their measure, households should not spend more than 30 percent of their income on housing. Those that do are considered to be cost burdened, while households spending greater than 50 percent of their income on housing are considered to be severely cost burdened. This definition of affordable housing applies to all households regardless of their income.

The term "area median income" (AMI) is commonly used in discussions about affordable housing, specifically in determining income limits for households of various sizes to qualify for certain housing programs, such as HUD's Section 8, or income-restricted housing units. HUD calculates AMIs for all counties and metropolitan areas in the United States, and uses it to determine income limits for different income categories. The AMI for the Reno-Sparks MSA was $63,500 in FY 2015. The table below shows the income limits calculated by HUD for a 1-person and 4-person household in the metropolitan area.

HUD Income Limits: 2015

Income Limit Category	1-person HH	4-person HH
Extremely Low (30% AMI)	$13,350	$24,250
Very Low (50% AMI)	$22,250	$31,750
Low (80% AMI)	$35,600	$50,800

Source: HUD

In addition, it is not uncommon to see affordable housing programs target households with even higher incomes. For instance, the Reno Housing Authority offers units to households earning up to 120 percent of AMI ($53,350 for a 1-person family; $76,200 for a 4-person family).

Residential building permits. City of Reno building permit data indicates that housing development in the City is rebounding. While the number of units permitted annually is still far below pre-recession levels (which averaged 2,000 to 2,500 units per year), it has been increasing from a low of 341 permits in 2011, to 1,555 permits in 2014. Since 2011, permits issued for multifamily projects have accounted for 35 percent of permitted units, which is greater than the share between 2000 and 2010 of 26 percent.

Vacant residential land. According to initial analysis by TMRPA[2], Reno has approximately 20,541 vacant acres of residential land, which accounts for half of all vacant residential land in the Truckee Meadows Service Area (TMSA). Of this vacant residential land, 82 percent is designated for single-family development in the current Reno Master Plan, while 16 percent is designated for mixed-use development with some residential component. The remaining two percent of vacant buildable lands are designated for multi-family housing. Assuming similar average densities for each development type, this vacant land has the potential to accommodate approximately 130,000 additional housing units.

What Does It Mean?

Recovering housing market. While the housing market was hit hard during the Great Recession, recent trends suggest Reno is recovering. The average home price in Reno has increased 20 percent in the past two years and the number of annual home sales has remained consistent over the past five years. Building permit data for Reno also suggests a strengthening housing and real estate market. In 2011, the City issued just 341 new building permits, while in 2014 this number rose to 1,555 permits. Between 2010 and 2013, employment in the construction industry (another indicator of housing market health) rose at an average annual rate of 5.2 percent, the fastest rate of growth across all industries in the City during this period.

Location of residential land in Reno. Most approved residential developments and vacant residential land is currently located at the edges of the City (and the Truckee Meadows Service Area more generally). The North Valleys (Cold Springs and Stead), Mogul, Verdi, and South Reno are all areas where there are large amounts of approved residential projects or where vacant residential land is available in Reno. While most of the approved PUDs have the necessary services to begin construction, this is not the case for all. In addition, much of the vacant residential lands are not currently serviced with water by TMWA. At this time, the cost of extending services to these areas is not known, but since this cost must be borne by developers, these areas are not likely to be developed in the near future should the cost of extending services prove too high.

Development-ready. While Reno has a large supply of vacant residential land, not all of it is currently reached by urban services and infrastructure, or is easy to serve in the future. While it may appear that Reno has an adequate supply of vacant land to accommodate new residential and industrial growth, it is still not clear where these infrastructure constraints exist across the City, and what impact they might have on Reno's future development capacity. On a similar point, the timing of new development is another factor that could impact Reno's ability to accommodate future growth. After a tumultuous decade, it is not entirely clear what approved, but unbuilt, developments are in a position to move ahead in the development process. Ultimately, approved units might not all come on-line in time to meet short-term demands for housing.

2. TMRPA is currently in the process of conducting a detailed residential lands inventory for the Truckee Meadows. This information will be updated to reflect their findings as such data becomes available.

Single-family housing. Much of the vacant residential land that is available in Reno is designated for single-family housing development. While this housing type has long been the predominant option available in Reno other options may need to be encouraged in the future to better meet the needs of residents. For example, as the number of older residents living in Reno increases, there may be stronger demand for apartments or condos, which tend to be less expensive and easier for older adults to live in than traditional single-family homes. Alternative housing types may be desirable from a services perspective, as attached housing types tend to be mores cost effective to serve than low-density single-family ones. Sustainability considerations may also require a shift to more dense housing options, which generally use less water and energy than single-family homes, and tend to be more cost effective to service with public transit.

Housing Affordability. The affordability of housing in Reno will be greatly impacted by the future economic vitality of the region. The housing market is rebounding from the Great Recession and has already begun to impact the affordability of home ownership for residents. Many of the workers in some of the City's largest industries (i.e. retail, tourism, and gaming) currently earn wages too low to afford the rising home prices in Reno. Rental rates are currently affordable to most residents except those earning less than 40 percent of the Area Median Income. However, as employment in the region grows and home prices continue to increase there will be a growing demand and resultant increase in rental rates, which could further exacerbate housing cost burdens on residents, especially if wages and incomes continue to decline in real terms. The City also has and will likely continue to have issues addressing the homeless and transient populations and could consider prioritizing resources to aid these populations.

Moving Forward

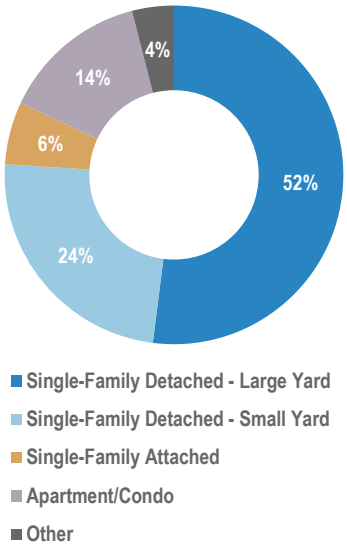
Exploring residents' preferences. As ReImagine Reno enters Phase II, it will be important to continue to explore and understand residents' preferences for different types of housing and neighborhoods. The results from Phase I of the ReImagine Reno public participation indicated that many residents would like to continue to live in single-family homes in the future, but would also like to live in more walkable neighborhoods. Understanding some of the reasons behind this preference, as well as exploring the trade-offs associated with different development patterns in the City will be important to help guide future land use decisions. In addition, it may be necessary to encourage more diverse housing types in the City to address the future needs of residents, such as for additional affordable housing or senior housing. Also, while a significant portion of residents may desire to live in a single family home, not all household earn incomes high enough to be able to afford to buy one. Engaging residents in these discussions will help to build a clearer picture of the types of residential development residents desire to see in Reno in the future.

Understanding implications of location. The Truckee Meadows Regional Plan envisions much of the region's future development occurring in designated Centers and TOD Corridors. However, the volume of units already approved in lands outside of these Centers and Corridors suggests that, at least in the foreseeable future, the majority of growth will occur in the outskirts of the City. Understanding the impacts of the location of new development on City and regional services and infrastructure will be an important step in the ReImagine Reno process, and will help to inform

National Housing Preferences

Since 2011, the National Association of Realtors has released three studies measuring national preferences for certain types of housing and neighborhoods using nationally-representative surveys. According to the NAR's 2013 report, over 76 percent of respondents saying they would prefer to live in a single-family detached home, down slightly from 2011 when 80 percent said they would prefer this type of home.

NAR Housing Type Preferences: 2013



Source: NAR; EPS

These findings are similar to the housing preferences of Reno's residents, as expressed in the Community Survey conducted as part of the public input process of Phase I. Overall, 63 percent of respondents said they would like to live in a single-family home 10 years from now, while an additional 15 percent said they would like to live in ranch or large-lot home.

Please see the Master Plan Economic, Demographic and Market Framework Memorandum included in Appendix B for further discussion of the NAR preference surveys and national housing preference trends.

National Community/ Neighborhood Preferences

The National Association of Realtors' Community Preference Survey also asked respondents their preferences for certain types of neighborhoods. Specifically, they were asked to choose between:

- **A Walkable Community:** "There is a mix of single-family detached houses, townhouses, apartments and condominiums. Places such as shopping, restaurants, a library, and a school are within a few blocks of your home and you can either walk or drive. Parking is limited when you decide to drive to local stores, restaurants, and other places. Public transportation, such as bus, subway, light rail, or commuter rail, is nearby."
- **A Conventional Suburb:** "There are only single-family houses. Places such as shopping, restaurants, a library, and a school are within a few miles of your home and you have to drive to most. There is enough parking when you drive to local stores, restaurants and other places. Public transportation, such as a bus, subway, light rail, or commuter rail, is distant or unavailable."

In 2015, 45 percent of respondents preferred the walkable community option, compared to 48 percent preferring conventional suburbs. It should be noted that among millennials (born after 1981), 51 percent preferred the walkable community compared to 43 percent who preferred a conventional suburb.

Please see Appendix B for a more in depth discussion of this topic.

future discussions about the fiscal costs and benefits to the City of greenfield or infill development. In addition, the ReImagine Reno process could also facilitate discussions with the community regarding desired development patterns and their trade-offs. For example, during the public outreach conducted during Phase I, residents expressed a desire to live in more walkable neighborhoods with better access to services and amenities, such as a shopping street. RTC also found that residents of the Truckee Meadows felt increasing access to public transit was the top transportation goal for the region. However, these types of built environments and services are not typically well-supported by traditional single-family suburban developments.

Incorporating other efforts. Currently, the Truckee Meadows Regional Planning Agency (TMRPA) is in the process of completing a housing study for the region, in coordination with the Washoe County School District (WCSD). The study will examine the capacity of vacant residential lands compared to the region's future housing needs using a series of growth scenarios. The study will also look at impacts of these scenarios on regional service providers, such as Truckee Meadows Water Authority (TMWA), RTC, and WCSD. This work has direct relevance to the ReImagine Reno process, and close coordination with TMRPA on this topic is expected moving forward.

Identifying development constraints. The readiness and serviceability of sites for residential development in Reno will have a tremendous impact on the City's overall capacity to accommodate growth, over both the short- and long-term. Moving forward, it will be important to understand where sites, especially those already approved for development, currently lack the needed infrastructure and services to develop, and how much of a burden this places on developers. In some instances, it may be in the City's best interest to provide the needed infrastructure or services to encourage development in a particular area or to allow for the provision of more affordable housing units, for example. During Phase II, the ReImagine Reno process could begin to explore the potential costs and trade-offs for providing services to different areas within the City, community support for these decisions, and the impact such decisions will have on the City's overall capacity to accommodate future growth.

Related Plans and Studies

- City of Reno Master Plan (City of Reno)
- Truckee Meadows Regional Plan (TMRPA, 2012)
- EPIC Report (EDAWN, 2015)
- TMRPA Housing Study (TMRPA, forthcoming)

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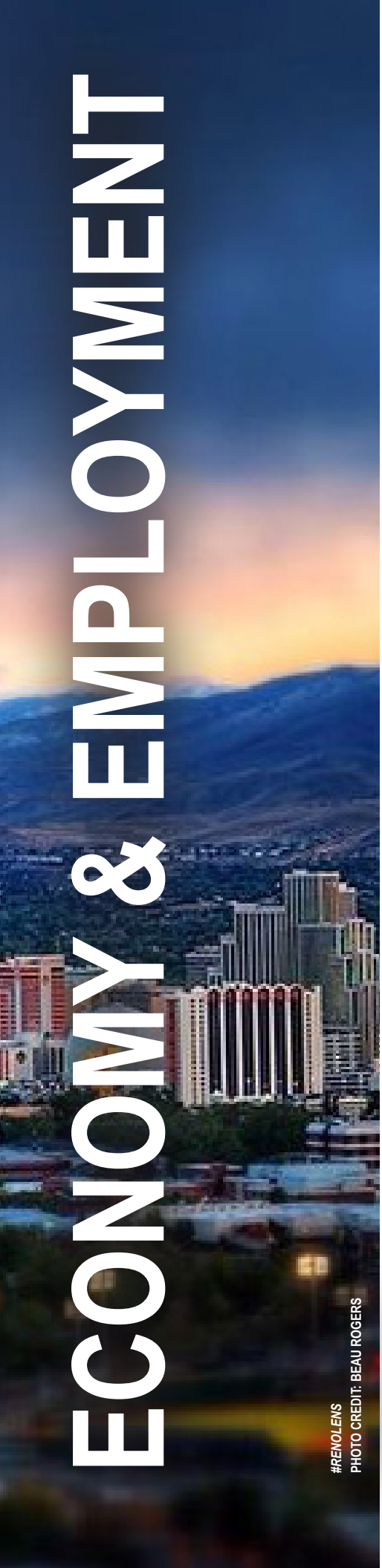
PHOTO CREDIT: MIKE VOLLMER



Economy and Employment

Where We Are Today

Reno Employment Growth by Industry: 2005-2013

Industry	2005 Employment	2010 Employment	2013 Employment	2005-10 Ann. % Change	2010-2013 Ann. % Change
Agriculture & Forestry	68	87	62	5.1%	-10.7%
Construction	8,295	3,567	4,156	-15.5%	5.2%
Educational, Health, & Social Services	29,468	30,658	33,600	0.8%	3.1%
Entertainment, Accommodation, & Food Services	26,701	25,321	25,423	-1.1%	0.1%
Finance, Insurance, & Real Estate	7,741	7,375	7,190	-1.0%	-0.8%
Government	6,724	7,239	6,943	1.5%	-1.4%
Information	2,249	2,164	1,662	-0.8%	-8.4%
Management & Administrative Services	9,991	10,913	12,600	1.8%	4.9%
Manufacturing	7,707	7,189	7,651	-1.4%	2.1%
Mining	88	167	106	13.7%	-14.4%
Other Services	2,697	3,648	3,587	6.2%	-0.6%
Professional Services	6,218	7,275	7,601	3.2%	1.5%
Retail Trade	14,781	15,759	15,522	1.3%	-0.5%
Transportation & Utilities	5,596	6,211	6,968	2.1%	3.9%
Wholesale Trade	4,408	5,022	4,387	2.6%	-4.4%
TOTAL	**132,898**	**132,642**	**137,543**	**0.0%**	**1.2%**

Source: Nevada DETR; Economic & Planning Systems

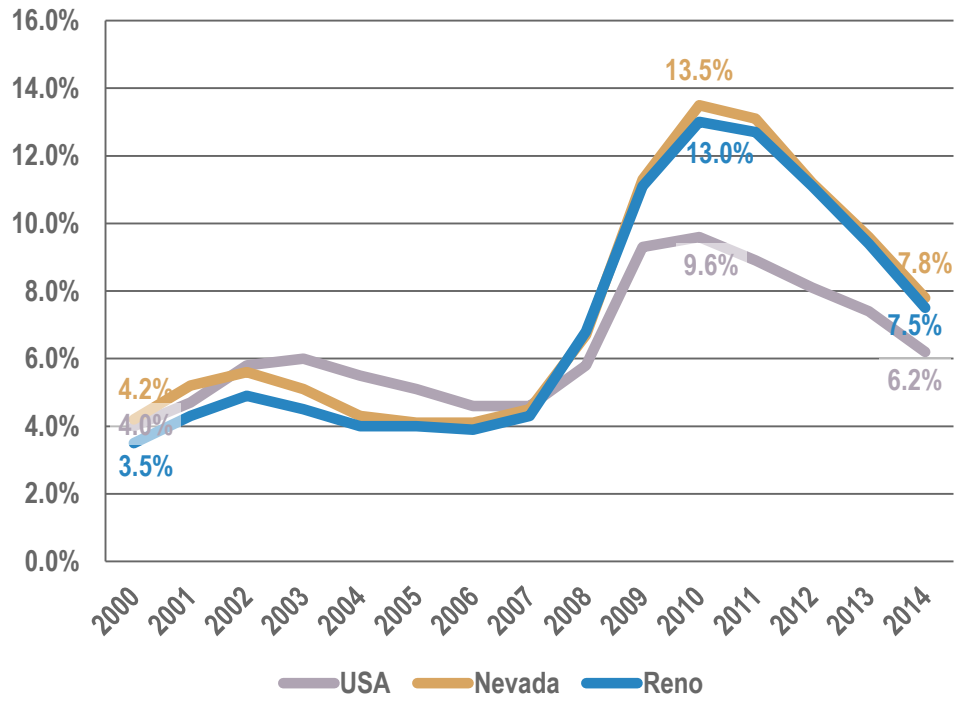
Service-oriented economy. According to the Nevada Department of Employment, Training, & Rehabilitation (DETR), the largest industry by employment in Reno was the educational, health, & social services industry, which employed 33,600 people in 2013, nearly a quarter (24 percent) of the City's workforce. The next largest industries were the entertainment, accommodation, and food service industry and the retail trade industry, accounting for 18 percent and 11 percent of the City's workforce, respectively.

Public employers and casinos. Reno's 2014 Comprehensive Annual Financial Report (or CAFR) lists the Washoe County School District as the largest employer in the City, with approximately 8,750 employees, or 4.19 percent of the City's total workforce. The University of Nevada-Reno was the second largest employer, followed by Renown Regional Medical Center, Washoe County, and Peppermill Hotel Casino-Resort. Overall, employers in the gaming industry had a strong representation among

Reno's largest employers. Silver Legacy, Atlantis, El Dorado, and International Game Technology (or IGT, a gaming related company) were all in the top 11 largest employers in Reno in 2014.

Changes in employment. While both Reno and Washoe County were hit hard by the impacts of the Great Recession, total employment in Reno in 2013 (137,543) was above what it was in 2005 (132,642), according to statistics from DETR. This was not the case for Washoe County, which in 2013 had 22,827 fewer jobs in 2013 than it did in 2005. Overall, employment in Reno has increased as a share of Washoe County's total employment from 63 percent in 2005 to 73 percent in 2013. However, the share of the state's workforce that is employed in Washoe County has decreased since 2005. In 2013, 16.2 percent of all jobs in Nevada were located in the County, compared to 17.4 percent of jobs in 2005.

Average Monthly Unemployment Rate: 2000 - 2014



Source: US Bureau of Labor Statistics

Dropping unemployment. Despite recent job growth, unemployment in Reno is still higher than it was before the Great Recession. Data from DETR show that the average monthly unemployment rate in Reno during 2005 was 3.9 percent, compared to 7.5 percent in 2014. However, this is considerably lower than the unemployment rate in 2010, which had an average monthly rate of 12.7 percent. Since 2010, the average monthly unemployment rate in Reno has fallen consistently.

Gains in education, health & social service industry. Between 2005 and 2013, the educational, health & social services industry grew the most of any industry in the City, adding 4,132 jobs. Over the same period, the management & administrative services, professional services, and the transportation & utilities industries saw increases in employment of 2,609, 1,383, and 1,372 workers, respectively.

Decline in construction and tourism industries. Over the same period of 2005 to 2013, Reno's construction; entertainment, accommodation & food services; information; and finance, insurance & real estate industries all experienced job losses.

Employment

Reno

Unemployment Rate (2014) 7.5% ▼

Top 5 Industries
- Educational, Health, & Social Svcs. ▲
- Entertainment, Accommodation, & Food Svcs. ▼
- Retail Trade ▲
- Managment & Admin. Services ▲
- Manufacturing ▼

Washoe County

Unemployment Rate (2014) 7.8% ▼

Top 5 Industries
- Entertainment, Accommodation, & Food Svcs. ▼
- Government ▲
- Educational, Health & Social Svcs. ▲
- Retail Trade ▼
- Management & Admin. Services ▲

USA

Unemployment Rate (2014) 6.2% ▼

Top 5 Industries
- Educational, Health, & Social Svcs. ▲
- Retail Trade ▲
- Manufacturing ▼
- Entertainment, Accommodation, & Food Svcs. ▲
- Finance, Insurance, & Real Estate ▼

Source: US Census Bureau
Year: 2013 (unless other year given)
▲Increase since 2005 ▼ Decrease since 2005

Income

Reno

HH Income <$25k 29% ▼
$48,740 ▼ Median HH Income
HH Income +$100k 21% ▲

Washoe County

HH Income <$25k 25% ▲
$53,588 ▼ Median HH Income
HH Income +$100k 23% ▲

USA

HH Income <$25k 23% ▼
$53,046 ▲ Median HH Income
HH Income +$100k 22% ▲

Source: US Census Bureau
Year: 2013
▲Increase since 2000 ▼ Decrease since 2000

Sources:
- US Census Bureau
- US Bureau of Labor Statistics
- Economic & Planning Systems
- Nevada DETR
- City of Reno
- TMRPA
- EDAWN
- Nevada Gaming Control Board

Reno's Largest Employers: 2014

Employer	Approx. Employees
Washoe County School District	8,250
University of Nevada-Reno	4,250
Renown Regional Medical Center	2,750
Washoe County	2,250
Peppermill Hotel Casino-Resort	2,250
International Game Technology (IGT)	2,250
Integrity Staffing Solutions	1,750
Silver Legacy Hotel Casino	1,750
Atlantis Hotel Casino	1,750
El Dorado Hotel & Casino	1,750
City of Reno	1,250

Source: City of Reno

Location Quotient

A location quotient (or LQ) is commonly used in economic development to measure concentrations of jobs in certain industries in a location compared to a larger geography, such as a state or country. Generally, LQs greater than one indicate a concentration of a particular industry.

Comparing Reno to Nevada, manufacturing, educational, health, and social service, and professional service jobs all had LQs greater than 1 indicating that there is a greater concentration of employment in these industries in Reno than in the State of Nevada as a whole. In addition, these industries have all seen gains in employment over recent years, suggesting the City is becoming a hub for these industries in Nevada.

However, the construction and the entertainment, accommodation & food services industries have grown in recent years, seeing employment growth between 2010 and 2013.

Employment Forecasts. As with population estimates, forecasts for future employment growth for Reno vary in their outlook for growth. The 2014 Consensus Forecast released by the TMRPA (which contains estimates for Washoe County only) predicts that employment in Washoe County will grow by 84,000 jobs between 2014 and 2034, an annual rate of growth of 1.4 percent. On the other hand, Scenario B of the EPIC Report forecast predicts that employment in Washoe County will increase by 35,000 jobs by 2019, and annual rate of growth of 3.2 percent (Reno alone would see 24,600 new jobs according to the Report). If the employment growth estimated by Scenario B of the EPIC Report comes to fruition, then the demand for housing will likely out pace forecasts for population and housing growth, leading to significant implications for the infrastructure and services provided by the City.

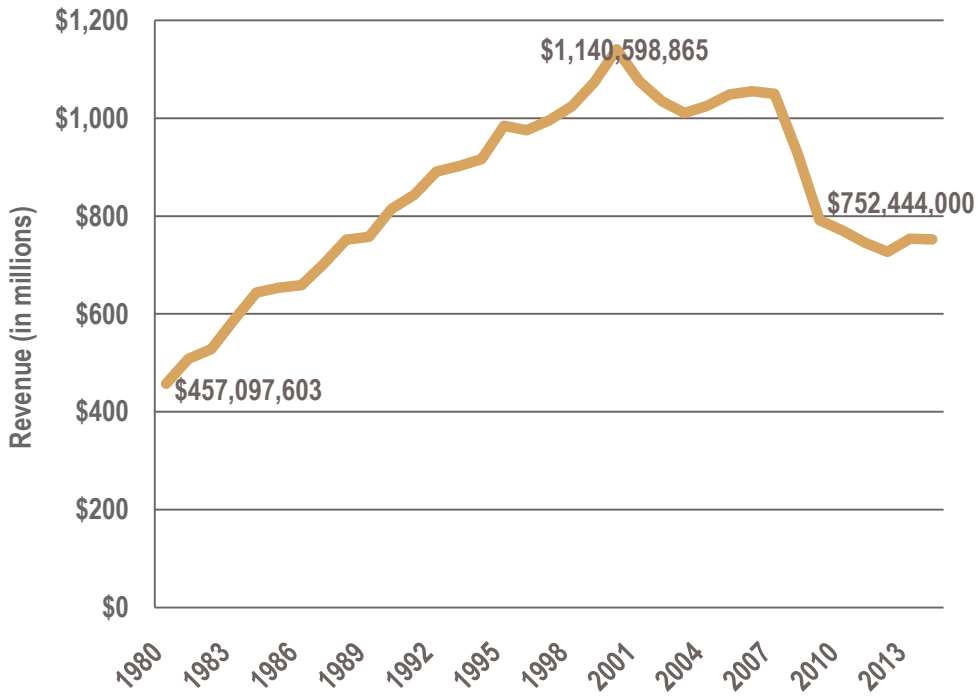
Growth by industry. Between 2012 and 2022, DETR predicts that the Reno-Sparks MSA will see the greatest overall employment growth in education and health services; trade, transportation, and utilities, and professional and business services. One notable trend is the growth in the construction industry, which is projected to grow at a rate of 3.4 percent, the most of any industry in the Reno metropolitan area. A detailed breakdown of industry projections indicate the fastest growth will occur among jobs in the information, manufacturing, and construction industries, such as data processing, manufacturing of magnetic and optical media, residential building construction, and building equipment contractors.

Target industries. Economic development activities in Reno and the greater Truckee Meadows region are the responsibilities of the Economic Development Authority of Northern Nevada (EDAWN). EDAWN's 2015 Strategic Plan identified advanced manufacturing; technology and data centers; logistics and e-commerce; back office and business support services; aerospace and defense as areas in which it will continue to try to attract new businesses in the future. Already EDAWN and the state have had success in persuading notable companies like Tesla, Apple, and Switch to relocate to the Reno area, although the majority of these new jobs are located outside of Washoe County.

Declining real wages and incomes. While the US Census indicates that Reno's median household income has increased in nominal terms from $40,530 in 2000, the median income has actually decreased adjusting for inflation. In 2013 dollars, a median income of $40,530 in 2000 is equivalent to approximately $56,673, much higher than the median income recorded for 2013 of $45,663. The annual average wage in Reno during 2013 was $46,299. Average wages in the City have grown since 2005, increasing at an annual rate of 1.6 percent.

Need to diversify economic opportunities for residents. The average wages for workers employed in two of the City of Reno's major industries (i.e. retail and hospitality/ entertainment) are significantly lower than the city-wide average. The average wage for a retail worker is $32,033, while the average for a worker in the accommodations and entertainment industry is $25,486. However, the fastest growing industries (education/ heath care, management and administrative services, professional services, and transportation and utilities) over the past 5 to 10 years have wages that are equal to

Washoe County Annual Gaming Revenues: 1980 - 2014



Source: Nevada Gaming Control Board

or greater than the City average. The continued diversification of the City's economy will be essential to addressing the affordability of the region and decreasing the City's reliance on low-paying tourism and gaming industries.

Declining gaming revenue. Annual revenue from casinos and gaming has declined in Washoe County since its peak in 2000, according to data from the Nevada Gaming Control Board. Since 2000, total annual revenue from gaming has decreased by approximately $388 million, or 34 percent, to 2014. In all, gaming revenue in Washoe County is very small compared to Clark County. To illustrate, in 2014 casinos in Washoe County generated $752,444,000 in gaming revenues, compared to the $9,554,002,000 generated by casinos in Clark County.

Accommodating expected non-residential growth. In a 2013 analysis of industrial lands in the region (currently being updated), TMRPA found that there was a sufficient amount of industrial lands to accommodate expected growth over the next 20 years. In all, there were approximately 2,800 acres of buildable vacant industrial land within the TMSA. However, the report notes that while there was an adequate supply of smaller sites (less than 10 acres), there was a shortage of larger industrial sites within the Truckee Meadows. The fiscal impact analysis completed for Phase I of the Master Plan update found that primary employment uses (both office and industrial) generate a net fiscal positive benefit to the City. These uses provide increased revenue streams for the City, as compared to residential uses, due to business license fees and have limited impacts on services provided by the City.

Location of vacant non-residential land in Reno. Vacant industrial lands, as identified by TMRPA, are located near major transportation infrastructure, such as highways and airports. Specifically, there are clusters of vacant industrial lands at the Reno-Tahoe and Reno-Stead Airports, as well as along US 395. Additional vacant industrial lands are located in the South Reno area. In all, the North Valleys had the

Tourism in Reno

Tourism is an important part of Reno's economy. Mirroring the trends seen in gaming revenues, visitor volumes to Washoe County have been declining since 2002, increasing only over the past two years. In 2014, there were 4,698,419 visitors to Washoe County, according to data from UNLV's Center for Economic and Business Research.

Tourism promotion for the region are the responsibility of the Reno-Sparks Convention and Visitors Authority (RSCVA), which also owns and operates several facilities in the region including the Reno-Sparks Convention Center and the iconic National Bowling Stadium. Currently, RSVCA promotes the Reno under the brand "Reno Tahoe USA," advertising the region's natural setting and wealth of activities and events throughout all seasons.

In 2015, RSCVA released its latest Visitor Profile Survey, adding to data collected in similar surveys during 2011 and 2013. Among other findings the report notes that:

- The 35-49 age group makes up the largest share of visitors, and is the only age cohort to have grown since 2011.
- The majority of visitors are from Western states, making up 53 percent of visitors during the 2nd quarter of 2015. Many of these visitors come from California.
- Visitors reporting participating in gaming has dropped since 2011. In all, just 38 percent of visitors participated in gaming in 2015. By contrast, 56 percent of respondents reported participating in recreation.
- Gaming remains the biggest spending category, with visitors reporting spending $180 per person per day.

Changing Gaming Industry

The landscape of the gaming industry is changing, both nationally and in Reno. While Reno was once one of just a handful of places where gambling was permitted in the United States, gamblers and tourists now have a growing number of options as more states ease restrictions on gaming and casinos. According to UNLV, commercial casino gaming revenues were up 2.45 percent nationally in 2014 but down 1.22 percent in Nevada. Casinos are also rapidly diversifying their revenue streams. According to the Nevada Gaming Control Board, revenues from non-gaming activities became larger than revenues from gaming in 1999 on the Las Vegas Strip and have increased every year since. At the same time, gaming revenues have decreased. Casinos are diversifying the attractions at their resorts to appeal to a wide range of visitors and relying less on gaming as a main draw. While this is certainly the case for many Las Vegas casinos, this trend is also evident in Reno, as the larger casinos located outside of downtown are performing better than the older downtown casinos due in part to their ability to provide alternatives for visitors, including enhanced entertainment and leisure options.

Changes in Gaming Revenue from Previous Year

State	2014	2015
Colorado	-0.38%	7.07%
Florida	8.53%	5.40%
Maryland	24.66%	20.95%
Nevada	-1.22%	-0.02%
New Jersey	-4.20%	-8.31%
Ohio	36.14%	14.11%
NATIONAL	2.45%	0.18%

Source: UNLV Center for Gaming Research

Reno Commuting Patterns: 2002 and 2012

Live in Reno, Work In:	2002	2012	Change 2002-2012	% of 2012 Total
Reno, NV	71,166	65,648	-5,518	71%
Sparks, NV	16,017	11,772	-4,245	13%
Carson City, NV	2,013	2,284	271	2%
Paradise CDP, NV	918	1,095	177	1%
Las Vegas, NV	693	633	-60	1%
Truckee, CA	544	512	-32	1%
Incline Village CDP, NV	612	492	-120	1%
Henderson, NV	15	387	372	0%
Spanish Springs CDP, NV	221	294	73	0%
North Las Vegas, NV	223	281	58	0%
All other locations	7,293	9,674	2,381	10%
TOTAL	**99,715**	**93,072**	**-6,643**	**100%**

Work in Reno, Live in:	2002	2012	Change 2002-2012	% of 2012 Total
Reno, NV	71,666	65,648	-5,518	48%
Sparks, NV	23,592	23,801	209	17%
Sun Valley CDP, NV	6,421	4,576	-1,845	3%
Spanish Springs CDP, NV	3,343	4,187	844	3%
Carson City, NV	3,628	3,602	-26	3%
Cold Springs CDP, NV	1,692	2,337	645	2%
Fernley, NV	1,150	1,870	720	1%
Lemmon Valley CDP, NV	1,875	1,414	-461	1%
Las Vegas, NV	326	934	608	1%
Washoe Valley CDP, NV	457	757	300	1%
All other locations	21,585	28,774	7,189	21%
TOTAL	**135,235**	**137,900**	**2,665**	**100%**

Source: US Census Bureau; Economic and Planning Systems

most vacant industrial land in Reno, with 2,265 acres, followed by 391 acres in the South Meadows. Most large industrial sites in the Truckee Meadows are located near the Reno-Stead Airport, however the lack of existing infrastructure and traffic on access roads is a barrier to attracting employment-oriented development to the area.

Commuting patterns. In 2012, nearly 70 percent of employed residents of Reno also

worked in Reno. Sparks (12.6 percent), Carson City (2.5 percent), and Paradise CDP[1] (1.2 percent) were the most common commuting destinations for Reno residents. The remaining commuted to other destinations. On the other hand, less than half of the workers employed in Reno lived in Reno in 2012 (47.6 percent). However, most came from communities in the region: 17.3 percent commuted from Sparks, 3.3 percent from Sun Valley, 3 percent from Spanish Springs, and 2.6 percent from Carson City.

What Does It Mean?

Economic recovery. The City of Reno still appears to be recovering from the economic impacts of the Great Recession. Unemployment is still higher than it was in 2005, and job growth has slowed considerably, from annual rates of growth of 2.6 percent between 2000 and 2010, to 0.8 percent between 2010 and 2015. However, job growth is rebounding, and recent events in the region (such as Tesla's announcement to open a factory in the Tahoe-Reno Industrial Center (TRI Center)) point towards continued economic growth.

Residents less well off. Despite nominal increases in median incomes, incomes and wages have stagnated in real-terms. This means that since 2000, the prices of common goods and services (i.e. those used to calculate the consumer price index—a common measure of inflation in the Untied States) have increased at a faster rate than residents' incomes, eroding their purchasing power. As a result, Reno's residents are likely to feel less well off today than they did in 2000. In addition, a higher percentage of residents fell below the poverty level in 2013 compared to 2010 and 2000.

Industrial development. While TMRPA's recent analysis of industrial land supply in the Truckee Meadows indicated that Reno has a sufficient supply of land to meet future needs, the report notes that it is important to consider the differing needs of potential users. In general, manufacturing firms are looking for sites in the range of five to 10 acres, while distribution, logistic, and e-commerce firms are looking for larger sites, ranging from 20 acres to 100 acres. Depending on Reno's desired economic development goals, the City might need to find additional opportunities for larger-site industrial development. One way this could occur is through extending services and infrastructure to certain industrial areas—TMRPA notes in their report that providing necessary infrastructure and services to the Reno-Stead Airport would greatly increase the amount of large development-ready sites in the region.

Location of economic growth. Many of the large employers moving to the region are likely to locate in the Tahoe-Reno Industrial Center (TRI Center), located in nearby Storey County. The sizable job growth at the TRI Center will generate demand for additional workforce housing and potentially create new commuting patterns in the region (for instance, as recently as 2012, fewer than one percent of Reno's employed residents worked in Storey County). While employment growth is likely to occur in Storey County, Reno will likely need to address the indirect impacts of this employment growth, including increased demands for housing, services (such as schools), and transportation routes/capacity without any of the direct economic benefits or tax revenues generated by these businesses.

Service sector workforce. Most of the jobs available in Reno are in service-oriented industries. Recent job announcements, such as from Tesla, raise questions about how prepared Reno's workforce will be to fill the jobs new employers will create in

Industrial Land Suitability

As noted in this section, the Truckee Meadows Regional Planning Agency undertook an inventory and analysis of the industrial lands in the region in 2013. Their findings showed that while the region has a fair amount of vacant land for industrial development, much of this land would need investments in infrastructure or mitigation of other constraints before it could be considered development ready. In the analysis, TMRPA categorized vacant industrial parcels into the following categories:

- **Tier 1:** well-served by industrial-scale infrastructure and not affected by moderate constraints
- **Tier 2:** served to a lesser degree by industrial-scale infrastructure and/or may be affected by moderate constraints
- **Tier 3:** not well-served by industrial-scale infrastructure and/or affected by moderate constraints

The table below illustrates the breakdown of the region's industrial lands into these three categories.

Vacant Industrial Land by Suitability Category

Category	Acres	% of Total
Tier 1	216	8%
Tier 2	196	7%
Tier 3	2,415	85%
TOTAL	**2,827**	**100%**

Source: UNLV Center for Gaming Research

These calculations do not include the lands owned by the Reno-Tahoe Airport Authority, as these lands are only available for long-term lease. However, the lands surrounding the Reno-Stead Airport are currently not well serviced with infrastructure, and would also require investments before being considered development-ready.

1. CDP: Census designated place

Downtown

Throughout Phase I, the revitalization of downtown has been identified as a priority of both the City and the community. As such, downtown should be an important area on which to focus during Phase II of ReImagine Reno. In order to better inform potential actions or strategies for downtown the following issues and questions will need to be explored further:

- What can the City of Reno do to help spur development activity in the downtown area?
- What are realistic expectations for development activity downtown?
- How can the City of Reno and the University of Nevada-Reno develop a joint venture and collaborative strategy for creating an active University District that links the core campus to downtown?
- How does the City encourage and regulate the adaptive reuse of buildings downtown?
- How can the gaming and casino industry fit within the future vision of downtown?

For further discussion of these issues and questions, please see the Master Plan Economic, Demographic, and Market Framework memorandum included in Appendix B of this report.

the region. For instance, many service sector jobs do not require an extensive or specialized set of skills, unlike those in the technology and manufacturing industries targeted by EDAWN and other recent regional economic development efforts. A lack of a qualified workforce could mean that these jobs remain unfilled, workers must relocate from other regions, or companies decide to look elsewhere. Developing and transitioning the existing workforce in Reno to meet the needs of future opportunities will be a big challenge that should be reinforced within the updated Master Plan, as it is not realistic to believe that the existing workforce can adequately serve the increased demands of the desired economic base EDAWN and others hope to develop. Reno must ensure that it is an attractive place for new residents from outside the region, especially for those with jobs skills that can support existing and new businesses.

Moving Forward

New locations for growth. One component of Phase II of the ReImagine Reno process could be to evaluate the potential for supporting new locations for employment growth within the City of Reno. One such area is the Reno-Stead Airport, which represents an opportunity for attracting employers desiring large sites by providing a competitive alternative to the TRI Center. To capitalize on the opportunities possible near the Reno-Stead airport the City will need to take a more proactive approach in addressing the constraints present at this site, such as the capacity constraints of the regional roadway network connecting Reno-Stead to I-80 and the rest of the region. The trade-offs associated with such an approach could be examined in greater detail during Phase II, allowing the community to better evaluate where and how they would like to see the City support economic development going forward.

Qualified workforce. Many of the new jobs offered by employers who have recently announced their relocation to the Reno area will require skills and experience in specialized fields, attributes not all Reno workers currently have. While educational institutions like UNR and Truckee Meadows Community College have started programs to train students in fields such as technology and advanced manufacturing, there is still expected to be a shortage of qualified workers in Reno in the near-term. As a result, many employers will need to hire workers from elsewhere. Providing workforce training and adult education programs for workers in Reno, especially those currently unemployed, will need to be an essential component of the greater region's economic development strategy to ensure the expected economic boom benefits as many current City residents as possible. Meeting with local employers, especially those in EDAWN's target industries as well as educational providers, could be an important part of Phase II of the ReImagine Reno to better understand the issues and opportunities surrounding the readiness of Reno's workforce.

Develop a local economic development strategy. While the City of Reno works closely with EDAWN and the Governor's Office of Economic Development (GOED) on economic development activities, the ReImagine Reno process could serve as an opportunity to envision and explore how regional economic development policies and strategies can best be applied at the local level, supported through its Master Plan and local land use policies. In addition, through the public participation process in Phase I of ReImagine Reno, residents expressed support for visions of Reno as a base for outdoor activities, and arts and culture center, a university town and a technology center. Understanding how residents would like to see the City's economy grow and develop in the future is another important consideration that could be undertaken as

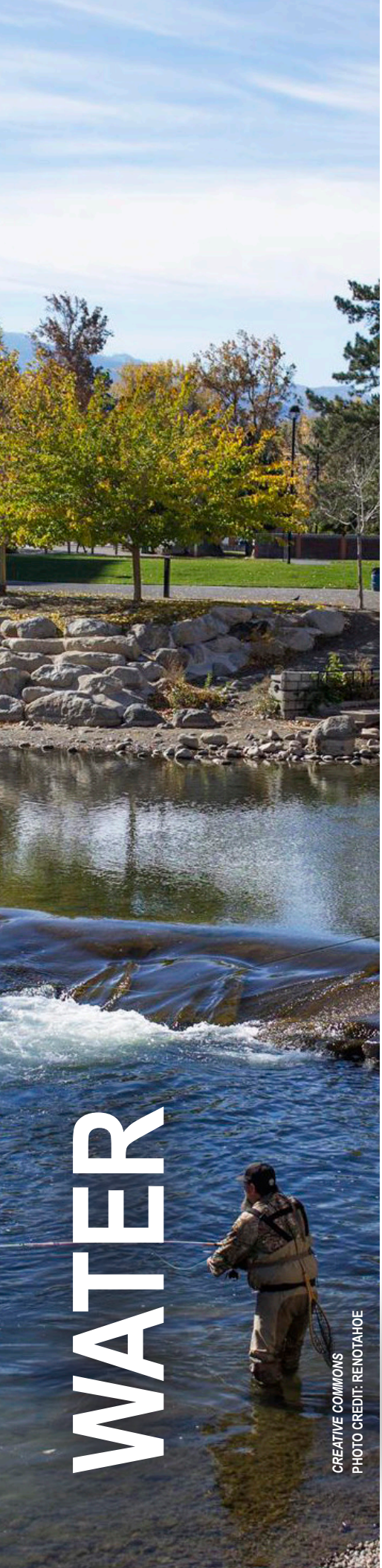
part of Phase II.

Gaming. Related to the point above is the role of gaming in Reno moving forward. While the Great Recession certainly contributed to the gaming industry's current decline in Reno, gaming revenues in the City have been falling since 2000—well before the most recent economic downturn. Despite this, gaming still plays an important role in the local economy, as casino and gaming related companies accounted for some of Reno's largest employers in 2014. While gaming is likely to continue to be a part of the City's economy moving forward, it is unlikely to be a driving force in economic growth. In addition, public outreach during Phase I of ReImagine Reno indicates that few residents include "Reno as a gaming destination" in their vision for the City. Moving forward, the ReImagine Reno process could provide the City with an opportunity to understand how gaming fits into its local economy, and the role it should play (particularly in the downtown area) moving forward.

Downtown. Reno's downtown is an area of great importance to the community, being referred to as the "heart of the City" by a participant in stakeholder interviews held in Reno in May 2015. While the area has great assets, such as the Truckee River, a performing arts center, a AAA baseball stadium and a new transit center, there seems to be a general feeling in the community that the downtown area should be a focus for the City as the ReImagine Reno process continues into Phase II. Indeed, downtown was mentioned by participants in nearly all of the focus groups held as part of the public outreach process of Phase I. The Master Plan update process provides an excellent opportunity to understand how the City can best reinforce downtown's role as the heart of the City and continue to leverage recent investments, such as the RETRAC covers between West Street and Virginia Street.

Related Plans and Studies

- City of Reno Master Plan
- Truckee Meadows Regional Plan (TMRPA, 2012)
- 2014-2034 Washoe County Consensus Forecast (TMRPA, 2014)
- EPIC Report (EDAWN, 2015)
- Truckee Meadows Regional Industrial Lands Analysis (TMRPA, 2013)



CREATIVE COMMONS
PHOTO CREDIT: RENOTAHOE

Water

Where We Are Today

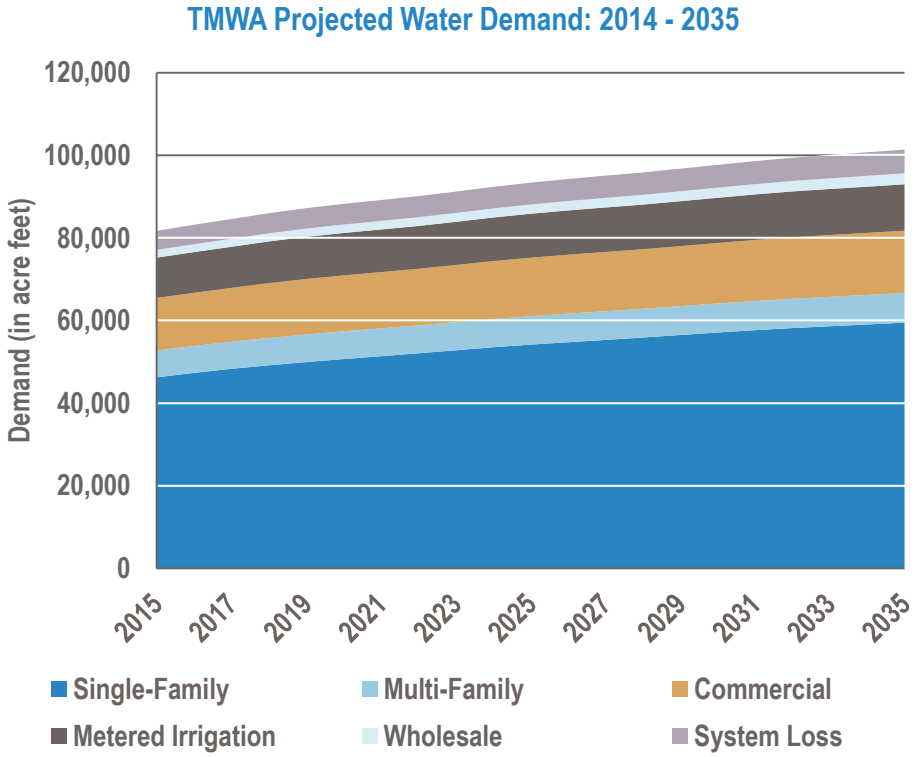
Future demand. The supply of water in the Truckee Meadows region is currently sufficient to meet existing needs of residents and businesses. As of the writing of the Comprehensive Regional Water Management Plan in 2011, there was a sufficient supply of water to meet the needs of the 2030 Consensus Forecast Population of 590,500 residents with a projected water use of 142,000 acre feet per year. While this estimate has not been updated to reflect the latest Consensus Forecast population estimates, Washoe County's expected 2034 population was revised downward (to 563,779 people by 2034), suggesting the region still has an adequate supply of water to meet future demands. In addition, TMWA's draft 2016-2035 Water Resources Plan estimates that demand within the utility's service area will increase from 81,000 acre feet in 2015 to 101,000 acre feet in 2035 and should be well within its ability to serve, especially with the implementation of the Truckee River Operating Agreement (TROA) which provides TMWA with storage supplies to meet demands of up to 119,000 acre feet of water per year.

Water resources. TMWA is the largest provider of water in the Truckee Meadows region. In all, TMWA has access to 186,000 acre feet of water resources (including decreed water rights, irrigation rights, groundwater rights and storage rights), and projects producing 77,500 acre feet from these resources in 2015. The Truckee River is the largest source of water supplied by TMWA, which it supplements with Truckee River water stored in reservoirs located in California and groundwater, as needed. In all, surface waters account for approximately 80 percent of TMWA's water resources. Most new water supplies added to TMWA's overall supply of water over the years have come from purchasing and existing Truckee River irrigation rights to municipal and industrial use.

Truckee River Operating Agreement (TROA). The TROA represents a years-long effort by the State of California, the State of Nevada, the City of Reno, the City of Sparks, Washoe County, the Pyramid Lake Paiute Tribe, and others to better manage and regulate the use of water in the Truckee River system. The conditions set for implementing the agreement were met as of August 2015, clearing the way for TROA's implementation. When complete, TROA will allow TMWA to significantly increase the amount of water it stores as drought reserves in upstream reservoirs. Of particular note for Reno and TMWA, TROA guarantees TMWA storage for 119,000 acre feet per year of water in upstream reservoirs. The recent final approvals of the TROA are expected to improve storage capacity and flexibility in how Reno and the region use this precious water resource.

Water use. The largest users of water supplied by TMWA are single-family homes, which accounted for 56 percent of all water supplied by the utility in 2015. However, projected use is not expected to increase substantially in the future, rising from 46,252 acre feet in 2015 to 59,506 acre feet by 2035. By comparison, TMWA's multi-family service accounts for a much smaller percentage of water, approximately 8 percent in 2015. Overall, the utility predicts that demand for water will begin to plateau starting in 2035.

Reliance on snow pack. The water supply of the Truckee Meadows region relies heavily on snowfall during the winter to replenish water stored in upstream lakes and



Source: TMWA

reservoirs. However, except for 2011, snow pack in the region's mountains has been below the 30-year average for 1984-2014 between 2007 and 2014. Such dry winter conditions have not been experienced in the Truckee River basin since the previous prolonged drought cycle during 1987-1994. Of particular concern, winters during the previous four years marked the driest back-to-back years on record. 2015 saw the lowest runoff from melting snow ever recorded in the Truckee River system.

Floriston Rate. Federal laws govern the required amount of Truckee River water that must flow from California to Nevada each day, as measured at the Farad gage located along the California/Nevada border. This rate, known as the Floriston Rate, must be met before water can be stored in the reservoirs located along the Truckee River. When the amount of water in Lake Tahoe and Boca Reservoir are insufficient to maintain this rate, storage water must be released from the other Truckee River reservoirs to maintain the required flow. While the Floriston Rate is typically met during wet years, it is not uncommon for the rate to not be met during droughts, although not all droughts have required the release of privately owned storage water from the reservoirs. Floriston Rates were not met during both 2014 and 2015, and required TMWA to release drought reserves stored in upstream reservoirs. While winter snow pack is typically sufficient to replenish the water stored in the Truckee River reservoirs (even during drought conditions), consecutive years of low runoff in the spring means that TMWA anticipates beginning the 2016 irrigation season (April – September) with less water in upstream reserves than it had going into the 2015 irrigation season.

Drought preparedness. Currently, TMWA's supply of water resources is sufficient to meet the needs of customers through drought conditions similar to those seen during the worst drought on record (between 1987 and 1994). Models maintained by the utility indicate that with the implementation of TROA, TMWA will be able to meet current demands under conditions twice as severe as those seen during 1987-1994 over a 9-year period. Historical records and analysis of tree-ring data in the Carson River

Truckee River Water Rights

While the implementation of TROA will greatly affect the operation of the Truckee River, it will not change the amount of water rights that are available in the region from this resource. The Orr Ditch decree, issued in 1944 and still in force today, established the total amount of water rights available from the Truckee River. In all, the total water rights for the Truckee and its tributaries is 224,000 acre feet.

In the past, the majority of these water rights were for agricultural irrigation, but over time most of these rights have been purchased and converted to municipal and industrial uses. Today, TMWA is the owner of the majority of Truckee River water rights. Approximately 46,739 acre feet of irrigations rights remain, and could be available for future acquisition by the utility. This leaves TMWA with enough water rights from the Truckee River (between 39,000 to 35,000 acre feet) to take advantage of the 119,000 acre feet guaranteed to the utility under TROA.

While there are currently enough water rights available from the Truckee River to satisfy TMWA's anticipated future demands from customers, these resources are not infinite. Developing, enhancing, and acquiring rights to other water resources in the region may be necessary to accommodate population growth beyond 2034. Also, as TMWA continues to convert irrigations rights from the river to municipal and industrial uses, less water is available to support agricultural activities in the region. Irrigation water could also come from treated effluent, although public perceptions and health regulations make this difficult.

Sources:
- TMWA
- NNWPC
- WRWC

What are PCEs?

Tetrachloroethylene (PCE) is an organic solvent used in a variety of commercial and industrial processes since the 1930s. It was regularly used in commercial dry cleaning, paint manufacturing, and auto repair. PCE is a common soil contaminant, and moves very well through groundwater and is considered to be a probable carcinogen.

In Reno, PCE contamination occurs in eight plumes located under the old US 40, Virginia Street, and Kietzke Lane. Clean up and management of the contamination is the responsibility of the Central Truckee Meadows Remediation District (CTMRD) which works to mitigate the contamination of existing groundwater wells, prevent additional contaminations, and prevent the plumes from spreading. It works closely with TMWA, as many of the contaminated wells are owned by the utility. Mitigation and treatment efforts have been successful, and have removed over 4,150 pounds of PCE from drinking water since 1996.

What are Septic Nitrates?

Septic nitrates in groundwater result from both human and natural sources. Human sources are most commonly septic tanks, whose effluent often contains high levels of nitrates. While small amounts of septic effluent are generally not enough to impair groundwater quality, high concentration of septic systems can result in serious degradation.

In a 2007 report, Washoe County determined that there were approximately 16 areas in the County with septic system densities high enough to negatively affect groundwater supplies, including in the North Valleys. While septic systems in these areas are mostly located outside of Reno's city limits or sphere of influence, impacts to water resources in this area could still affect the potential for future development within the City.

system (which is similar to the Truckee River system) indicate that drought events of this length were rare occurrences in the past, occurring at frequencies of one in 230 years. In addition, TMWA makes considerations for drought-year supplies when evaluation dedications of water to the utility through Rule 7 (see below), and has also adopted a number of water conservation initiatives, including charging a tiered-rate for water use that is designed to charge customers who use greater amounts of water more than customers who use less water, in its Water Conservation Plan. It should be noted that water saved through such conservation measures is not used to supply new growth, but is placed into TMWA's drought storage system, or released back into the Truckee Meadow's water system (usually through groundwater recharge). In December 2015, the Nevada Drought Forum released recommendations to address water resource challenges.

Water quality. Potable water provided to customers by TMWA is of very high quality. However, groundwater quality in certain areas is negatively impacted by the presence of tetrachloroethylene (also known as PCE) and septic nitrates. PCE contamination is mainly an issue in the central Truckee Meadows, affecting areas of downtown Reno, downtown Sparks, and west of the Reno-Tahoe International Airport. TMWA works closely with the Central Truckee Meadows Remediation District (or CTMRD), which is charged with monitoring water quality in impacted areas. TMWA uses wellhead treatment of water pumped from municipal wells in affected areas to ensure groundwater is safe for human consumption, and to remove PCE from groundwater supplies. TMWA also maintains a "Truckee River Fund" to support projects that protect or enhance the water quality of the Truckee River.

What Does It Mean?

Water rights and availability. Although the WRWC estimates that 183,250 acre feet per year of water are available in Washoe County, not all of this water supply is available, either because rights to the water is owned or allocated to other users besides water providers, or because the infrastructure does not yet exist to convey and pipe the water to end users. TMWA's Rule 7 requires new development to dedicate or purchase adequate water supplies. Water rights are bought and sold through open markets whose price is determined through supply and demand. Acquiring water rights can be a complex process that can require tremendous amounts of time and effort to determine proper ownership, use, and yield. Since TMWA is required to serve new customers in perpetuity, it takes great care to ensure rights provided to it through new development are sufficient to meet current and future needs, including during dry years.

Costs of water/Rule 7. TMWA's Rule 7 requires that new development or other new applicants for service receive a Will-Serve Commitment letter, either by dedicating water rights sufficient to meet the increased demand (as determined by TMWA), or by purchasing the Will-Serve Commitment at a price determined by TMWA, which will then provide the additional water demanded from its existing Will-Serve Inventory. Water rights in Reno are bought and sold through an open water rights market. This means that the price charged to developers is heavily influenced by the demand for water rights in the region. For example, TMWA's "Rule 7" price for water was approximately $5,000 per acre feet in 2005, however, due to increased development and demand for water rights in the Truckee Meadows region, the Rule 7 price increased to over $32,000 an acre foot the following year. While the slowdown in the real estate and

housing markets have reduced the demand for water—TMWA currently lists the Rule 7 price of $7,520 per acre feet—this price could rise again as development, especially those entitled during the slowdown, picks up again, increasing the demand for water rights in the region.

Impacts of climate change. Current planning and modeling undertaken by TMWA to prepare for droughts relies heavily on assumptions that past climatic trends will continue in the future. However, studies conducted by the Desert Research Institute (DRI) and UNR indicate that climate change has the potential to alter the frequency, duration, and severity of droughts in the future. The magnitude of these changes is uncertain, and will require continued monitoring.

Growth paying for growth. TMWA's approach to funding system improvements and expansions relies on new growth paying for the increased demand it places on the utility's water system. While this means that existing TMWA customers are not required to pay for new growth in the utility's supply and distribution system, situations may arise in which it might be in the interest of the City of Reno to invest in system improvements as a way to incentivize development in certain areas within TMWA's service area, especially if there is a benefit to oversizing or expanding of new infrastructure serving areas expected to grow in the future.

Moving Forward

Water conservation. Since water and sustainability emerged as areas of concern during the Phase I public engagement, it will be important to ensure that the community has opportunities to weigh-in on these topics during Phase II. Although TMWA already engages in a number of water conservation efforts, additional ideas for water conservation and sustainable management of the community's water resources might emerge during Phase II that could be incorporated into the Master Plan, especially those relating to municipal regulations and ordinances that have an impact on water usage, such as those for landscaping.

Water provision to the North Valleys. The 2011 Regional Water Management Plan noted that the demand from domestic wells and permitted municipal uses in Cold Springs Valley, Lemmon Valley, and Spanish Springs Valley exceeds the State's estimated yield for the groundwater resources in these areas. However, this area of the region is expected to grow in the near future despite the fact that new infrastructure will be needed to serve additional development. While TMWA, through the North Valleys Initiative (NVI), has completed improvements needed to supply more water to Stead and Lemmon Valley, Cold Springs still lacks the water it needs to supply future planned development. The Regional Water Management Plan also notes that Stead and Lemmon Valley are likely to require additional investments to fully serve the planned development in these areas. As the ReImagine Reno process moves forward the City could consider, in consultation with the community, whether it would like to prioritize providing additional water and infrastructure to the North Valleys as a means to promote additional growth in this area.

Consolidation of providers. Over the past decade, TMWA has merged with other large water utilities in the region, including the South Truckee Meadows General Improvement District and the Washoe County Department of Water Resources. However, TMWA is not the sole provider of water in the Truckee Meadows Region; the Sun Valley General Improvement District serves portions of the North Valleys, and

Types of Drought

Droughts are not always easy to define, especially since they often have no distinct beginning or end. According to TMWA's draft 2016-2035 Water Resources Plan, the utility monitors the following types of drought:

- **Meteorologic Drought:** These droughts are typically defined based on the degree of dryness or lack of precipitation experienced in an area over a period of time that deviates from expected conditions. This type of drought is important to monitor in the Truckee Meadows, as the region's water supply is heavily dependent on runoff from snow pack.
- **Hydrologic Drought:** This form of drought, while closely related to a meteorologic drought, is defined based on lower than normal amounts of water in streams, rivers, lakes, and groundwater. Hydrologic droughts typically lag three to four years behind a meteorologic drought. This is also an important form of drought to monitor in the region, as low water levels in Lake Tahoe and Boca Reservoir often will result in decreased flows in the Truckee River, especially during the irrigation season (April - September). During a hydrologic drought, TMWA may be forced to release water stored in reservoirs upstream from Reno should the Truckee River's flow fall below the Floriston Rate.
- **Induced Droughts:** These droughts occur when resources are used above their capacity to supply water sustainably. While this form of drought is aggravated by meteorologic or hydrologic droughts, their causes are almost entirely man-made. TMWA regularly monitors ground water levels within its service area, and engages regularly pumps water into the ground to enhance or replenish groundwater supplies.

Aquifer Storage & Recovery

TMWA relies on a number of sources to supply water to its customers, many of which vary by season. For instance, during the summer months TMWA typically draws more water from wells to compensate from the reduced supply of water available during this season from the Truckee River (especially during hydrologic droughts). To ensure groundwater supplies remain a sustainable resource for the utility, TMWA has established an Aquifer Storage and Recover (ASR) program.

Under this program, TMWA injects treated surface water from the Truckee River during the fall and winter (when water use drops approximately 25% from the summer) into the ground to both replenish the groundwater that was used during the previous summer, and to store excess water for potential use during the next summer if needed.

There is also the potential to use treated wastewater effluent to recharge aquifers, especially in the North Valleys area, which is mostly served from groundwater sources. This concept, broadly known as indirect potable reuse (or IPR), is currently being reviewed by the Nevada Department of Environmental Protection with the aim of providing guidance for potential applications of IPR across the state. Such a program in Reno would allow for both better management of groundwater resources, and new applications for treated wastewater effluent. TMWA estimates that IPR could expand water supplies in some areas by as much as several thousand acre feet each year.

other private providers serve smaller areas. Consolidation of these remaining water systems under TMWA may be beneficial to Reno, in terms of giving TMWA (and Reno, Sparks, and Washoe County) more control over the management of the region's water resources, and to improve TMWA's ability to efficiently serve areas within the TMSA.

Coordination with wastewater services. Reuse of treated wastewater has the potential to supplement and enhance TMWA's ability to meet the demands of customers, while also addressing the limitations faced by wastewater providers in discharging treated effluent. Through processes such as indirect potable reuse (or IPR), treated wastewater could be used to augment water supplies in the region, especially in areas such as the North Valleys, where such resources are already scarce. In addition, treated wastewater could be used by TMWA in its groundwater management programs, helping to maintain a sustainable supply of groundwater throughout the utility's service area. Evaluation of the feasibility of such programs are ongoing, but could be prioritized by the City of Reno through its own investments in improvements to the wastewater facilities it manages should this arise as a top concern for residents during Phase II of the ReImagine Reno process.

Water quality of the Truckee River. As so much of the City's water is supplied from the Truckee River, it is important that Reno keep a sharp eye on activities, both natural and human, that occur within the river's watershed. Moving forward, the City, in cooperation with regional partners, should be involved in any decisions regarding uses in the watershed that risk damaging or impairing the water quality of the Truckee River. While TMWA's Truckee River Fund already supports efforts to restore or enhance the Truckee River system, additional efforts or policies on the part of the City of Reno could be considered during Phase II of the ReImagine Reno process should these emerge as community priorities.

Related Plans and Studies

- Nevada Drought Forum: Recommendations Report (2015).
- 2015-2035 Water Resources Plan – Draft (TMWA, 2015).
- 2011-2030 Water Management Plan (Northern Nevada Water Planning Commission (NNWPC)/Western Regional Water Commission (WRWC), 2011).
- 2010-2030 Water Resources Plan (TMWA, 2010).
- 2010-2030 Water System Facility Plan Update (TMWA, 2010).

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Sewer & Wastewater

Where We Are Today

Sewer and wastewater service. Unlike water, the City of Reno provides sanitary sewer and wastewater treatment services to its residents. The City finances these services through the Sanitary Sewer Fund, which is an enterprise fund for the City. The City generates revenue for sewer service through sewer user fees and new connection charges. The user fees are used for repair, maintenance, and operation of the sewer and storm sewer system. The connection charges are used for capital projects needed for construction improvements in expansion, extension, and betterment of the system including treatment facilities. The City has been increasing its user fees by eight percent annually since 2011 in order to increase revenues for covering needed deferred maintenance and improvement costs. City staff expect revenues to align with costs in the near future, and as of 2016 the user fees will be tied to annual CPI growth going forward.

Truckee Meadows Wastewater Facilities, Operators, and Capacity

Facility	Operator(s)	2014 Flow (MGD)	Hydraulic Capacity (MGD)	Treatment Capacity (MGD)	Estimated Time for Upgrade
Truckee Meadows Water Reclamation Facility	City of Reno/City of Sparks	28.0	40.5	33.0	2030
South Truckee Meadows Water Reclamation Facility	Washoe County	3.5	4.1	4.1	2020
Reno-Stead Water Reclamation Facility	City of Reno	1.4	2.0	1.96	2029
Lemmon Valley Wastewater Treatment Plan	Washoe County	0.2	0.3	0.3	2016
Cold Springs Water Reclamation Facility	Washoe County	0.3	1.2	1.2	>2034

Source: City of Reno; City of Sparks; Washoe County

Wastewater facilities. The City cooperates with the City of Sparks and Washoe County to provide wastewater treatment services to customers living in the region, such as through the Truckee Meadows Water Reclamation Facility (TMWRF). There are three major treatment areas for wastewater; the North Valleys, the Truckee Meadows, and the South Truckee Meadows. Each area has separate treatment facilities, although all may send certain wastewater streams to TMWRF for treatment. The North Valley area has three facilities, the Reno-Stead Water Reclamation Facility, the Cold Springs Water Reclamation Facility, and the Lemmon Valley Wastewater Treatment Plan. The TMWRF serves the Truckee Meadow area, while the South Truckee Meadows area is served by the South Truckee Meadows Wastewater Reclamation Facility.

Capacity. TMWRF has the largest capacity for wastewater treatment of all the water treatment plants in the Truckee Meadows region. It currently treats up to 28.0 million gallons of water per day (MGD). The remaining plants are much smaller, with the next largest being the STMWRF at 3.5 MGD. Currently, all plants are operating below their maximum capacity.

Reuse of effluent. All wastewater treatment facilities in the Truckee Meadows region besides the TMWRF rely heavily on effluent reuse as a means to dispose of treated wastewater—the South Truckee Meadows Water Reclamation Facility (STMWRF) relies solely on effluent reuse for wastewater disposal, while the TMWRF depends on reuse to dispose of the excess wastewater it cannot discharge into the Truckee River. Nearly 4,000 acre feet of water is reclaimed annually by TMWRF, helping the facility to reduce the amount of water it needs to discharge into the Truckee River.

Environmental regulations. Some facilities, such as TMWRF, face capacity limits of a different sort. In order to protect water quality, TMWRF is limited in the amount of certain pollutants and nutrients (nitrogen and phosphorous in particular) it can discharge into the Truckee River. As a result, the facility could face constraints to the amount of water it can treat well before it reaches its full facility capacity. This problem is compounded by water conservation efforts, which increase the concentration of some nutrients in the water flowing into the facility. In the future, the facility will either need to find other uses for the effluent it produces in excess of the amount it can discharge, or reduce the amount of nutrients and total suspended solids present in its effluent. In preparation, the next upgrade to the TMWRF will add an advanced oxidation process to help increase the plant's ability to remove nitrogen (at an estimated cost of $30-$40 million).

What Does It Mean?

Variable approach to rates. The City of Reno has three different wastewater treatment sheds with different treatment facilities. Each planned upgrade for each facility has different cost and timing, but the implications on timing and cost are driven largely by growth in these areas. New connections fees are anticipated to pay for these upgrades; however they do not vary by geography. User fees also do not vary by geography.

Reuse of effluent. Many of the wastewater facilities in the Truckee Meadows rely on finding new uses (or reuses) for their effluent to dispose of treated wastewater. For many plants, including TMWRF, this will be an important constraint on their capacity to treat wastewater, more so than overall plant capacity. While most already provide reclaimed water for irrigation, there are discussions in the Regional Water Management Plan regarding the exploration of wastewater effluent for year-round industrial uses, as well as in groundwater recharge and storage. Such efforts are still being explored. One challenge lies in how best to get reclaimed wastewater to where it can be used, which may require increased cross-jurisdictional cooperation between Reno, Sparks, and Washoe County.

Impact on growth. The capacity for wastewater treatment plays a large role in determining where growth can occur in the future. The North Valleys, which already face some water supply issues, will also face wastewater treatment capacity constraints in the future. While the current facilities serving these areas are sufficient to treat wastewater over the next 10-15 years, the Regional Water Management Plan notes that these areas will need to find ways to expand their discharge capacity in order to support the total amount of growth envisioned for these areas, especially as septic systems in these areas are replaced with sewer connections.

What is the NPDES?

The National Pollution Discharge Elimination System (NPDES) is a program administered by the EPA to manage and protect water quality. Throughout the system, public and private entities are allowed to release water meeting minimum quality standards back into rivers, lakes, and streams. The program relies on establishing total maximum daily loads (TMDLs) for different water bodies, setting limits to the amount of certain pollutants and nutrients that can be released into a water body and still maintain water quality standards.

For the Truckee River, TMDLs have been established regulating nitrogen, phosphorous, and dissolved solids. The TMWRF is limited in the amount of these pollutants it can discharge into the river through a wasteload allocation (WLA). While the TMWRF is currently in compliance of these requirements, it may not be in the future. Water conservation efforts in the region have resulted in greater concentrations of nitrogen in wastewater flows traveling to the TMWRF for treatment. As a result, the facility is currently just under its limits for this nutrient, and is likely to exceed its WLA before the plant meets its 40 MGD discharge capacity.

This has a direct impact on future development in the City of Reno. If the treatment plant is not in compliance with water quality standards, the Nevada Department of Environmental Protections may not approve final maps for new developments. As a result, the City of Reno and City of Sparks plan to add an advanced oxidation process to the TMWRF in the future upgrades to the plant.

Sources:
- City of Reno
- NNWPC
- WRWC

Sewer Collection Areas in the Truckee Meadows

In all, there are four sewer collection areas within the Truckee Meadows, all of which serve portions of the City of Reno. These include:

- **Cold Springs:** serves the areas surrounding the Cold Springs Valley. Wastewater is treated at the Cold Springs Water Reclamation Facility, operated by Washoe County.
- **Stead/Lemmon Valley:** serves the areas around the Reno-Stead Airport and in Lemmon Valley. Wastewater is treated at the Reno-Stead Water Reclamation Facility and the Lemmon Valley Wastewater Treatment Plant.
- **Truckee Meadows:** serves the largest area in the Truckee Meadows, roughly the areas south of the intersection of US 395 and Golden Valley Rd and north of the intersection of I-580 and South Meadows Parkway, as well as all of the City of Sparks. Wastewater in this area is treated at the Truckee Meadows Water Reclamation Facility.
- **South Truckee Meadows:** serves the areas south of the Truckee Meadows service area. Wastewater is treated at the South Truckee Meadows Water Reclamation Facility operated by Washoe County.

Moving Forward

Additional capacity. As the region grows, it will place a greater demand on wastewater facilities. Currently each facility has spare capacity, and so can accommodate some amounts of growth before requiring upgrades or capacity expansions. The Truckee Meadows facility, which is the largest (33.0 MGD), is not anticipated to need upgrades until 2030. The South Truckee Meadows facility is estimated to need upgrades by 2020. The two larger North Valley facilities, Reno/Stead and Cold Springs, will not need upgrades until 2029 and 2034, respectively. However, these estimates are based on historic growth patterns and rates. The additional capacity needed and associated costs within each service area should play an important role in conversation related to where the City wants to grow in the future, anticipated to take place during Phase II of the ReImagine Reno process.

Encourage additional uses for treated effluent. Increasing the reuse of treated effluent serves two purposes: allowing full use of the existing capacity of wastewater facilities, especially TMWRF, and reducing the demand for treated, potable water for uses such as irrigation (which can account for over half of residential water use). Discussions regarding water are likely to be an important piece of the ReImagine Reno process, and could provide an opportunity for the City to explore new ways in which it, and more importantly the public (negative perceptions of wastewater reuse tend to be a large barrier), can support the reuse of treated wastewater.

Variable user fees. Currently, the City of Reno charges a uniform sewer and wastewater fee for all customers despite the fact that each facility serving residents has different costs and timing for necessary upgrades. Since growth in the north, central, or southern part of the City has different implications on the timing and cost of upgrades, it may be worth exploring the need to vary the rates charged to residents based on location as part of the fiscal analysis planned for Phase II.

Related Plans and Studies

- 2011-2030 Comprehensive Regional Water Management Plan (Northern Nevada Water Planning Commission/Western Regional Water Commission, 2011).
- TMSA/FSA Water, Wastewater and Flood Management Plan (City of Reno, 2007).

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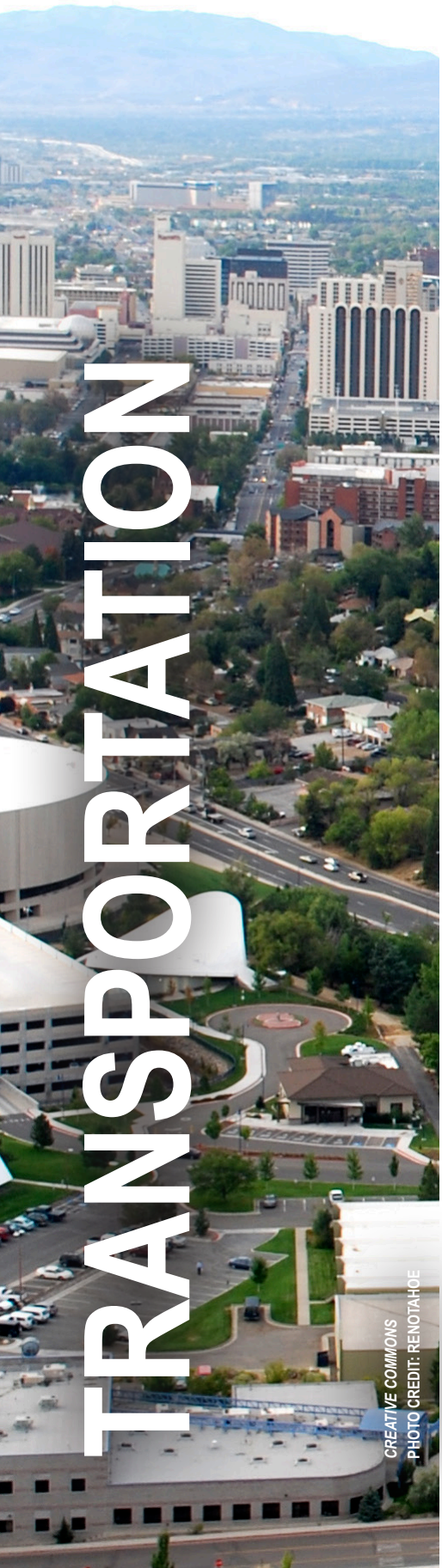

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Transportation

Where We Are Today

Transportation responsibilities. The City of Reno is responsible for the day-to-day maintenance of all roadways within its city limits, including both local and regional roadways. However, construction or reconstruction of regional roadways, as well as improvements to regional roadways under the Pavement Preservation Program is the responsibility of the Regional Transportation Commission of Washoe County (RTC). RTC also serves as the region's metropolitan planning organization and public transit provider. In addition, the Nevada Department of Transportation (NDOT) is responsible for maintaining Interstate 80 and US Highway 395. In all, Reno manages 680 miles of streets, 20 miles of alleys, and 100 parking lots.

Reno Mode Split for Commutes to Work: 2000 and 2013

Means of Transportation to Work	2000 (% of all worker 16+)	2013 (% of all worker 16+)
Car, truck, or van	86.9%	87.1%
Public transportation	4.4%	3.2%
Walk	4.4%	3.6%
Bicycle	0.9%	1.0%
Other	1.0%	1.7%
Worked at home	2.4%	3.5%

Source: US Census Bureau

Mode split. According to the US Census, 87.1 percent of Reno's residents commuted to work by car in 2013, up slightly from 2000, when 86.9 percent of residents commuted by car. Approximately 3.2 percent of residents commuted using public transportation, while 3.6 percent walked to work. Just 1 percent of residents biked to work. Reno's mode split is fairly similar to that in Washoe County and in the United States, where 88.6 percent and 86.1 percent commuted to work by car, respectively. However, Reno had a slightly higher share of workers commuting by walking or biking than did Washoe County and the United States in 2013. Nationally, a higher share of workers commuted to work by public transportation (5 percent) compared to Reno (3.2 percent) and Washoe County (2.4 percent).

Commute times. In 2013, the US Census estimates that the average commute time for workers in Reno was 19.4 minutes, up from 18.6 minutes in 2010 and 17.9 minutes in 2000. However, the average commute time for workers in Reno was lower than in Washoe County in 2013 (21.5 minutes) and lower than the average for all workers in the country (25.5 minutes).

Transit services. Through the community engagement process conducted during the most recent update to the Regional Transportation Plan (RTP) adopted in 2013, RTC found that expanding transit service was the most commonly identified transportation need in the region. As a result, the current RTP places an increased focus on multi-modal transportation, especially public transit. Public transportation was a topic that received much discussion during the public input for Phase I. While many of the Focus Group participants stated they desired a better public transportation system, the majority of the Community Survey respondents were more ambivalent. It will be

necessary to explore this specifics of this issue further as part of Phase II.

Bicycle network. According to the Reno Sparks Bicycle and Pedestrian Plan, the region had approximately 205 miles of bikeway facilities and infrastructure consisting of shared use paths, dedicated bike lanes, and shared lanes.

Complete streets. Building on the community's expressed desire for expanded transit services, the regional transportation plan also focuses on creating more "complete streets" throughout Reno. To that end, RTC adopted the Reno Sparks Bicycle and Pedestrian Plan as a part of its most recent Regional Transportation Plan, as well as supporting a range of complete streets projects in its transportation funding plans. For instance, RTC has built 80.7 miles of new bike lanes on regional roads between 2008 and 2011. According to RTC, regional roads that have undergone complete street upgrades have seen between 25 percent and 45 percent reductions in traffic crashes.

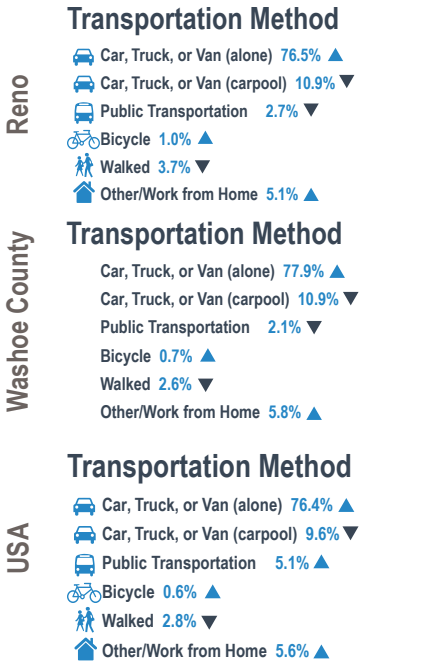
Multi-modal connectivity. The Reno Sparks Bicycle and Pedestrian Plan identified connectivity of the existing pedestrian and bicycle network as a major issue. For bicyclists, the plan focused on the lack of north/south connections between South Reno and North Reno, and east/west connections between Reno and Sparks along 4th Avenue/Prater Way. For pedestrians, connectivity issues identified in the plan centered on gaps in the pedestrian network, obstructions, and the general state of repair and lack of pedestrian infrastructure (such as well-marked street crossings).

Traffic congestion. Increased traffic and congestion on regional roadways has increasingly become a challenge. Major routes into Reno experience severe congestion during morning and evening commutes, and have seen significant growth in commuter and freight trips as regional employment and logistics/distribution centers have been established in areas to the north of downtown Reno along Pyramid Highway and US 395, and along I-80 near the TRI Center. To address these concerns, RTC has allocated funding to study capacity increases along US 395 between I-80 and Parr Boulevard, as well as interchange improvements along I-80.

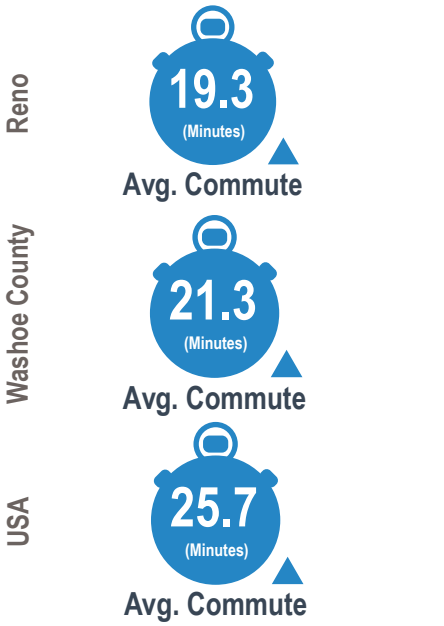
Roadway maintenance. Since 1995, the City of Reno has made street maintenance and pavement rehabilitation a major priority. The City works closely with the City of Sparks, Washoe County, and RTC to coordinate road maintenance efforts through the regional Pavement Preservation Program. While this program has improved the overall condition of the region's roadways, according to RTC 12 percent of the region's non-regional and residential roads (which are the responsibilities of Reno, Sparks, and Washoe County) had pavement in poor condition in 2012, well above the region's 2020 goal of 5 percent in poor condition. In order to meet this goal, RTC anticipates a need for additional resources at the local level to be directed towards maintenance for non-regional and residential roadways.

Funding sources. Transportation projects in the region are funded from a combination of federal, state, and local sources. The City has a Street Fund that receives revenue from a dedicated property tax of $0.23 per $100 of assessed value, which is 24 percent of the City's total property tax rate. It is used to fund street projects with a portion going to operation and a portion going for repair and rehabilitation of streets. Funding sources for RTC include: a 1/8 percent sales tax for road and transit projects; a fuel tax indexed to the Producer Price Index (PPI); a transit sales tax of 5/16 cents; a road sales tax; and a Regional Road Impact Fee (RRIF) that is levied on new development

Commutes



Source: US Census Bureau
Year: 2013;
▲Increase since 2000 ▼ Decrease since 2000



Source: US Census Bureau
Year: 2013;
▲Increase since 2000 ▼ Decrease since 2000

Sources:
- US Census Bureau
- RTC
- City of Reno

Goals of the 2035 Regional Transportation Plan

One of the responsibilities of the Regional Transportation Commission of Washoe County (RTC) is the creation of a long-range plan to guide future investments in the region's transportation system. The 2035 Regional Transportation Plan (RTP), was adopted in 2013. The RTP's policies and proposed investments are guided by four principles, or overarching themes: Safe and Healthy Communities, Economic Diversification, Sustainability, and Increased Travel Choices. The following are goals included in the RTP meant to help support the guiding principles:

- Improve Safety
- Integrate Land Use & Economic Development
- Promote Healthy Communities and Sustainability
- Manage Existing Systems Efficiently
- Integrate all Types of Transportation
- Focus on Regional Connectivity
- Promote Equity and Environmental Justice
- Improve Freight and Goods Movement
- Invest Strategically

The RTP also includes 18 indicators that will help RTC evaluate its success in implementing the Plan and achieving the goals listed above.

based on its estimated impact on the region's transportation network.

Transportation funding constraints. In all, RTC estimates the funding needs for its public transit services to 2035 will total $1.4 billion, in addition to the $6 billion needed to fund complete streets projects and maintenance of existing infrastructure. In 2013 to 2017 alone, the Regional Transportation Plan estimates the need to invest close to $1 billion in the region's transportation system. However, only $822 million is available for transportation projects included in RTC's 2014-2018 Regional Transportation Improvement Program. In addition, according to the Regional Transportation Plan, the City of Reno and the City of Sparks estimate that they have a roadway reconstruction backlog of approximately 18 million square feet of pavement which would cost up to $18 million per year to address. However, both cities combined have just $4.6 million per year available in funding for roadway reconstruction.

What Does It Mean?

Land use and transportation. Land use decisions have tremendous impacts on transportation systems. For example, higher density developments located along transportation corridors are generally easier and more cost-effective to serve with local roads and public transit than are low-density suburban-style residential developments. In addition, many approved PUDs in Reno are located at the edges of the City, and in many cases, far from existing commercial/retail and employment uses. As a result, more residents will need to drive their cars to access employment and other everyday services, adding to growing concerns about congestion on the region's roadways and costs to the City for maintenance of local roads.

20 minute town. During initial meetings with stakeholders, it was mentioned that many long-time residents think of Reno as a "20 minute town"—meaning that residents can commute to work and access everyday goods and services in 20 minutes or less. However, trends from US Census data show that commute times have been increasing over the past 15 years, and, on average, almost exceed 20 minutes. As population and employment growth pick up in Reno and elsewhere in the region, commute times are expected to continue to rise, especially given the increasing share of residents commuting to work by car.

Reno street fiscal considerations. The density of development has a direct impact on the cost of maintaining roads within Reno. The total acreage of a given development and the corresponding street miles that are required to serve that area are a big driver of on-going costs to the City. If the density of future developments increases, there is the potential for the Street Fund to benefit from significant decreases in ongoing costs associated with operations and maintenance. The Fiscal Impact Analysis conducted by EPS (see appendix) reflected an average density of four dwelling units per acre for single family development. But, for example, if the density of a single family development is doubled to 8 dwelling units per acre, the net fiscal benefit on the Street Fund increases from $77 per unit to $186 per unit.

Moving Forward

TOD Corridors. Given the strong connection between land use decisions and transportation, it will be important that land use policies included in the updated Master Plan are considered with an eye towards potential impacts on both the local and regional transportation systems. One strategy moving forward could be to explore how best to support the TOD Corridor concept laid out in the Regional Plan through Reno's local policies. During initial stakeholder interviews, many participants were skeptical of the TOD Corridors, noting that the concept was a source of both tension and confusion in the community and that many development projects in these areas still required a special use permit for approval. Despite these concerns, most stakeholders agreed that the TOD Corridor concept of increased density along commercial major transportation corridors should be carried forward as part of the City's Master Plan. Better understanding the limitations and barriers to transit-oriented development, as well as exploring opportunities to further incentivize the types of higher density development called for in the Regional Plan should be important components of Phase II of the ReImagine Reno process. Moving forward it may be necessary to re-brand the concept in some way to avoid some of the controversies that have arisen in the past.

Barriers to transit. While RTC's Regional Transportation Plan notes that the public most frequently cited expanding transit as the region's greatest transportation need, multiple free-responses to questions about public transit included in the Phase I Community Survey raised concerns about the safety and cleanliness/maintenance of public transit in Reno noting that these concerns discouraged wider use of public transportation. Further investigation of this issue, as well as other barriers that prevent wider public transportation use in Reno could be undertaken in Phase II of the project and possibly addressed through the update Master Plan.

Transit types. During initial interviews with stakeholders the idea of adding a streetcar/trolley line to Reno's public transit service, specifically along Virginia Street through downtown (and connecting to the UNR campus), was mentioned several times as a means of promoting greater transit usage, especially among people who would not consider taking a bus, and supporting downtown revitalization. This sentiment was reflected in some of the free-response comments in Phase I Community Survey. However, streetcar or trolley lines are often more expensive to build and operate than bus or bus rapid transit services. Further discussions with the community about the costs and benefits of certain transportation systems, as well as the trade-offs investments in these systems would entail, can continue in Phase II of the project to better understand the level of support that exists for streetcar or other transit enhancements in the community.

Walkability. Through the public outreach activities of Phase I, the community expressed a desire to see more walkable neighborhoods in the Reno of the future. While neighborhoods such as Midtown, the Old Southwest, and around Mayberry Plaza were cited as desirable in the free-responses in the Community Survey, it will be necessary for additional public engagement on this topic in order to better understand what walkability means to the community as well as what the public thinks a walkable neighborhood looks like, and how they would like to see their own neighborhood change to better support walkability. Some work on this topic has already been completed as part of the Reno Sparks Bicycle and Pedestrian Master Plan, and could serve as a good starting point for understanding existing barriers to walkability in the City. In

Goals of the Bicycle and Pedestrian Plan

In 2011, RTC developed a Bicycle and Pedestrian Plan to serve as a part of the previous Regional Transportation Plan, and is the official policy document pedestrian and bicycle facilities in the Truckee Meadows. The following goals were set forth in the plan to help achieve the community's vision:

- Support walking and bicycling and the development of a comprehensive bicycle and pedestrian transportation network that connects to other transportation modes, meets the needs of all users, and creates a viable alternative to the automobile.
- Maintain the aesthetic appeal, cleanliness, and functionality of existing infrastructure.
- Develop and implement an education and enforcement program that will reduce the number of bicycle and pedestrian collisions each year with the ultimate goal of zero collisions.
- Maximize the amount of State and Federal funding for bicycle and pedestrian transportation improvements for which Reno, Sparks, and Washoe County are eligible.
- Develop a well-connected bicycle and pedestrian network that integrates with public transportation.
- Encourage project sponsors to consider the needs of bicyclists and pedestrians when designing, reviewing, and approving all development and transportation projects and accommodate those needs whenever possible.

Fiscal Impacts of New Development on Reno's Street Fund

Street projects in the City of Reno are funded through the City's Street Special Revenue Fund (or Street Fund). As detailed in the Fiscal Impact Findings and Analysis Methodology memorandum, included in Appendix A, the type and density of new development in the City has a range of different net impacts on the Street Fund. For instance, a new single-family home built in the City will add approximately $77 per year to the Street Fund, while a new multi-family unit generates around $148 per year, the most of any land use analyzed. Similarly, a single-family development built at a density of four units per acre adds $77 per year per unit to the Street Fund, compared to $186 per year per unit for a single-family development with a density of eight units per acre.

These differences are largely attributed to the amount of streets needed to service low density development compared to those of higher density. In general, since the distances between single-family units built at low densities is greater than single-family developments of higher densities or developments with other uses. While the City of Reno is not responsible for the construction of new streets serving private developments, it is responsible for maintaining and repairing those roads once constructed.

Street Fund Net Fiscal Impact by Use

Use	Net Fiscal Impact
Single-Family	$77
Multi-Family	$148
Retail	$52
Office	-$13
Industrial	$19

Source: Economic and Planning Systems

addition, the goals and policies in that Plan should be considered for incorporation into the updated Reno Master Plan during Phase II.

Reno's transportation priorities. There are limited resources for investing in improvements and expansions of both the regional and local transportation systems. As a result, it will be necessary for the City to understand how its residents would like to prioritize future investments in transportation, and influence RTC or NDOT to prioritize such investments when they are outside of the City's jurisdiction. While public transit was raised as a priority for the region through the outreach process of the Regional Transportation Plan, traffic congestion and roadway expansions were hot topics in Phase I public outreach and also discussed as priorities for Reno during initial interviews with elected and appointed officials. Phase II of the ReImagine Reno process should explore transportation priorities in greater depth so that transportation-related policies in the updated Master Plan can reflect the community's preferences.

Support innovation in transportation. Recent innovations in technology have made the prospect of driverless cars and other autonomous vehicles a possibility within the 20-year planning horizon of the Master Plan. While the timing and magnitude of the impacts such technological advancements will have on transportation systems are still uncertain, Phase II of the ReImagine Reno process could explore ways in which the City of Reno can prepare for, or even support these new technologies. The establishment of the Nevada Advanced Autonomous Systems Innovation Center in 2014 at the University of Nevada Reno, and the Federal Aviation Administration's designation of the State of Nevada as an unmanned aerial vehicle (UAV or drones), present a tremendous opportunity for Reno to be a leader and innovator in this area, as well as providing a opportunities for economic development and diversification.

Related Plans and Studies

- 2035 Regional Transportation Plan (RTC, 2013)
- 2014-2018 Regional Transportation Improvement Program (RTC, 2013)
- Truckee Meadows Regional Plan (TMRPA, 2012)
- Reno Sparks Bicycle & Pedestrian Plan (RTC, 2011)

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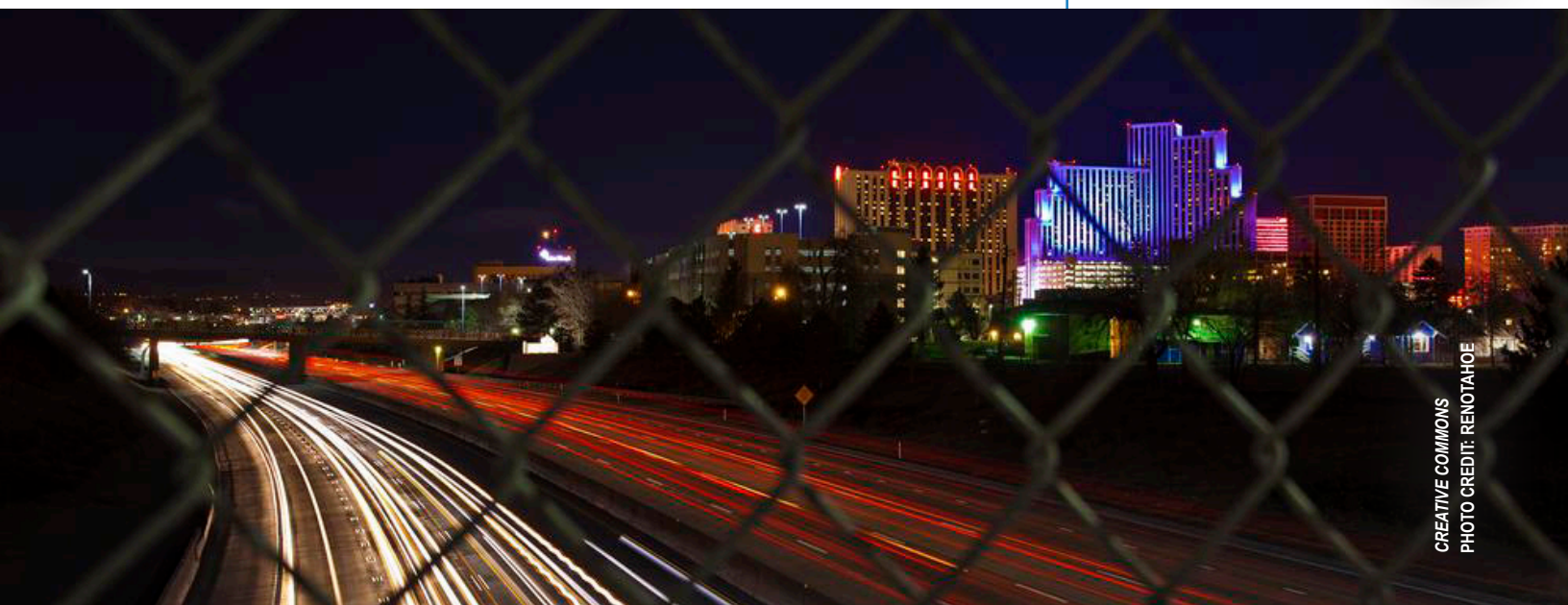

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Education & Schools

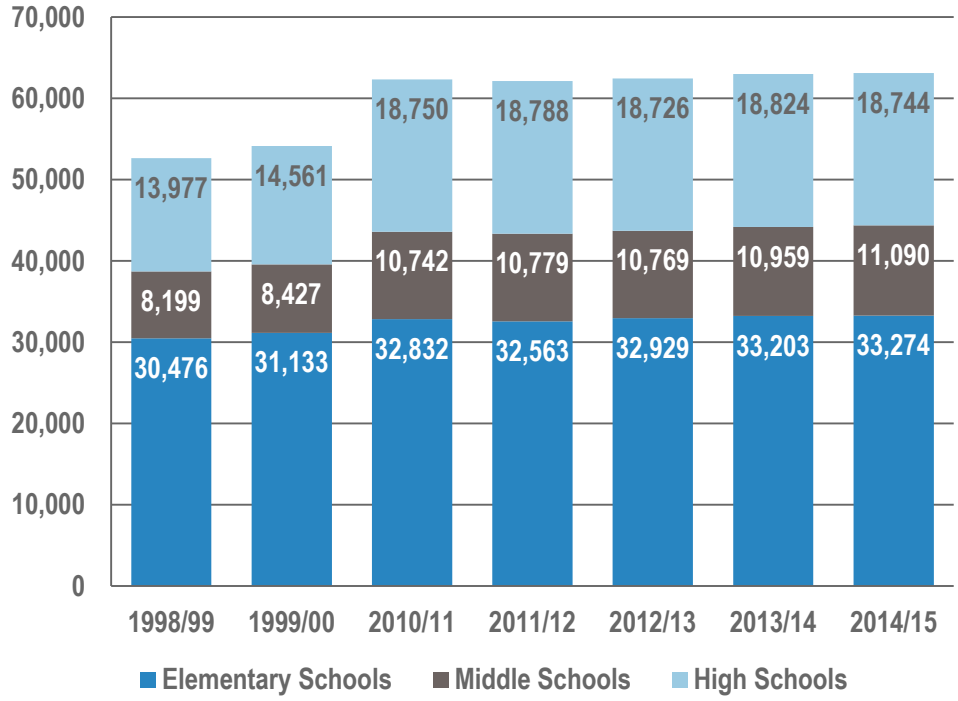
Where We Are Today

Better educated. Compared to Washoe County and the United States, Reno's population is better educated. In 2013, the US Census estimates that 37 percent and 29 percent of Washoe County's and the United States' population over the age of 25 years had received a tertiary degree or greater. In addition, the percentage of Reno's population with an associate, bachelors or graduate/professional degree has increased since 2000, up to 38 percent in 2013 from 32 percent in 2000.

Fewer residents without a high school education. Reflecting the City's overall higher level of educational attainment, the percentage of Reno's residents without a high school diploma or equivalent was 14 percent in 2013, compared to 18 percent in 2000. However, Reno had a higher rate of residents without a high school education (14.3 percent) than in Washoe County (13 percent) or the United States (13.9 percent) in 2013.

Primary and secondary schools. The Washoe County School District (WCSD) is the local public school district for the City of Reno, and also includes the City of Sparks and Washoe County. WCSD operates 90 schools located throughout Reno and Sparks: 62 elementary schools, 14 middle schools, and 14 high schools. In addition, WCSD runs six other types of schools, including an online program and an adult high school. There are a variety of options for students in Reno outside of the traditional public school system. These include school district and state sponsored charter schools as well as private schools. During the 2013/14 school year, 4,835 students were enrolled in a sponsored charter school and 3,694 students were enrolled in a private school.

Washoe County School District Enrollment: 1998 - 2014



Source: Washoe County School District

WCSD student enrollment. During the 2014/15 school year, 63,108 students were enrolled in a school in WCSD. This is an increase of 122 students from the previous school year. Since 2010, total enrollment in the district's schools has increased by 784

students. Enrollment is expected to increase in the future. Should population growth in the region follow the projections of the EPIC Report's Scenario B[1], WCSD estimates that the district will see an additional 5,318 students by 2019. By 2024, the district expects a total of 10,765 new students. To meet the projected increases in enrollment, the district anticipates the need to build around 17 new schools (nine elementary schools, four middle schools, and 3.5 high schools) at a total projected cost of $812 million.

Over-crowding. Currently, 23 out of 88 schools in the district (for which information is available) exceed their enrollment capacity, and 40 out of the 88 schools exceed their classroom capacity. Across the district, 228 classrooms are located in portable trailers with enough students to fill at least three new schools. According to projections by the school district using information from the State Demographer and the EPIC report, school over-crowding will become an even larger issue in the future as the region's population continues to grow.

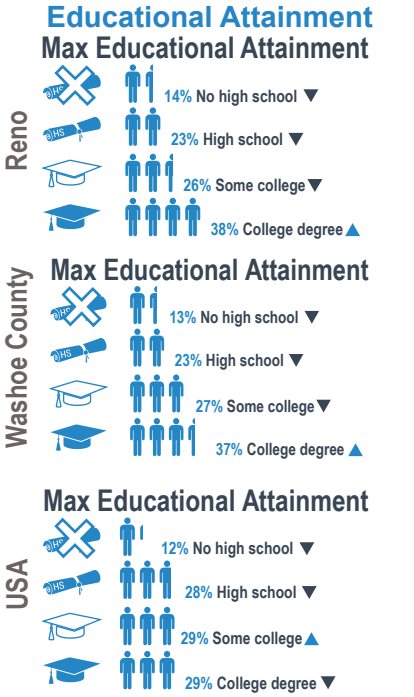
Aging facilities. On top of over-crowding, WCSD is currently facing challenges funding the needed repairs and upgrades to its facilities. The average age of a facility in the district is 39 years, and many are beginning to reach a point where upgrades and renovations are needed for essential systems, such as HVAC, electric, and plumbing. Added up across 90 schools, these needs are quite substantial. WCSD estimates it will need to spend a minimum of $25 million each year just to keep pace with repairs and renovation needs over the next 10 years.

Public school funding. WCSD is the only school district in the State of Nevada that relies solely on the Government Services Tax (GST) and property taxes for funding. Recently, the school district has used bonds to help fund its repair and maintenance needs, but it does not have funding to address the need for new schools. In all, the district anticipates a funding short-fall of $81 million per year over the next 10 years. In addition, the school district has no formalized mechanism for offsetting the costs of new schools generated by new development. Larger residential developments have voluntarily dedicated land and/or built schools for the school district in order to create a marketable development project in the past, but this practice likely will be harder and harder to replicate in the future.

Colleges and universities. The University of Nevada Reno (UNR) is one of the primary institutions of higher education in Reno. In 2015, the school had a total enrollment of 20,898 students, and offered degrees at the undergraduate, graduate and doctoral level and hosts a number of colleges and schools, including the College of Agriculture, Biotechnology and Natural Resources, the College of Engineering, and a Division of Health Sciences. In addition to UNR, the region is home to a number of other higher education institutions including Truckee Meadows Community College (with a 2015 enrollment of 11,584) and Sierra Nevada College.

What Does It Mean?

Impacts on education outcomes. While public education is not something the City of Reno has direct control over, the quality of the school system plays an important role in determining educational outcomes of students, as well as quality of life for residents.



Source: US Census Bureau
Year: 2013;
▲Increase since 2000 ▼Decrease since 2000

1. While the Washoe County School District relies mostly on the Consensus Forecast to predict future enrollment, the recent discussion led by the school district concerning overcrowding refers to Scenario B of the EPIC Report when predicting student enrollment over the period of the study.

SB 411

Passed during the previous state legislative session, SB 411 allows for the Boards of Trustees of school districts across Nevada to create citizen committees known as Public Schools Overcrowding and Repair Needs Committees to assess the funding needs of a school district and to recommend a ballot question in 2016 asking voters to approve of increases to certain taxes in order to fund school district capital projects.

Such a committee was formed for the Washoe County School District to consider the extent of the district's needs. Per the law, the Committee can only ask voters to raise:

- Room taxes on rental of transient lodging
- Governmental services tax
- Real estate transfer tax
- Sales and use tax
- Property tax

Currently Washoe County only assesses a property tax and a government services tax to fund schools, although these other taxes could be assessed if they are chosen by the Committee as good options and approved by voters.

According to a presentation by the WCSD, students in deteriorating school buildings scored between five and 11 percentile points lower on standardized achievement tests than students in modern buildings (controlling for income), and elementary school students who move from an overcrowded school to a less-crowded one enjoyed gains in educational achievement equivalent to about 65 days of additional instruction per year.[2] In addition, education can influence a variety of different areas of residents' lives, such as their ability to find a well-paying job, their overall health and wellness, their likelihood to commit a crime, and their participation in government and other civic events.

Deferring maintenance. While some of the repairs needed in school district facilities could be deferred until a later date, WCSD does not consider this to be a practical option. According to a report by the Council of the Great City Schools and cited by the school district, every dollar of preventative maintenance that is deferred will ultimately result in $4 worth of repairs or maintenance in the future. In other words, the longer the community waits to address the issue of school facilities' state of repair, the more expensive, and thus harder, it will be to do so.

Fiscal impacts of new students. A challenge facing the district in light of the population growth relates to the fiscal impacts of new population and student enrollment. In general, property tax revenues WCSD receives from new residential growth is insufficient to meet the additional demands such growth places on the school system. In general, the amount of new homes that are necessary to fund the construction of a new school typically result in an increase in student enrollment greater than what could be accommodated in the new school.[3]

Moving Forward

Additional funding sources. Other school districts in the state supplement the funding they receive from GST and property taxes in a variety of ways, such as with portions of revenue generated through a real estate transfer tax (as in Clark County), a County Infrastructure Sales Tax (as in Carson City) or a transient lodging tax (as in Clark County). In the past, WCSD has asked the state legislature for additional funding, as well as County residents through failed county-wide ballot initiatives. While the City of Reno plays a limited role in public education, schools and education are an important community issue that has already been raised in a number of the free responses received through the Master Plan survey conducted during Phase I of ReImagine Reno. Moving forward, the City could explore ways in which it might take a more proactive approach to aid WCSD as part of Phase II of the Master Plan update process.

Economic development. As Reno looks to diversify its local economy, the City will need to also diversify the skills and qualifications of its residents. This can occur through workforce education and training, but in order to support the businesses in Reno and the creation of new businesses the City will also need to become an

2. Slides 37 and 40, "Growth and Overcrowding, Funding, and Short-term and Long-term Options," Washoe County School District , October 7, 2015 (http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/640/Overcrowding%20and%20funding%20presentation.pdf).

3. From: "Frequently Asked Questions: School Overcrowding and Capacity," Washoe County School District, October 7, 2015 (http://www.washoeschools.net/cms/lib08/NV01912265/Centricity/Domain/640/FAQ%20on%20overcrowding%2010.7.15.pdf).

attractive place to live for workers from outside. School access and quality are often a huge determinant for home purchase locations and can have a big impact on which areas of the region grow and if the region can attract new residents/workers. The City may need to consider taking a more involved approach to ensuring the school system is attractive to current and new families.

Continued outreach to UNR. With recent updates to its Campus Master Plan, the University of Nevada Reno looks set to expand its footprint south of I-80, creating an opportunity to diversify uses in downtown Reno by adding new employers and encouraging new industries, such as technology. The Campus Master Plan envisions a new University District in this area—a mixed-use neighborhood with programmatic and physical links to the university. The ReImagine Reno process will need to engage with members of the university community, both students and administrators, to clarify the overall mix of land uses contemplated south of I-80, to explore ways in which the City can support and further reinforce the University's vision for connecting its campus with downtown, and different strategies or policies that could be included in the Master Plan to help promote the implementation of the Campus Master Plan.

Related Plans and Studies

- Envision WCSD 2020: Investing in Our Future (WCSD, 2015)
- WCSD Data Gallery (includes information on capacity and needed repairs)
- Draft Washoe County School District Capacity Analysis and Recommendations (WCSD, 2015)
- University of Nevada, Reno: Campus Master Plan 2015-2024; University Regional Center Plan (2014)

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Overcrowding by School

While overcrowding is a serious concern for the school district in light of projected future population growth, overcrowding is already an issue in a number of schools, including those serving students in Reno. The district measures crowding in two ways:

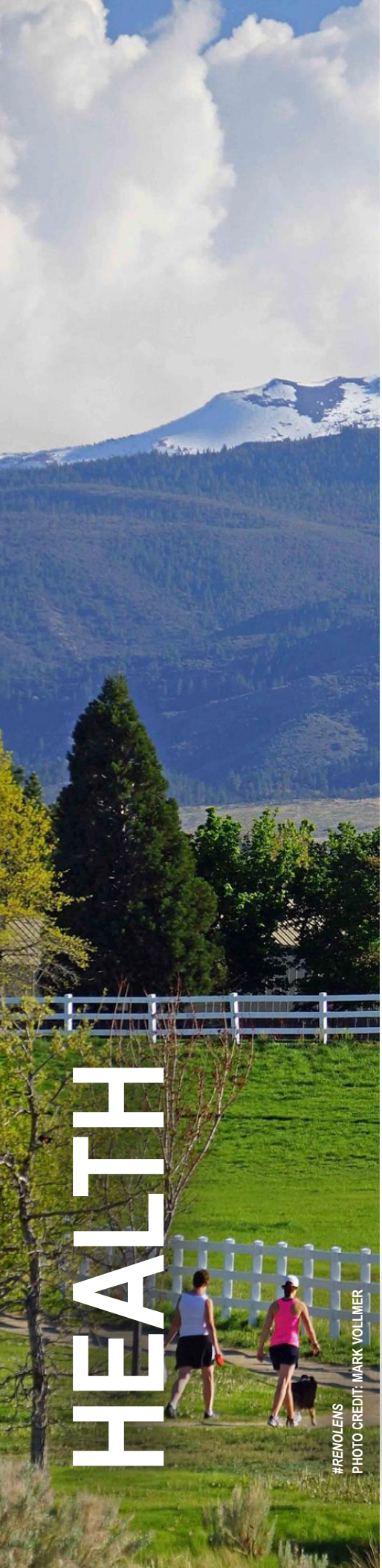
- **Enrollment Capacity:** measures the number of individual students attending a school compared to the number of students the school building was designed to hold. This measure does not include portable classrooms, as these do not add space to other parts of the schools, such as lunchrooms and playgrounds.
- **Classroom Capacity:** measures the number of classes at a school compared to the number of rooms available in which to hold class. This measure does include portable classrooms.

The table below lists 12 schools located in Reno over 100 percent of their enrollment capacities..

Student Enrollment Capacity by School: 2014

School	Enrollment Capacity
Brown Elementary	138%
Rita Cannan Elementary	118%
Double Diamond Elementary	115%
McQeen High	114%
Mt. Rose Elementary	110%
Anderson Elementary	110%
George Westergard Elementary	109%
Silver Lake Elementary	108%
Jessie Beck Elementary	104%
Roger Corbett Elementary	103%
Alice Smith Elementary	102%
Damonte Ranch High	101%

Source: WCSD



Health

Where We Are Today

Leading cause of death. According to the Washoe County Health District (WCHD), heart disease, cancer, and chronic lower respiratory disease are the top three leading causes of death in Washoe County. These diseases are also the leading causes of death across both Nevada and the United States.

Death Rates for Leading Causes of Death in Washoe County: 2013

Cause of Death	Washoe County (per 100,000 people)	Nevada (per 100,000 people)	United States (per 100,000 people)
Heart Disease	205.9	195.2	175.0
Cancer	166.3	169.3	168.9
Chronic Lower Respiratory Disease	48.9	51.8	42.2

Source: US Census Bureau

Physical activity. Just one third of adults in Washoe County met national recommendations for daily physical activity in 2013 according to WCHD. However, 84.3 percent did engage in at least some physical activity for leisure or recreation in 2012 according to the Centers for Disease Control and Prevention (CDC), more than in Nevada (79.5 percent) and the United States (77.4 percent).

Overweight and obese. Overall, 58 percent of Washoe County's population was overweight or obese in 2012 (based on measures of Body Mass Index). While this does mean that over half of the County's population was above their recommended weight, the rates in Washoe County were below those for adults in Nevada (61 percent) or the United States (62 percent).

Food access and hunger. According to the US Department of Agriculture, approximately 30 percent of Washoe County residents lived in census tracts designated as a "food desert", or a low-income income census tract where a substantial number of residents have low access to a supermarket or large grocery store. This is a higher rate than in Nevada (22.26 percent) and the United States (23.61 percent). However, 14.67 percent of the County's population was estimated to have experienced food insecurity in 2013, fewer than in Nevada (15.81 percent) or the United States (15.21 percent). While fewer residents of Washoe County were food insecure than in the state or the nation, the Washoe County Health District (WCHD) reports that roughly one in four children (or 25 percent) experienced food insecurity. The City has been coordinating with the WCHD and Washoe County Food Policy Council (WCFPC) over the last several years to identify specific opportunities to support local food access/ urban agriculture through City policies and regulations.

Mental health. WCHD's Community Health Needs Assessment highlights a growing concern about the mental health of residents living in Washoe County. Rates of death from suicide are one common metric used to gauge mental health. According to the CDC, Washoe County had an age-adjusted death rate from suicide of 19.8 per 100,000, above the rate for Nevada (18.7 per 100,000) and the United States (12.3 per 100,000). In addition, the Community Health Needs Assessment notes that Washoe County high school students reported having felt sad or hopeless more often than their

peers across the nation. Approximately 14 percent reported having attempted suicide, almost twice the national rate for high school students.

Access to health care. Access to healthcare is another important component of community health. In 2012, Washoe County had 70.5 primary care physicians per 100,000 people in 2012, higher than the State of Nevada rate of 56.3 per 100,000 but lower than the national rate of 74.5 per 100,000. Despite this high ratio of population to providers, approximately 38 percent of the County's population currently lives in a health professional shortage area according to the US Department of Health and Human Services. According to WCHD, the County also is experiencing a significant shortage of mental health providers and is designated as a mental health professional shortage area.

Overall health. According to the CDC, 15.3 percent of Washoe County adults reported being in poor health in 2012, fewer than in the state as a whole (17.3 percent) and the nation (15.7 percent).

Air quality. Air quality is another health concern in Washoe County. Although air quality on most days is considered to be "good", there are days when pollutants present in the air exceed federal standards for air quality. For example, the County is currently considered to be a "serious" non-attainment area for PM10 (or coarse particulate matter), and has exceeded federal standards for PM2.5 (fine particulate matter) and ozone (O3) on certain days.

Air Quality Index. According to the US EPA's Air Quality Index (or AQI), Washoe County had air quality considered to be "very unhealthy" during 5 days in 2014, more than any other county in Nevada. The county also had "unhealthy" air quality over 3 days, and 134 days of "moderate" air quality. Overall, the number of unhealthy and very unhealthy days in 2014 was down from the previous year, when air quality was considered very unhealthy during 14 days. However, 2012, 2013, and 2014 were the first days in the past ten years with any days considered very unhealthy.

Causes of poor air quality. A variety of factors can contribute to poor air quality in Reno. Air quality during winter months is usually impacted by persistent temperature inversions, which trap pollution from sources like car exhaust or wood burning in the Truckee Meadows. Smoke from wildfires is another common cause of poor air quality, especially during the summer and early fall when wildfires are most common. For example, air quality in Reno exceeded PM2.5 limits during six days in September 2014 as a result of smoke from the King Fire in California.

What Does It Mean?

Links to the built environment. While the City of Reno is fairly limited in its ability to change health outcomes of its residents, there are strong links between public health and the built environment. For instance, each of the three leading causes of death in Washoe County is influenced by physical activity and air quality. Focus groups convened by the Washoe County Health District's 2015 Community Health Needs Assessment Report expressed the need for activities in the community for people of all ages, as well as a need for recreation centers and more parks and affordable recreational opportunities during all seasons. Built environments that encourage healthy and active lifestyles were also mentioned frequently in both focus groups and community meetings. Creating safe and enjoyable environments that encourage

What is the Community Need Index?

The Community Need Index (CNI) was developed by Dignity Health and Tuven Health in 2004 to help health organizations, non-profits, governments, and other policy makers identify and quantify barriers to health care access within their community. The CNI score is calculated by comparing a particular zip code to all zip codes in the United States on a variety of statistics that are meant to measure different kinds of barriers. These include income barriers, cultural barriers, education barriers, insurance barriers, and housing barriers. Scores in each category are assigned on a scale of 1 to 5; a score of 5 means that zip code fell within the upper quintile compared to national rankings of all zip codes. These scores are averaged to determine the overall Community Need Score. Scores range from 1 to 5, with 1 indicating zip codes with the least need, and 5 indicating zip codes with the greatest needs.

CNI Scores for Reno Zip Codes: 2014

Zip Code	CNI Score
89501	4.2
89502	4.8
89503	3.8
89506	3.6
89508	2.4
89509	3.4
89510	2.8
89511	2.2
89512	5.0
89519	1.8
89521	2.6
89523	3.0

Source: Washoe County Health District; Truven Health Analytics, Inc.

What is a Food Desert?

The US Department of Agriculture (USDA) and other federal agencies use the term "food desert" to describe urban neighborhoods or rural areas that lack access to fresh, healthy, and affordable foods. This definition does not include fast food restaurants and convenience stores. For federal programs and grants, food deserts are delineated based on census tracts. To qualify, a census tract must have a poverty rate of 20 percent or more or have a median income less than 80 percent of AMI *and* have at least 500 people and/or at least 33 percent of the census tract's total population living more than one mile from a grocery store.

By this definition, four census tracts in Reno would qualify as food deserts. Combined, these census tracts had a population of 14,295 in 2010. The largest tract by population was located in the area east of the University of Nevada-Reno, while the other three are located in Lemmon Valley, south and east of the Reno-Stead Airport.

physical activity, active mobility, and recreation are important ways in which the City can encourage good physical health. In addition, ensuring residents throughout the entire City have access to amenities like trails, recreational facilities, and parks is another strategy to promote healthy living.

Mobility and access. Not all residents of Reno drive cars, and may have a difficult time reaching health providers, especially if there are no alternatives, like public transportation, available. This is also true for residents who have poor access to food, such as those living in food deserts. Expanding public transportation service, promoting more mixed-use environments, or encouraging housing (especially affordable or senior housing) close to important services, amenities, or existing transit routes are all ways the City, through the Master Plan and other land use and transportation policies, can help to influence access to health care and food.

Transportation and air quality. While poor air quality days in Reno have a variety of causes, pollution from vehicles is a major contributor. Reducing the need for trips by automobiles, through encouraging places with a mix of uses, or by increasing options for alternative, less polluting, modes of transportation (such as public transportation) are some of the ways in which the City can help to influence air quality. Such actions can also contribute to the City's desire to reduce greenhouse gas emissions and reduce its contributions to climate change.

Health and quality of life. Health and wellness are intricately linked with the quality of life in a community. Suffering from illness and disease not only impacts an individual's health, it also has a negative effect on their lives, including happiness, productivity at work or school, and financial health (especially if an individual incurs large medical expenses as a result of his or her illness).

Moving Forward

Coordination with partners. Traditionally, issues related to public health have not been included in communities' comprehensive plans. However, this is a topic that is growing in importance for many communities, especially as they experience an increase in the population of older adults. It is increasingly common to see goals, policies or strategies in comprehensive plans addressing issues related to health, especially those with direct links to the built environment. Health was not discussed in detail during the Phase I public outreach but could be explored in Phase II with the community and with agencies and organizations already working on these issues, such as the Washoe County Health District, to ensure that the policies included in the updated Master Plan reflect community priorities, and support current efforts.

Community recreational needs. Another area that could be explored in greater detail during Phase II is the need for additional recreational opportunities and built environments supportive of active and healthy lifestyles. While the public outreach conducted by the Washoe County Health District in its recent Community Health Needs Assessment suggested such opportunities are currently lacking in the community, more information on specific needs, where such needs are greatest within the City, and what barriers exist that might prevent access to recreational opportunities that currently exist would be helpful to better understand how the City might address these through the updated Master Plan.

Related Plans and Studies

- Washoe County Community Needs Health Assessment (2015)
- Draft Healthy Food Access Plan (WCFPC, 2014)
- Access to Healthy Food in Washoe County: A Framework for Food System Design (2010)

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PHOTO CREDIT: RENOTAHOE

Hazards & Public Safety

Where We Are Today

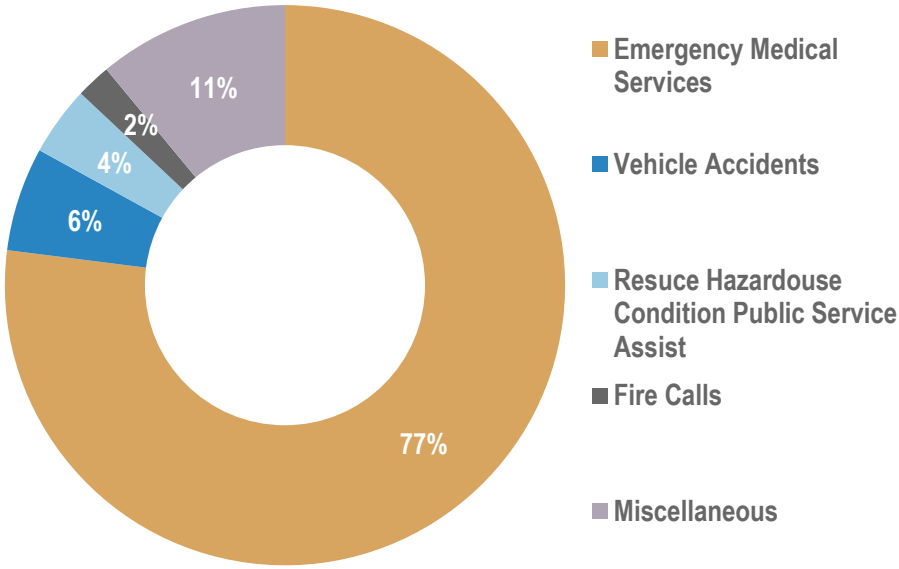
Public safety providers. In Reno, public safety and related services for residents of Reno are provided primarily by the Reno Police Department and the Reno Fire Department (whose operations entail both fire response and medical response).

Residents' perceptions of safety. According to the Reno Police Department's Annual Report for 2014, 88.6 percent of respondents to the RPD's "Attitude and Public Opinion Survey" felt that Reno is a safe place to live, up from the previous survey conducted by RPD. 28 percent of respondents felt that Reno was becoming less safe, down almost 10 percent from the previous survey. When asked why they feel Reno is a safe place to live, most respondents cited fewer crimes being committed and greater police presence in their neighborhood.

Public safety concerns. Respondents to the latest RPD public survey identified drugs, theft, and gangs as the three biggest public safety concerns in Reno. These concerns were shared by residents across the City, however graffiti, robbery, and panhandling were also mentioned as concerns for residents living in Northeast Reno, Northwest Reno, and Central Reno, respectively.

Crime rates. According to statistics from RPD, there was a decrease in violent crimes (murder, rape, robbery, and assault) between 2012 and 2013, from 5.18 per 1,000 residents to 4.96 per 1,000 residents. Property crimes (burglary, larceny/theft, vehicle theft, and arson) were also down from 32.44 per 1,000 residents in 2012 to 30.99 per 1,000 in 2013. Nationally, there were 3.68 violent crimes committed per 1,000 people during 2013, lower than the rate experienced in Reno during the same year. The nation as a whole also experienced lower rates of property crime, with just 27.3 per 1,000 people during 2013.

Death Rates for Leading Causes of Death in Washoe County: 2013



Source: City of Reno Fire Department

Fire Department responses. In 2014, the Reno Fire Department (RFD) responded to 35,534 calls for service, down from the previous year when RFD responded to 37,200 calls. 77 percent of calls were for medical related emergencies, and just 2

percent were for fires. RFD's response times, as reported in their 2015 Annual Report, averaged seven minutes and 18 seconds from the time of the 911 call to when RFD arrived on scene.

Emergency response. The City of Reno coordinates emergency response efforts with the City of Sparks and Washoe County through the Regional Emergency Operations Center (REOC). The REOC supports a unified command structure across all emergency response and public safety agencies in the region, providing support to local agencies as needed coordinated through the REOC.

Hazard mitigation planning. Hazard risk assessment and mitigation planning is undertaken jointly by the City of Reno, City of Sparks, Washoe County, and other regional partners and agencies. Together, these jurisdictions recently released a draft of the 2015 Regional Hazard Mitigation Plan, which assess risks faced by each jurisdiction from a range of hazards, as well as lays out strategies for mitigating risks from disasters in the future.

Reno risk assessment. Comparing frequency, magnitude, warning times and durations, the 2015 Draft Regional Hazard Mitigation Plan ranked earthquakes and wildfires as posing a very high risk to Reno. The plan also identifies terrorism or other acts of violence as posing a high risk to the City. Moderate risks identified in the plan include those posed by avalanches, droughts, floods, biological infections, and energy emergencies. Infectious disease, severe storms, volcanoes, civil disorder, hazardous materials and nuclear waste transport were all ranked a low-risk hazards.

Flooding. According to TMWA, a major flood has occurred in the Truckee Meadows on average of once every decade during the past century. In an effort to help manage future flood events and minimize damage, the City of Reno partnered with the City of Sparks, Washoe County, and the US Army Corps of Engineers, among others, to form the Truckee River Flood Management Authority (TRFMA). TRFMA works to restore the natural ecosystem of the Truckee River, as well as to plan and coordinate mitigation projects, such as the recent Virginia Street Bridge Project.

What Does It Mean?

A safer community. While residents still have concerns about crime, especially related to drugs and gangs, many believe that Reno is a safe community and are satisfied with the performance of the Reno Police Department. While crime rates are down from the previous year, they remain above national averages for both violent crimes and property crimes. However, in the Community Survey conducted during Phase I, safety was one of the top priorities for the community, reflecting results from a recent ETC Citizens Institute survey earlier in the year. This suggests that many residents still have concerns about safety in the community. In a survey conducted by the Reno Police Department, most residents desired to see an emphasis on gang enforcement, drug enforcement, and neighborhood patrolling.

Medical service calls. As reported by the Reno Fire Department in their 2015 Community Report, 77 percent of the department's calls for service were related to emergency medical calls. In fact, fire calls accounted for just 2 percent of the 35,524 calls RFD received last year. This is a common trend seen in many fire departments across the country, and has led some communities to rethink the way they provide services and staff their departments.

What is a Hazard Mitigation Plan?

A hazard mitigation plan (or HMP) is a tool used in many communities across the country to identify and assess their vulnerability to a range of hazards, and to develop plans or projects to mitigate the impacts of future hazardous events. HMPs are also required by the Federal Emergency Management Agency (FEMA) as a condition for receiving federal money to fund hazard mitigation projects. Reno's HMP was created in partnership with Washoe County, the City of Sparks, Reno-Sparks Indian Colony, Pyramid Lake Paiute Tribe, and the Truckee River Flood Management Authority.

Defining Resilience

Resilience is a topic that has become increasingly common to discuss in the context of urban planning. Broadly it refers to a community's ability to manage *disruptive* forms of change, such as natural disasters and economic downturns, through mitigation and adaptation plans and actions that anticipate and contain disruptive impacts. Although closely related and often viewed as interchangeable, sustainability and resilience are distinctly different--as sustainability seeks to manage *normal* forms of change through programs and procedures that consider growth impacts on environment, community, and economy.

Regional cooperation. Many of the hazards and risks identified in the Regional Hazard Mitigation Plan, like droughts and earthquakes, are likely to have regional impacts and require a region-wide response. The City appears well prepared to address such challenges, as many disaster mitigation and emergency response procedures have been created in collaboration with partners in Sparks and Washoe County. This is especially true for flood damage mitigation, which is coordinated through a regional agency, the Truckee Meadows Flood Management Authority.

Moving Forward

Planning for community resilience. Community resilience is an important new topic increasingly addressed through a community's comprehensive plan. While the current Master Plan contains policies that address resiliency concerns, resiliency is not a prominent feature of the plan. Given the region's susceptibility to hazards, as well as vulnerabilities to economic shocks (as experienced during the Great Recession), a more robust set of policies to address these issues should be included in the updated Master Plan. This topic is discussed in greater detail in the Master Plan Assessment report and will be an important area in which to further engage the community during Phase II.

Maintaining levels of service as we grow. The population growth predicted for the region will have an impact on the ability for the City of Reno to provide services, especially those related to public safety. While recent survey responses suggest that residents feel safer living in Reno than in the past, these trends could be threatened if expanding police, fire, and emergency services do not keep pace with growing needs. In addition, the location and form of future growth will have different impacts on the ability of the City to meet new demands. For instance, Economic and Planning Systems estimates that fire services provided to the north and west portions of the City cost 25 to 30 percent more per person than elsewhere in the City due to the challenges associated with serving low density developments found throughout these areas (see Appendix: Fiscal Impact Findings and Analysis Memo) Moving forward, such considerations should be an integral part of any discussions with the community about the trade-offs associated with different forms of growth.

Perceptions of downtown. The qualitative data gathered from the community during Phase I confirmed that downtown Reno is an area of particular concern when it comes to crime and safety. This reflects findings from a Reno Police Department survey in 2013, which found that respondents tended to feel less safe downtown then they did in their neighborhoods, with a total of 43 percent saying they felt safe downtown at night, down from the previous survey conducted by the department. When asked about crime downtown, nearly half of respondents named drugs (25 percent) or homelessness/ panhandling (24 percent) as top concerns. Strategies to address perceptions about the safety of downtown will be an essential part of the larger discussions on this area anticipated for Phase II of the ReImagine Reno process.

Related Plans and Studies

- Washoe County Regional Hazard Mitigation Plan (Washoe County, 2015)
- City of Reno Police Department – Community Report (City of Reno, 2014)
- City of Reno Fire Department – Annual Report (City of Reno, 2015)

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#RENOLENS
PHOTO CREDIT: PIYUSH BAKANE

APPENDIX A:
FISCAL IMPACTS FINDINGS & ANALYSIS

CREATIVE COMMONS
PHOTO CREDIT: RENOTAHOE

MEMORANDUM

To: City of Reno

From: Andrew Knudtsen, Matt Prosser and Tim Morzel, Economic & Planning Systems

Subject: Fiscal Impact Findings and Analysis Methodology

Date: January 8, 2016

The Economics of Land Use

This memorandum provides a summary of the initial fiscal impact analysis findings developed through creation of a fiscal model for the Master Plan. The budget framework is described to provide an understanding of the revenues and expenditures that most impact the City's General Fund. The major revenues and expenditures that are impacted by new development have also been identified. With an understanding of the items of the budget most impacted by growth, the preliminary methodology for estimating impacts is described. Lastly, an overview of the approach and identification of major findings and additional major questions needed to be addressed is provided. This memorandum is intended to be a working document throughout the Master Plan process and will be finalized once all needed analysis is completed.

Budget Framework and Impacts of Growth

The City of Reno's budget consists of six primary fund types: General Fund, Special Revenue Funds, Debt Service Funds, Capital Projects Fund, Enterprise Funds, and Internal Service Funds. The General Fund is the City's major fund that provides for major day to day operations and accounts for 50 percent of the City's total budget. The General Fund is most impacted by new development and is the primary focus of the fiscal impact analysis. There are, however, two other funds directly impacted by growth that are analyzed here. They are the Street Fund, which is a special revenue fund, and the Sanitary Sewer Fund, which is an enterprise fund. These two funds were also modeled to assess the impacts of new development.

Economic & Planning Systems, Inc.
730 17th Street, Suite 630
Denver, CO 80202-3511
303 623 3557 tel
303 623 9049 fax

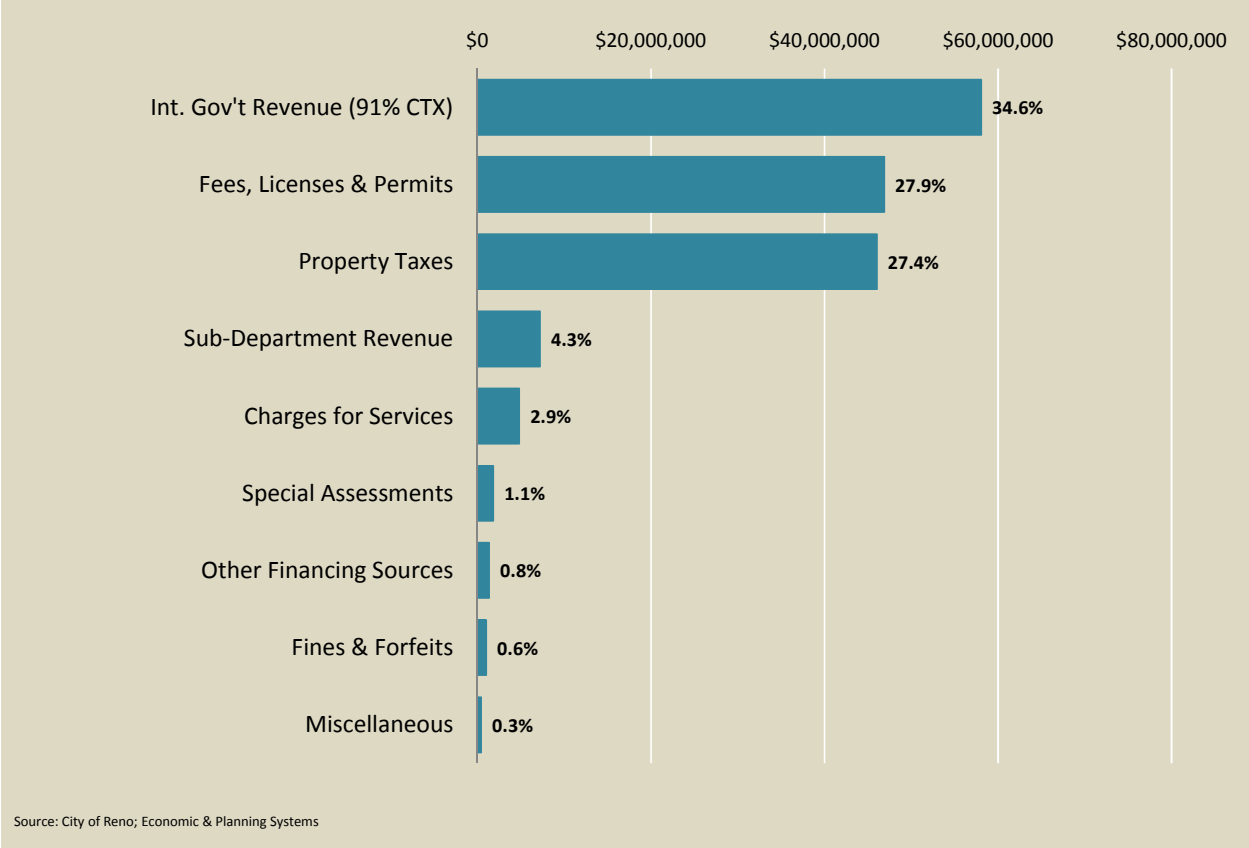
Denver
Los Angeles
Oakland
Sacramento

www.epsys.com

General Fund Revenues

The revenue sources for the City's General Fund fall within 10 major categories while the majority of revenue (89.9 percent) comes from three of these categories: Intergovernmental Revenue, Fees, Licenses, and Permits, and Ad-Valorem taxes (Property Tax). The revenue per category for the 2016 budget is shown in Figure 1.

Figure 1
City of Reno General Fund Revenue Sources, 2016



Intergovernmental Revenue (Sales Tax)

Overview

Intergovernmental Revenue is the largest category with $58.1 million dollars expected in 2016, which accounts for 34.6 percent of the General Fund revenues. The vast majority of revenue in this category comes from what is known as consolidated tax (CTX) and includes the following components:

- Cigarette Tax
- Liquor Tax
- Government Services Tax (GST)
- Real Property Transfer Tax (RPPT)
- Basic City County Relief Tax (BCCRT)
- Supplemental City County Relief Tax (SCCRT)

These taxes are sales and use taxes applied to the sale and use of goods. The overall rate is 7.725 percent, of which 2.25 percent is for city/county relief tax, which is listed above as BCCRT and SCCRT. This is the portion of sales and use tax redistributed to Reno through Washoe County; these sales taxes are collected by the State of Nevada and distributed by the State to the various government agencies. Revenue received by the City of Reno is distributed by the County according to Base and Excess Distribution formulas. The Base Distribution was determined in 1997, when CTX was established, and is recalculated annually to reflect changes in the Consumer Price Index (CPI). The Excess Distribution is the amount of revenue available to distribute after the Base Distribution has been made. Excess is distributed based on a formula combining the five-year moving average of the changes in population and assessed valuation for the City of Reno and other governmental entities in Washoe County. The other significant source of revenue in this category is the distribution of revenue from County gaming licenses.

Impacts of Development

Growth in revenue to the City from sales tax is most impacted by the growth of the overall population of Washoe County. Due to the State of Nevada's laws and procedures related to the distribution of CTX, the City's annual distribution of revenue generally grows as the county grows and typically equates to 29 percent of the county's distribution. While it is generally assumed that more retail sales occurring in Reno (versus elsewhere in Washoe County) would lead to more sales tax revenue, the impact of where the sale takes place is minimal and difficult to quantify due to the way the State collects and distributes sales tax revenues. In terms of this fiscal impact analysis, the location of retail (and the sales tax generated by retail) only significantly impacts Reno if the retail sales are occurring just outside Washoe County (neighboring counties or Indian Reservations).

In terms of the CTX revenues received by the City of Reno, it is important to evaluate the impact of development on the Base Distribution and the Excess Distribution separately. For the purposes of this analysis, it is assumed that development or growth has no impact on the Base Distribution amount due to the fact that the Base Distribution is purely based on the previous year's distribution adjusted for inflation. The Excess Distribution, which amounts to approximately 20 percent of the Total Distribution, is assumed to be impacted by growth and is consequently included in the estimate of future revenues in this analysis.

Fees, Licenses and & Permits

Overview

The second largest revenue category for the General Fund is Fees, Licenses, and Permits with estimated revenue in 2016 of $46.9 million, which is 27.9 percent of revenue. This category consists of two primary types of fees or licenses. The first is franchise fees, which account for approximately 60 percent of revenue in this category. Franchise fees are those which utility companies (including cable TV, electricity, natural gas, sanitation, and telephone) pay the City for the use of City right-of-way. The other major source is business license fees, which is estimated at $15.3 million for 2016. Additional revenue sources in this fund include liquor licenses, privilege licenses, city gaming licenses, and others.

Impacts of Development

The revenue from fees, licenses, and permits generally increases with the growth of the city's population and employment base. Franchise fees match closely with population and employment growth, as more users generate more revenue. Businesses licenses are obviously generated by

the number of establishments in the City of Reno and represent one of the few major revenue sources that vary between residential and non-residential uses.

Property Tax

Overview

The third largest revenue category for the General Fund is Property Tax with estimated revenue in 2016 of $46.1 million, which is 27.4 percent of total revenue. The total overlapping tax rate for the City of Reno in 2014/2015 was $3.66 per $100 of assessed valuation. Assessed value is calculated as 35 percent of the replacement value of property. Of the $3.66 per $100, the City of Reno gets $0.9598 per $100 of which $0.4247 goes to the General Fund. The remainder goes to specific uses including public safety ($0.1684 via the General Fund), fire facilities and equipment ($0.1369 via the General Fund), and road and street improvements ($0.2298 to the Street Fund).

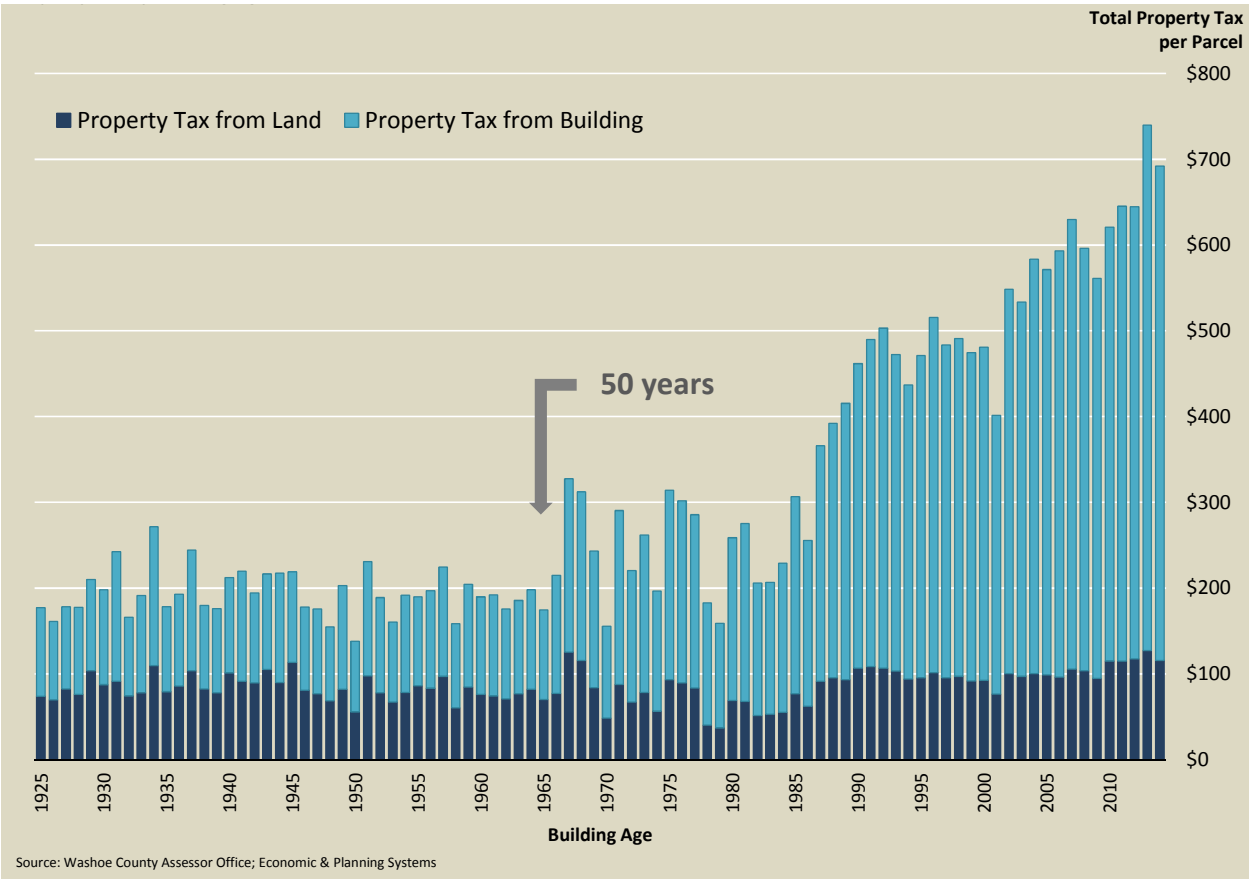
Impacts of Development

The amount of property tax generated by the City is dependent on the value of existing developed property and the addition of new development to undeveloped parcels. Developing vacant property to higher valued uses generates more property tax. Also generating increased property tax is the increase in value of existing properties through additions, renovation, and/or redevelopment.

Property value is determined through two measurements: the assessment of the value of the land and the assessment of the value of the improvements (buildings) on the land. The value of land varies depending on the location of the property and matches with differences in total market value in different geographies. The improvement value is determined through an assessment of replacement value (performed at least every five years) multiplied by a replacement factor that estimates the replacement cost of a building based on the use, age, and obsolescence of a building. In effect, the replacement value of a building or improvement is decreased by 1.5 percent annually for 50 years (assuming no major changes to a building). Therefore, the property tax generated from the value of land is fairly consistent by parcel (impacted by geography), but the revenue from a property improvements are greatly impacted by the age of the improvement.

Figure 2 shows the average total property tax by parcel and by year the primary improvement was built. The property tax from the land value and building value are shown and illustrate how different the property tax generated by parcels with older buildings is from parcels with newly built parcels. This approach to valuation increases the reliance on new development for property tax revenues, as no growth will produce diminishing returns in property tax revenue compared to costs that hypothetically are flat (or increasing with inflation). The increase in a property tax bill (assuming no change in use, new building or additions, or changes to parcel boundary) is also capped annually to an increase of 3 percent for residential parcels that are owner-occupied, that are used as a primary residence, or that are rental units that rent for less than HUD median market rents.

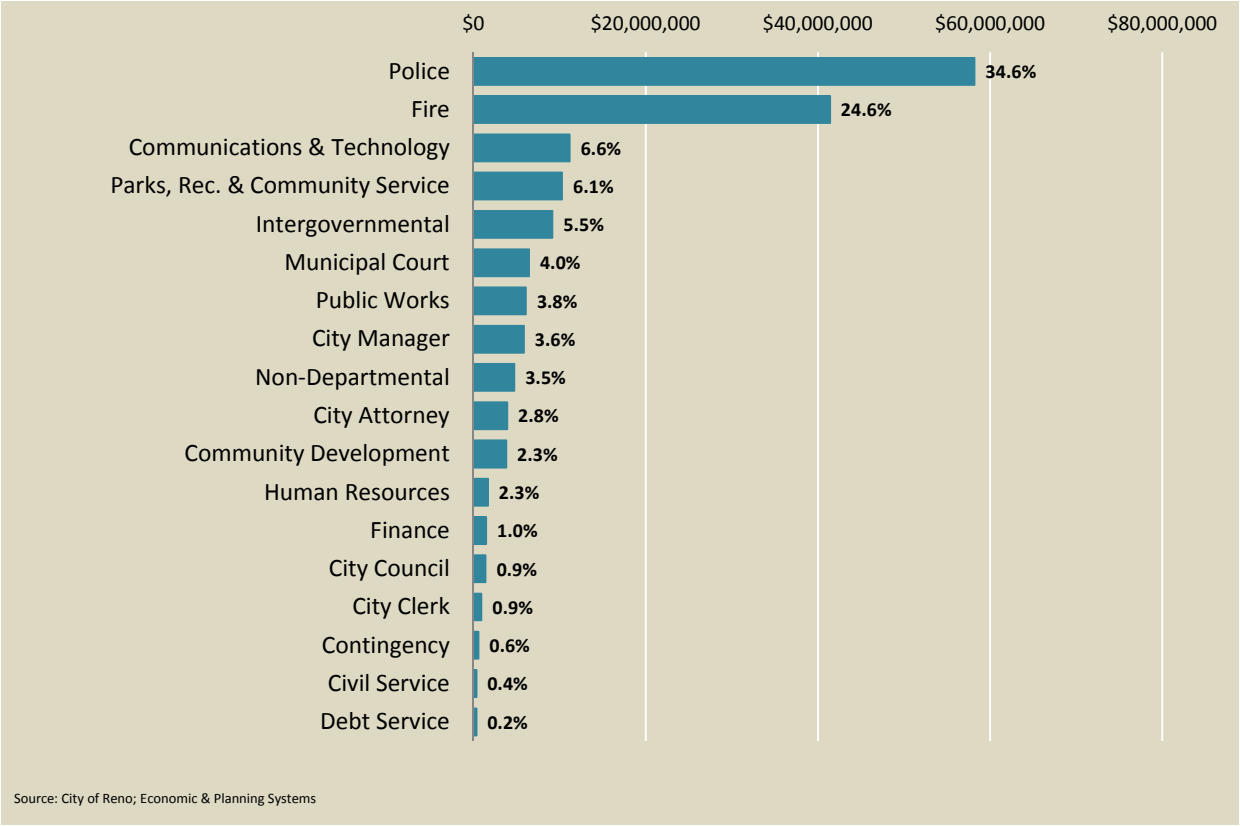
Figure 2
Average Property Tax per Parcel by Building Age, City of Reno



General Fund Expenditures

The expenditures in the City's General Fund fall within 18 major categories/departments. These expenditures per department are shown in Figure 3. Two departments account for the majority of the expenditures in the General Fund: Police and Fire. The budget for the Police Department in 2016 is $58.2 million (34.6 percent) and the budget for the Fire Department is $41.4 million (24.6 percent). Development has a major fiscal impact for both departments. The other two departments most impacted by new development are Parks, Recreation, and Community Service ($10.3 million, 6.1 percent) and Public Works ($6.1 million, 3.8 percent). The estimated impact of growth for these four departments specifically and the other departments will be estimated using a variety of approaches, which are described in subsequent sections of this this memorandum.

Figure 3
City of Reno General Fund Expenditures by Department, 2016



Source: City of Reno; Economic & Planning Systems

Fiscal Analysis Methodology

The purpose of fiscal impact analysis is to provide an objective estimate of the costs and revenue impacts to the City of new development in a variety of contexts. The analysis compares the estimated revenues generated by new development to the estimated costs of public services required to determine the net fiscal impact. Revenues and costs are estimated based on the budgets for each fund and department, and an assessment of potential effects of different types of development on each department or budget category. Certain revenue items are estimated using "case study" approaches based on formulas; for example, property tax is based on estimated assessed values multiplied by the applicable tax rates. Other items, such as public service costs related to residential development, are based on average cost factors (such as "per capita" estimate). The revenue sources and expenditures that have the largest impact on the budget and are most directly tied to growth will have a specific case study developed for them, while other revenues and expenditures will be estimated using average cost factors.

Average Cost Nexus Factors

EPS developed nexus factors that relate to the budget item being estimated to the service population or other metric that is best associated with the impact. These factors are discussed below in greater detail.

- Peak Persons Served (Residents and Employees) – Many services are affected by growth in both residents and employees. The purpose of this factor is to derive a peak population of persons served within the city. The number of people each use generates is estimated on average person generation factor for each use (average residents per household for single family and multifamily, and the average number of employees per square foot for retail, office, and industrial). Using the persons served approach means each new use will generate a number of people (i.e., one new single family housing unit will generate 2.48 people) which will be used to estimate costs and revenues based on the number of people use generates and average cost per person.
- Per Unit – Functions, such as business or liquor licenses, that serve specific land uses, such as commercial development, are estimated on a unit factor of 1,000 square feet of commercial/industrial space per unit or per residential unit.
- Street Lane Miles and Sewer Miles – Impacts to the Street Fund and the Sanitary Sewer Fund are estimated on the basis of "lane miles" or "sewer miles" for portions of those funds expenditures related to maintenance and capital improvements. The City maintains a certain amount of local and collector roads and a network of sewer main lines. A new development's impact will be judged based on the amount of street or sewer miles needed to serve the development and the average cost per lane mile or sewer mile.

Fixed and Variable Cost Adjustments

Directly applying the factors described above to new growth would be equivalent to using the average cost for each item, which can overstate cost impacts. For local governments whose services are at or near capacity, the average cost method is a generally accepted technique for estimating fiscal impacts. However, many functions still need to be adjusted to account for higher levels of fixed cost and/or a less direct relation to growth. The following process and assumptions were used in developing the "Percent Variable" adjustments to average costs.

- Administrative and General Government – Departments such as the City Council, City Manager, finance, communications and technology, human resources, and other department management functions have a high level of fixed costs regardless of the size of a city. Costs in these types of departments and functions are estimated to be 25 percent variable.
- Growth Impacted Departments – These include services such as development services (community development), municipal court, and dispatch. These types of services are estimated to be much more closely related to growth and increased population and are modeled using the average cost methodology or 100 percent variable.
- Functions with No Nexus or Relevance – Some city functions were determined not to have any relationship to real estate development projects.

General Fund Revenue

The preliminary approach that is used to estimate each revenue source is described in this section.

Sales Tax

Due to the way the State of Nevada collects and distributes CTX, the generation of sales tax from new development is based on the forecasted growth of the County and the use of a peak person factor that ties retail sales to the number people generated by a use and not where the actual retail sale is made.

Property Tax

Property tax is estimated based on estimates of the average value of new development by each major land use (single family, multifamily, office, retail and industrial). The average value will be factored down to 35 percent to estimate the assessed value of new development, and the property tax rate for the City's General Fund will be applied to estimate property tax ($0.42 per $100 of assessed value). The model will generally be used to estimate the impact of new development on the City and therefore will not have to factor in the depreciation of these uses over time. However, the comparison of the revenue from new buildings versus old buildings is provided to illustrate how the fiscal impact of each use changes over time.

Other Revenue Sources

The majority of other revenue sources are estimated using a peak person factor, with the exception of a few revenue sources. Licenses and fees that apply to only certain types of uses (i.e., business licenses, liquor licenses) will be applied on a per unit (either residential unit or equivalent commercial unit) basis.

General Fund Expenditures

The expenditures in the General Fund are estimated using a peak person factor or a per unit factor depending on the specific sub-department. For Police and Fire specific case studies were developed to estimate fiscal impacts.

Police

The 2016 budget for the Reno Police Department is approximately $58.2 million or 33.2 percent of the total general fund budget. In order to estimate future costs that the Police Department will incur, EPS has relied on call volume data provided by the Police Department. This data is organized by the use that is generating the call (i.e., residential, office, retail, etc.) determined by the geographic location of the call. There are five sub-departments within the Police budget whose expenditures are estimated using call volume data. These sub-departments account for the majority of the Police data. The remaining sub-departments are calculated on a person served basis. The approach used more closely ties the cost of police service to the uses that are generating the use. As a result, retail uses have the highest per unit cost because retail uses generate a higher number of police calls for both crime prevention and traffic incidents based on the geographic distribution of calls.

EPS has obtained a summary of the sectors (beats) by which the Police Department organizes the city and the number of officers currently serving each sector. This data will be in used in the future to assess the cost differences in different subareas of the city.

Fire

In order to estimate future costs that the Fire Department will incur, EPS has relied on call volume data that was provided by the Fire Department by fire station, and the service area of each fire station. Cost per fire station will be estimated based on required staffing levels and equipment needed. As development causes specific fire stations to exceed average thresholds for call volume per staffing level, an increase in costs will be triggered in addition to average per person served costs. As well, new development that occurs outside of existing fire station service areas will trigger the need for a new fire station and the additional operation costs associated with a new station. For the baseline assessment of cost per land use, a per person served average cost factor is used, but the analysis of the impact of development by geography will use variable cost per person served factors for four geographies within the city (North, Central, South, and West).

Other General Fund Expenditures

The remainder of General Fund expenditures are estimated using a per person served average cost factor. In addition, a variability factor was applied to each sub-department to account for expenditures not impacted by growth and fixed costs.

Street Special Revenue Fund

The Street Fund receives revenue from a dedicated property tax of $0.2298 per $100 of assessed value, which is 24 percent of the City's total property tax rate. It is used to fund street projects with 29 percent going to operation and 71 percent for repair and rehabilitation of streets per the City's Street Strategic Plan which is adopted by the City Council. These funds are restricted to neighborhood streets only.

Similar to the methodology used to calculate property tax revenues that are dedicated to the General Fund, this analysis assumes new property values for future development. Street Fund expenditures are estimated through assumptions regarding the amount of acreage associated with new development and the corresponding number of street miles that are required to serve a given acreage. Estimates of street miles per acre were determined through a series of case studies that evaluated the ratio of street miles per acre for a number of new single family and mixed-use developments in the City of Reno. Through these case studies, EPS generated baseline assumptions regarding the number of street miles per acre that various new development types are expected to generate and the corresponding cost to the City.

Subsequent sections of this report provide a comparison of the net fiscal impact to the Street Special Revenue Fund that result from using reduced property values, based on the existing assessor's methodology for depreciation.

Sanitary Sewer Enterprise Fund

The Sanitary Sewer Fund is an enterprise fund. As a result, sanitary and sewer costs associated with new development are expected to be balanced by the user fees that new development is expected to generate. The fund generates revenue through sewer user fees and new connection charges. The user fees are used for repair, maintenance, and operation of the sewer and storm sewer system. The connection charges are used for capital projects needed for construction improvements in expansion, extension, and betterment of the system including treatment facilities. The City has increased its user fees by 8 percent since 2011 in order to increase revenues for covering needed deferred improvement costs. City staff expects revenues to align with costs in the near future, and as of 2016 the user fees will be tied to annual CPI growth going forward.

Development Assumptions

In order to estimate the revenues and expenditures associated with future development, EPS has constructed an initial set of assumptions regarding demographic and economic factors associated with residential and commercial development. Future residential development prototypes include the following product types, their corresponding household size, average market value, and average assessed value, shown in Table 1.

Table 1
New Residential Development Prototypes

Product Type	Persons per Unit	Avg. Market Value per Unit	Avg. Assessed Value per Unit
Single Family	2.50	$375,000	$131,250
Townhome	2.00	$250,000	$87,500
Multifamily	2.00	$200,000	$70,000

Source: U.S. Census Bureau; Multiple Listing Service (MLS); Economic & Planning Systems

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Commercial development is separated into three commercial development categories that include retail, office, and industrial. The corresponding assumptions regarding employees per square foot, average market value, and average assessed value are summarized in Table 2.

Table 2
New Commercial Development Prototypes

Product Type	Gross Sq. Ft. per Employee	Avg. Market Value per Sq. Ft.	Avg. Assessed Value per Sq. Ft.
Retail	750	$190	$67
Office	525	$160	$56
Industrial	1,000	$100	$35

Source: U.S. Census Bureau; CoStar; Economic & Planning Systems

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Key Considerations

EPS was tasked in Phase I with developing a baseline fiscal impact model to provide the research and analysis necessary to assess the fiscal impact of new development in a variety of contexts. The series of major fiscal issues are (and will be in the future) analyzed using the fiscal model. The issues identified within EPS/Clarion's stakeholder outreach, the City's own outreach, and meetings with the City Council and Planning Commission. The issues analyzed for Phase I or to be analyzed in Phase II are listed below. The purpose of the model is to inform the City of the general implications of growth to the City's fiscal health and to evaluate potential Master Plan policies and strategies developed within Phase II.

The major issues to be analyzed identified to date include the following:

- Net Fiscal Impact by Use – This analysis estimates the net impact of each major land use on a per unit basis (one residential unit or 1,000 square feet of non-residential space). The purpose is to illustrate how the mixture of uses in the city work together to develop the fiscal health and balance of the city. (Phase I)

- Impact of Density and Land Use Pattern – This analysis uses elements of the fiscal model and national case studies to illustrate how costs to the City for various services/ infrastructure are different per use on a per unit basis for varying levels of density or different land use patterns. As well, the relative impact of the density of development on the overall fiscal impact. (Phase I)

- Impact of Geography – National case studies were analyzed to identify costs most often associated with infill development and greenfield development. The differences in relation to Reno are identified and the baseline fiscal model was modified to assess the differences in ongoing costs to the City based on the location within the city that new development occurs. (Phase I)

- Capital Cost of Growth and City's Role – The roles of providing new capital infrastructure to support development for the City, other agencies and developers are assessed to illustrate how infrastructure is provided in the region. The analysis attempts to organize the capital costs of new development within the different purviews of the different entities involved in the development process and assess how well this model impacts the Master Plan. (Phase I)

- Impact of Increases Levels of Service – Various departments within the City have been operating at less than optimal levels of staffing and funding in recent years. The analysis will illustrate how the fiscal impact of new development is changed by increased levels of service. (Phase II)

- Fiscal Impact of Growth Scenarios – All of the analysis listed above will ultimately be used to assess the impact of various growth scenarios developed in Phase II of the Master Plan update. The scenarios will show both different citywide scenarios as well as subarea specific analysis to inform major policy decisions. (Phase II)

Lastly, throughout the Master Plan update EPS will be generating a list of changes or strategies the City should explore to mitigate and/or address findings developed through the analysis completed above. These changes and strategies will be used to develop portions of the implementation plan for the Master Plan.

Net Fiscal Impact of Uses

The net fiscal impact, which is the measurement of revenues generated by new development less the expenditures created by new development, were estimated for each major land use including single family residential, multifamily residential, office, retail and industrial. This section summarizes the net fiscal impact of development on the General Fund and the Street Fund.

General Fund

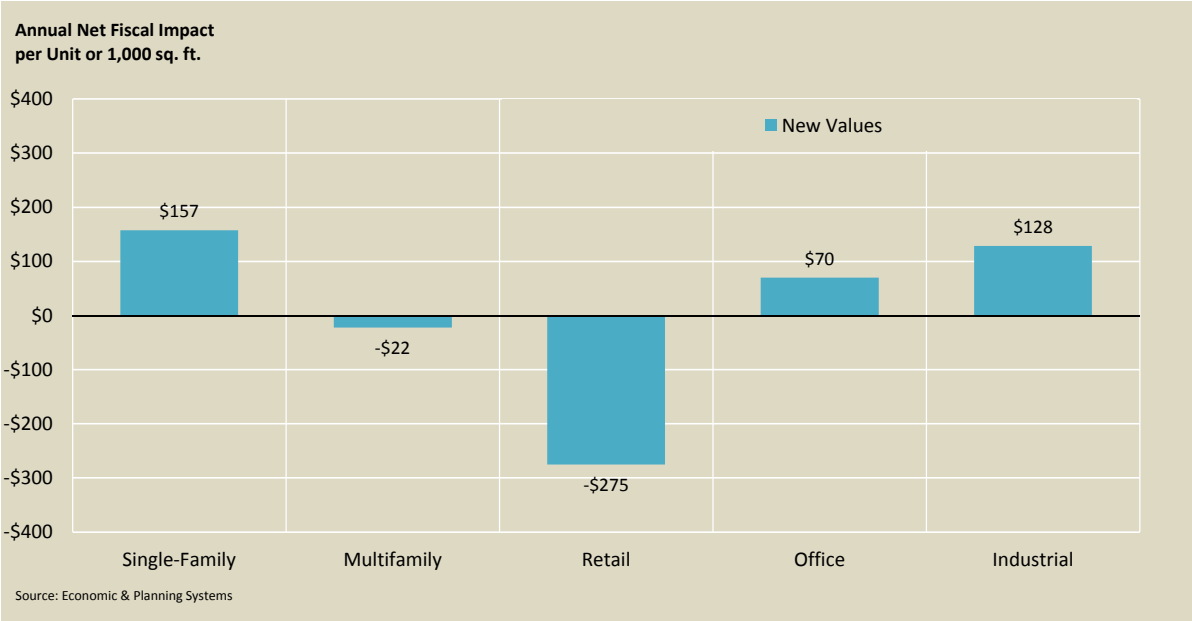
Residential

The net fiscal impact for a new single family home generates a net fiscal benefit to the City's General Fund of $157 per unit annually and a multifamily unit generates a slight fiscal negative impact per unit of $22 annually, shown in Figure 4. The difference in the net fiscal impact between single family and multifamily residential is primarily a result of the difference in property tax that is generated by the two development types. Generally, it is assumed that multifamily units have a lower market value than residential units and thus generate less property tax. Overall, multifamily units generate approximately 53 percent less property tax than single family units.

Commercial

Office and industrial uses generate an annual net fiscal benefit of $70 and $128 per 1,000 square feet, respectively, as shown in Figure 4. Retail generates an annual negative fiscal impact of $275 per 1,000 square feet. While office and industrial uses have a positive impact on the General Fund, retail development has a significant negative impact on the General Fund. There are two primary reasons for this. First, retail uses generate significantly more crime- and traffic-related police calls and thus have significant cost impacts on that police department. Second, due to the provisions governing Nevada's sales tax structure (CTX), additional retail development within the City of Reno does not directly generate additional sales tax revenue for the City. As a result, the sales tax revenues that new retail development will generate are not directly attributed to the physical location of new retail development as long as it is in Washoe County.

Figure 4
General Fund Net Fiscal Impact: New Property Values



Street Fund

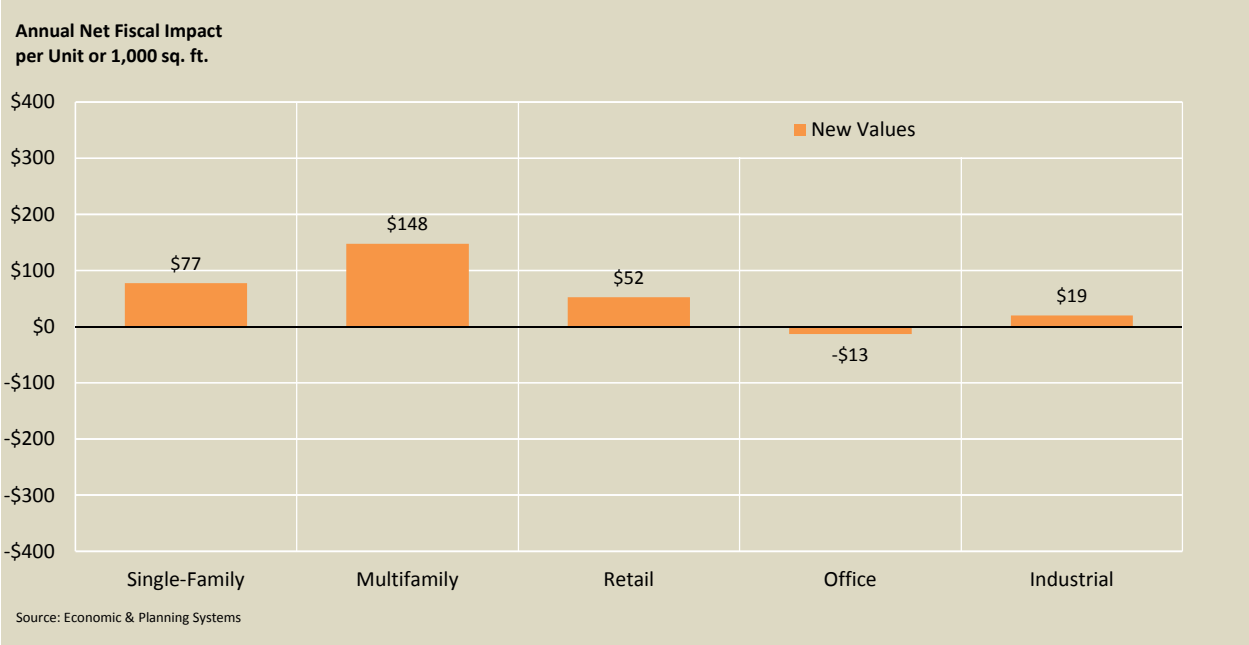
Residential

The net fiscal impact of single family development on the Street Fund is approximately $77 per unit annually. Multifamily development generates approximately $148 per unit annually. The higher densities and the corresponding reduction in total street miles associated with multifamily development is the primary reason for the increase in the annual fiscal impact per unit multifamily development has on the City's budget.

Commercial

Again, the primary reason net fiscal impacts of commercial development can vary can be attributed directly to the amount of property tax each type of development generates, the average densities associated with each type of development, and the number of street miles required to serve each development type. Retail and industrial development have a positive net fiscal impact of $52 and $19 per 1,000 square feet, respectively, while office has a negative fiscal impact of negative $13 per 1,000 square feet.

Figure 5
Street Fund Net Fiscal Impact: New Property Values

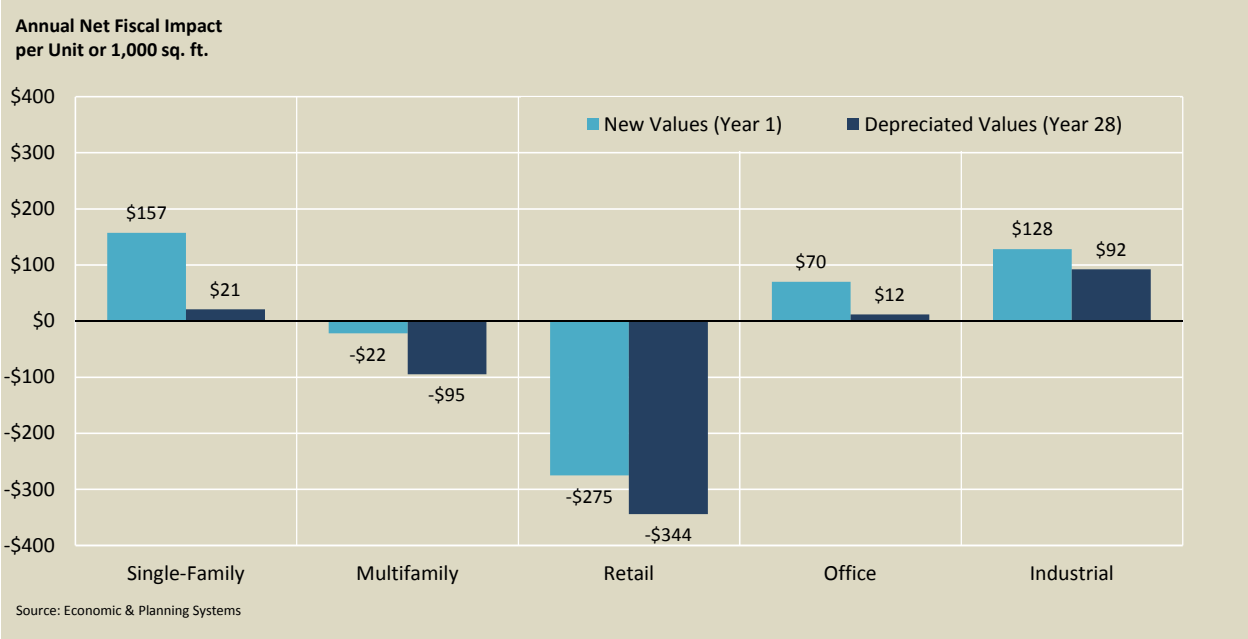


Impact of Property Value Depreciation

General Fund

The provisions governing Nevada's property tax structure have a significant effect on the net fiscal impact of development over the long-run. Specifically, the provision requiring that improvements (i.e., buildings) are valued at present replacement cost less depreciation at 1.5 percent per year to 50 years significantly reduces the amount of property tax that an individual property generates over time. For example, the value of a property will be reduced by 25 percent over approximately 28 years of improved value depreciation. Accordingly, the fiscal benefit of a single family unit an in year will be decreased by approximately 87 percent by year 28, as shown in Figure 6.

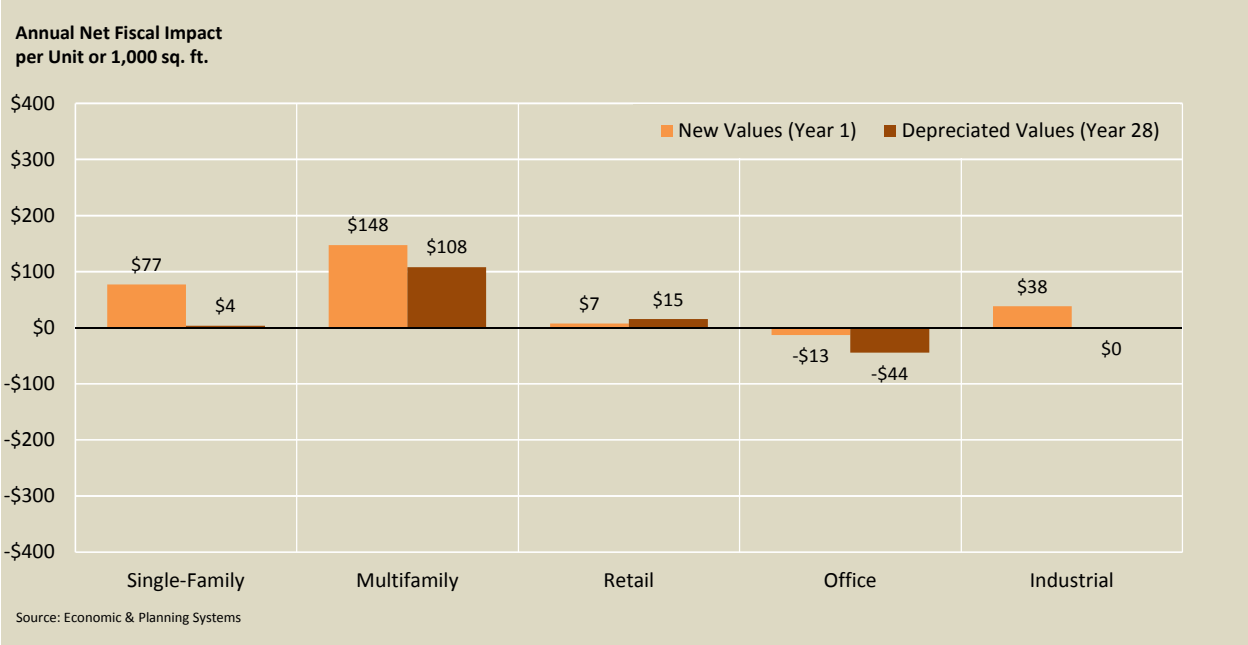
Figure 6
General Fund Net Fiscal Impact: Reduced Property Values as a Result of Improved Value Depreciation



Street Fund

The impact of depreciation also has a significant effect on the net fiscal impact of development on the Street Fund. Due to the fact that property tax is the sole source of revenue for the fund, the effect is even more pronounced than it is in the General Fund. Similar to the previous example, as value of a property is reduced by 25 percent as the depreciation methodology is expected to do over approximately 28 years, the fiscal impact of a single family unit is decreased by approximately 95 percent, as shown in Figure 7.

Figure 7
Street Fund Net Fiscal Impact: Reduced Property Values as a Result of Improved Value Depreciation



Impact of Density and Land Use Pattern

The density or intensity of development is often assumed to generate differential impacts on cost to serve development. There is a growing volume of research related to estimating the differences of fiscal impact of different development densities. Most often these studies are completed using a methodology that compares conventional suburban development to more compact development patterns, often referred to or defined as “Smart Growth”. A 2013 study (Building Better Budgets; A National Examination of the Fiscal Benefits of Smart Growth Development) completed by Smart Growth America analyzed 17 fiscal impact studies completed within the U.S. that evaluated the impact of Smart Growth versus conventional suburban development. The study found that upfront capital costs for infrastructure were 38 percent less on average for Smart Growth developments and the ongoing cost to service these developments were 10 percent less.

The impact of density is dependent on the service provided and how the costs are modeled, which is especially true for Reno. For several expenditures, EPS used a person served average cost factor to estimate expenditure costs, which is impacted by increased or decreased density but by a minimal amount. For other expenditures, EPS used specific case studies. Some of these case studies found a larger impact of the density of development on the fiscal health of the city. The differences identified are summarized below.

The services and infrastructure provided by the City of Reno that is most impacted by density of development are fire service, streets, and sewer. The density of development has an impact on the cost of providing these services, as denser development patterns have a lower cost per unit or square foot because less infrastructure is needed to serve each home or business. Generally, denser development requires less streets and sewer miles to serve a new residents or business. Fire service costs are less per person within each fire district response area until calls for service trigger the need for additional staffing. The denser development patterns have the greatest impact on streets cost, which is summarized below. Density however has minimal impact on the General Fund and is difficult to estimate.

General Fund Impact

For the majority of the expenditures in the City’s General Fund, EPS has used a person-served approach, which attributes cost based on the number of people (residents or employees) a use generates. If a parcel of land has more development on it, then more people will be on this parcel and therefore more city expenditures will be required. Generally EPS believes that there is little positive fiscal impact on the General Fund due to denser development. However, there is one major department within the General Fund that is impacted by density—fire service.

Fire service within the city is driven by two elements: 1) the volume of calls a fire station receives, and 2) the response time to calls. Fire stations in the city are placed strategically to meet standards for response time for calls for service (typically around five minutes on average). The number of households and businesses served within an average response time travel shed can vary greatly based on the density of development and roadway network. Generally, stations located in lower density areas with a disconnected or constrained roadway network will serve fewer residents and businesses and therefore have a higher cost per capita (per person served). The need to provide service within a reasonable response time, as the City does currently, indicates that development and annexations in areas that are sparsely populated or with disconnected roadways will increase costs to the City. The evaluation of the impact of development patterns (and therefore density) on fire service in Reno was analyzed and is summarized in the Impact of Geography section of this memorandum.

Street Fund and Sanitary Sewer Fund

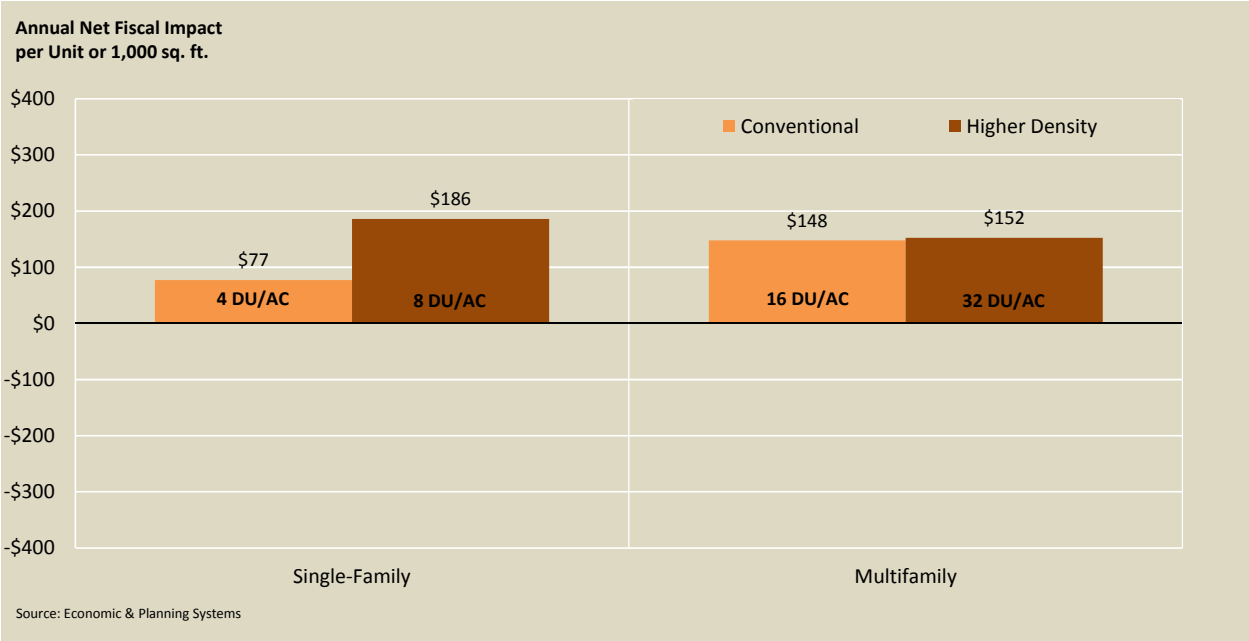
The two other major funds analyzed by EPS, the Street Fund and Sanitary Sewer fund, are estimated to be impacted by density. The differences in revenues and costs by density vary between the two funds.

Street Fund

The density of development has a direct impact on the total acreage of a given development and the corresponding street miles that are required to serve that area. The fiscal impacts summarized in previous sections of this memorandum reflect conventional development densities. If, however, the density of future developments increases, there is the potential for the Street Fund to benefit from significant reduction in ongoing costs associated with operations and maintenance.

The net fiscal impacts summarized in previous sections reflect an average density of four dwelling units per acre for single family development and 16 dwelling units per acre for multifamily development. If, for example, the density of a single family development is doubled to 8 dwelling units per acre, the net fiscal impact on the Street Fund increases from $77 per unit to $186 per unit, shown in Figure 8. As shown, the impact of higher density development on multifamily development is minimal. This is primarily a result of the limited number of street miles that are typically required to serve multifamily development.

Figure 8
Street Fund Net Fiscal Impact: Conventional vs. Higher Density Development



Impact of Geography

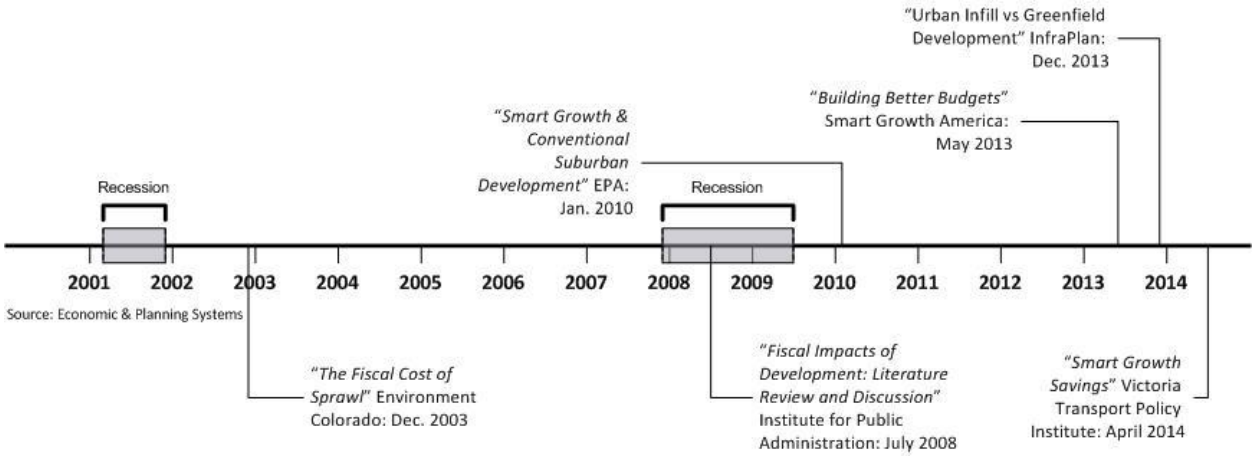
A major question identified in the outreach is the potential for the fiscal impact differential from infill development versus greenfield development. This sort of analysis typically assumes that infill development uses existing infrastructure and greenfield development generates the need for new infrastructure and therefore is more costly. The differences in costs, however, are dependent on a given community and its budget structure and therefore may not have a significant difference in Reno. Each major expenditure must be assessed to determine if costs savings or cost increases will be generated based on whether the development is occurring on an infill site (existing infrastructure) or a greenfield site (no existing infrastructure) and is more related to capital cost versus ongoing costs.

An alternative to the infill versus greenfield analysis is an assessment of the impact of new development based on the part of the city development is occurring in. EPS has divided the city into four major areas (North, Central, South and West) and is assessing the differences in fiscal impact based on the area of the city. Certain portions of the city have differences in how services are provided and also varying levels of population and population density, which will impact the City fiscally depending on where growth is planned for and occurs. This analysis is intended to help provide technical analysis to assess where certain uses are planned for and the amount of growth allowed in each area of the city. The cost of capital improvements is a major factor and needs to be addressed as well, in addition to the operational/ongoing fiscal impact analysis. The analysis uses both qualitative and quantitative analysis to illustrate the issues related to geography in Reno.

Literature Reviewed

A summary of recent studies related to the cost of development in infill versus greenfield settings is provided below. This is not intended to be an extensive review of literature that addresses the advantages and disadvantages to infill or greenfield development, but it is intended to pull from some of the more prominent contributions of recent literature regarding the impacts associated with these types of development. As illustrated in Figure 9, six significant contributions to the literature from the past decade are reviewed. The oldest study, completed by the Environment Colorado Research and Policy Center in late 2003, offers remarkably consistent findings as those of newer studies, e.g. a study completed by the Victoria Policy Institute in April 2014.

Figure 9
Timeline of Development Type Infrastructure Cost Literature Review



Definitions

The definitions of infill and greenfield have been used with broad applications. For this study, definitions have been provided to clarify the analysis.

Infill

Infill can generally be defined as development or redevelopment of vacant, abandoned, or underutilized sites located within an existing and/or developed municipal context. A primary characteristic of such a site is the presence of water, sewer, communications, or road, etc. infrastructure internal to the site that are relatively (though not always or completely) sufficient to meet the needs of the proposed development. Other characteristics may be more contextual, such as proximity to other residential areas, services, civic amenities and attractions, and employment centers.

Greenfield

Greenfield development, by contrast, is characteristically the development of open land or existing agricultural land on the urban periphery that does not contain water, sewer, communications, or road infrastructure internal to the site. As well, regional infrastructure is relatively insufficient to meet the demands of the proposed development. Under these conditions, utility connections, such as mainline water and sewer lines need to be extended into the site, roads and rights-of-way need to be provided, and other infrastructure needs to be developed.

Impacts

As noted in much of the literature reviewed, the impacts of infill and greenfield developments can vary widely depending on their location and proximity to services, existing infrastructure, transportation networks, and employment centers. Generally, however, there are consistencies among the findings of these studies pointing to the reality of increased costs and impacts to the public sector in both capital and ongoing costs attributed to greenfield development that exceed those of infill development.

The following findings are summarized from the studies collected and generally have itemized costs associated with the following horizontal infrastructure costs to the public sector in terms of either dispersed or compact development, density levels, general infill, or greenfield development case studies. The costs identified are also fairly high level in terms of roads, water and wastewater, fire, police, schools. Some studies also delve deeper to include electricity, telecommunications, gas, and health costs. But for simplicity of understanding, the following discusses the cost impacts associated with water/sewer and roads.

Water and Sewer Impacts

The extension of mainline water and sewer infrastructure can be a costly component of horizontal development, regardless of location. But for the most part, the findings of this literature reveal that water and sewer costs associated with greenfield development are 20 to 50 percent higher than water and sewer costs associated with infill development. Using case studies, the authors of this literature calculate that:

- Victoria Transport Policy Institute (2014): Annual municipal utility costs are 36 to 48 percent higher for rural cluster development types than for infill within higher or medium density development types.
- Environment Colorado (2003): The capital costs of constructing water and sewer lines can increase costs by 20 to 40 percent.
- Infraplan (2013): Citing a study completed by Roman Trubka in 2012, which used 22 case studies from the U.S., Canada, and Australia, upfront water and sewer infrastructure costs were 52 percent higher in outer-fringe or greenfield developments than infill developments.
- Institute for Public Administration (2008): In this literature review, a study of developments in Texas identified that water infrastructure in greenfield development cost approximately 27 percent more than in infill developments. Other studies cited cost savings for infill of 17 to 29 percent over greenfield.
- EPA (2010): This study estimated that general infrastructure cost savings for infill development ranged from 32 to 47 percent over greenfield development.
- Smart Growth America (2013): This study uses a handful of case studies from around the country and estimates that infill or smart growth development saves an average of 38 percent on general infrastructure costs over greenfield or conventional suburban development.

Road Impacts

The findings of some of the literature show that road costs associated with infill come with a cost savings ranging from 12 to 25 percent lower than greenfield development, whereas other sources put the magnitude of difference between costs in multiples of 3 to 5. Estimates by study are:

- Victoria Transport Policy Institute (2014): This study cited a 1999 work that estimated the cost of roads at different densities. Projects at 2.1 units per acre required nearly 3 times the cost of roads than developments of 5.5 units per acre.
- Environment Colorado (2003): This study estimated that the cost of building roads was approximately 25 percent lower in infill or compactly developed areas than in sprawling greenfield areas.
- Infraplan (2013): In this study of 22 case studies, average road costs of greenfield development were higher by multiplies of 5, and general infrastructure costs were higher in greenfield developments by a factor of 3 over infill development.
- Institute for Public Administration (2008): This study cited a national study of road infrastructure costs completed in 2000 that estimated a savings of nearly 12 percent if a more planned development pattern took place. It also cited another national report that average several fiscal impact studies conducted on the differences between road costs for infill and greenfield development types, which determined that roads in infill development cost 25 percent less than roads in greenfield developments.

Impact of Geography in Reno

The City of Reno and the Truckee Meadows region is unique in its approach to providing services and infrastructure to new development. The cost of providing water, sewer, and roadways is most impacted by geography. In Reno, the cost to provide two of these services, water and roadways, falls mainly on other agencies. Providing sewer and fire services are the most impacted by geography for the City of Reno.

Fire Service

Fire service is the expenditure item within the General Fund that is significantly impacted by the location of new development. The City of Reno has 14 fire stations that service the city. Two of these stations are not used currently due to lack of resources to staff the stations. The other 12 stations are staffed by 226 emergency personnel. Each fire station typically has 16 personnel per station (Fire Station 1 and 3 has more staff due the presence of a ladder truck and additional EMS needs) currently, but the department's goal is 20 per station.

Staffing and major equipment (fire trucks) are the major costs related to on-going fire service. Staffing at each fire station is dependent on the equipment at the station (i.e. number of trucks or EMS vehicles) and the call level. Fire stations are spread throughout the city to ensure a response time to emergency events (average of approximately five minutes). As a result each fire station has its own unique response area that it covers and variable call levels. The need to cover specific geography typically is a greater driver for location and staffing for a station than call volume. The only area that has enhanced staffing due to call volume is Station 1, which serves downtown Reno.

The need for a response area that facilitates a desired or required response time means that many stations have call levels that are well below other station areas. Areas within the city that are spread out and have lower density of residents and businesses have a higher cost per person served due to this. The service cost per call or person is higher in these areas than more central or dense areas. EPS aggregated the fire response districts for each station into four major geographies; Central, North, South, and West, which are shown in Figure 10. The emergency operations portion of the fire budget (86 percent of the total fire budget) was divided by the number of residents and workers in the city to develop a baseline cost per person served of $95, which is used in the baseline model. The number of residents and workers in each of the four districts was estimated and the total emergency operations budget was split on a per capita basis among the four areas. The cost per person served was then estimated to develop variable cost per use for each district.

The net fiscal impact of new development by each use was estimated for each of the four geographies to illustrate the impact. Figure 11 shows the net fiscal impact by area for each use with the citywide average illustrated with a red line.

Fire service within the central portion of the city is estimated to be approximately the same as the citywide average. These stations have average to above average call volumes and serve well populated areas. Some of the stations in the central area, which are mainly the stations near downtown, have greater than average call volumes. A large amount of new development within these station areas would trigger the need for additional staffing and would generate higher cost per person served. This exact threshold is difficult to determine, but this anticipated impact is worth noting and planning for.

The southern portion of the city has the lowest cost per person to serve for fire and therefore a greater net fiscal benefit. The North and West subareas have 25 to 30 percent higher costs per person served than the citywide average, and therefore generate greater negative fiscal impacts than other subareas. This is due to the spread out and sparsely populated nature of portions of these subareas, which means less calls for service are generated but stations still need to be fully staffed. The roadway network in these areas also has a large impact on costs. The more disconnected and circuitous the roadway network the smaller the response district a fire station can have in order to maintain desired response times.

Figure 10
Aggregated Fire Response Subareas and Fire Stations

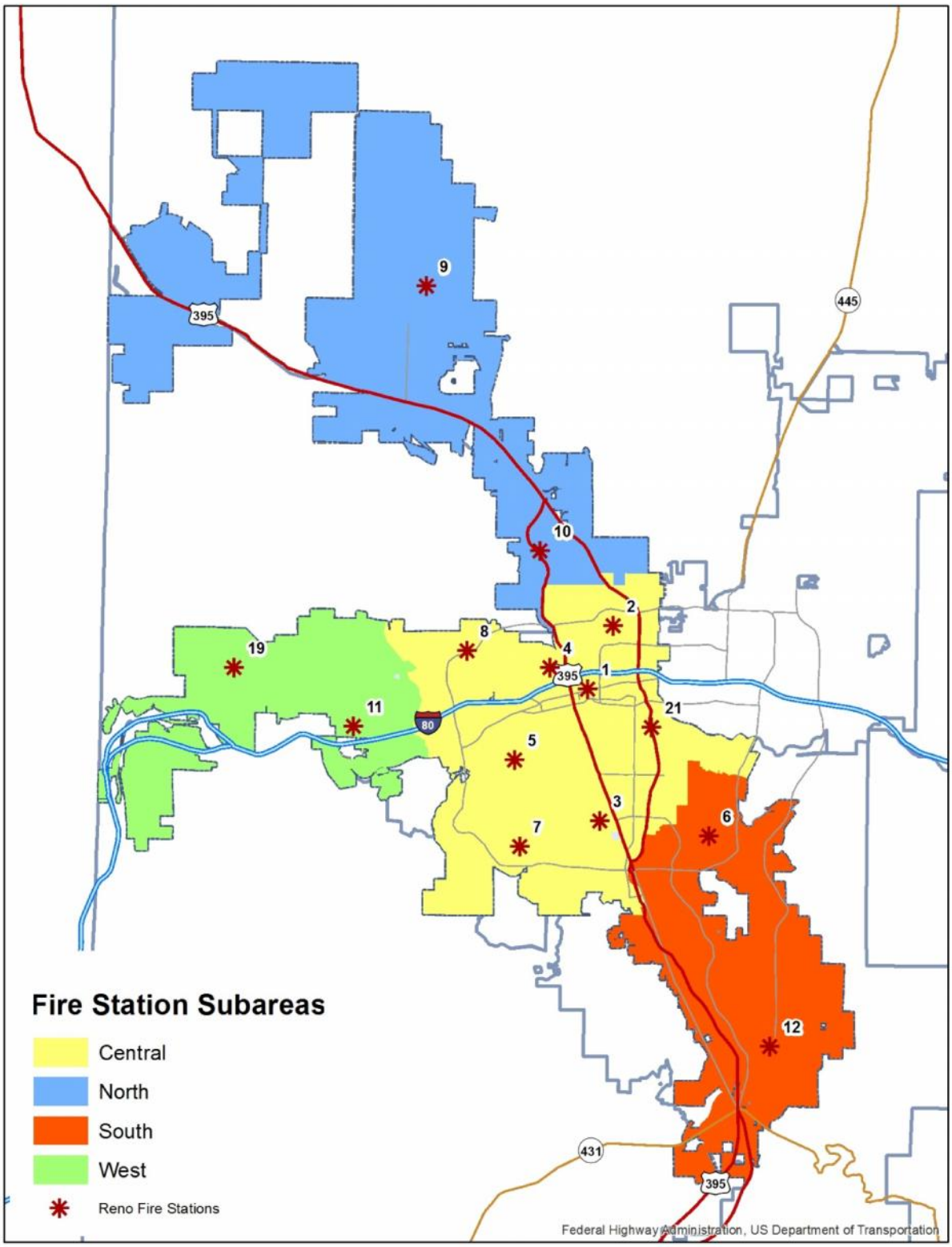
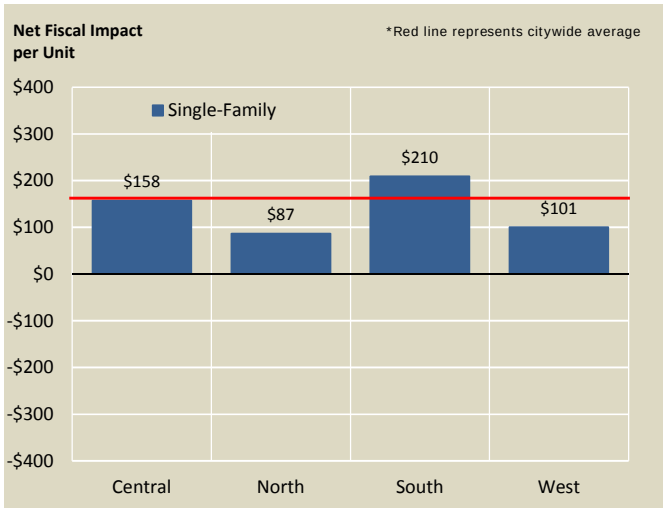
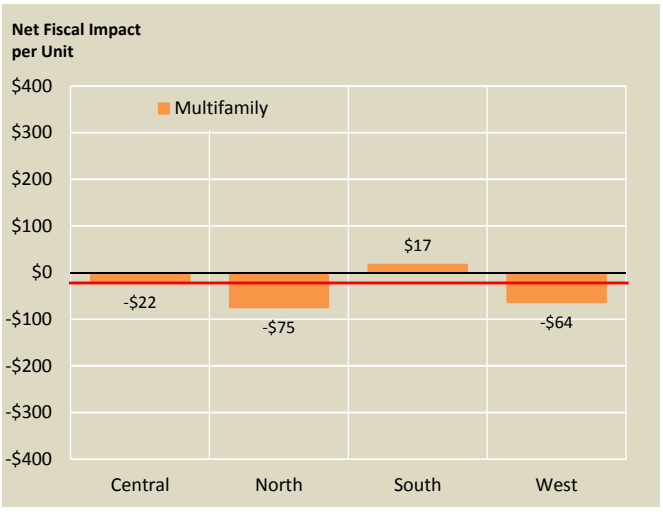
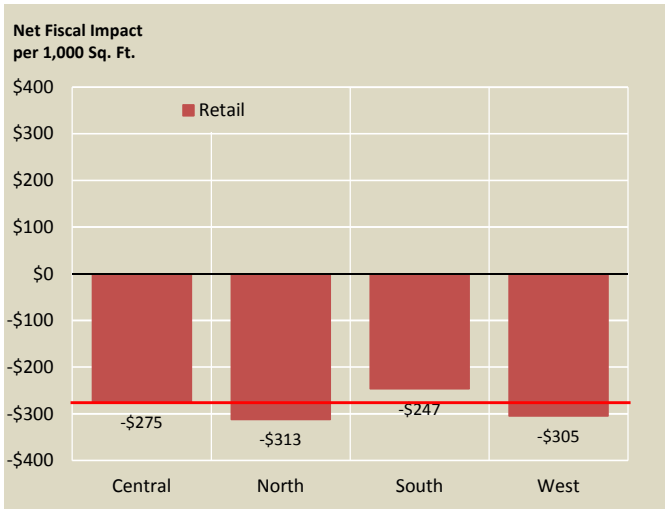
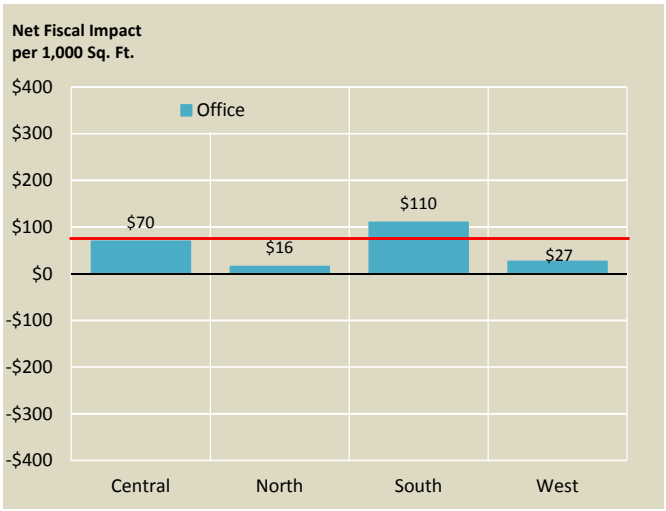


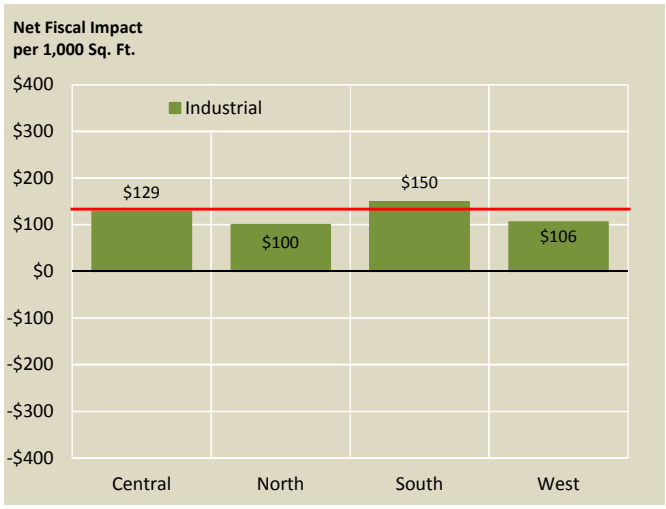
Figure 11
Impact of Geography on Net Fiscal Impact: Differential Costs Related to Fire Department











Wastewater Treatment

Sanitary sewer services are also impacted by geography. This impact is largely due to differing wastewater treatment needs and facilities within the city. As described earlier, wastewater treatment costs are part of the Sanitary Sewer Enterprise Fund. This fund is a cost recover fund that charges rates based on the cost to provide service.

There are three major treatment areas; North Valley, Truckee Meadows, and South Truckee Meadows. Each area has separate treatment facilities. The North Valley has three facilities; the Cold Springs wastewater treatment facility, the Lemmon Valley treatment facility and the Reno/Stead water reclamation facility. The Truckee Meadows Wastewater Reclamation Facility serves the Truckee Meadow area. Lastly, the South Truckee Meadows area is served by the South Truckee Meadows wastewater reclamation facility.

Each treatment facility has differing remaining capacities and on-going maintenance and upgrade costs. Based on forecasts ((the parcel based Population and Employment Model (PEM) using 2012 Consensus Forecast, and the 2014 Consensus Forecast which is not parcel based)) the estimated timing of plant upgrades are estimated. The Truckee Meadows facility, which is the largest (33.0 MGD), will not need upgrades until 2030. The South Truckee Meadows facility is estimated to need upgrades until 2020. The two larger North Valley facilities, Reno/Stead and Cold Springs, will not need upgrades until 2029 and 2034 respectively. Each planned upgrade for each facility has different cost and timing, but the implications on timing and cost are driven largely by growth in these areas. New connections fees are anticipated to pay for these upgrades; however they do not vary by geography. User fees also do not vary by geography. It may be worth exploring the need to vary user rates by geography to address differing issues in different treatment areas.

Capital Costs of Growth and City's Role

Infrastructure to serve new development is a provided and paid for by a variety of entities in Reno. This section identifies the infrastructure needed to serve a new project and the City's role in providing and paying for new development. As well, this section illustrates the impact that investments by the City into infrastructure can impact the pattern of new growth.

Regional Roles and Responsibilities in Growth and Infrastructure

There are typically several infrastructure improvements needed to make new development projects possible. The major improvements needed generally fall within six categories; Streets, Water, Sewer, Parks, Fire, and Schools. Improvements under each category are provided and paid for in similar ways but the approach is different for each, with dramatically varying levels of responsibilities for the City of Reno. These infrastructure improvements are essential to adequately serve new development and maintain the quality of life in Reno regardless of where and what form the development occurs in. The entity responsible for providing new infrastructure and how it is funded is summarized for each category below and show in Table 3.

Streets

Regional streets (arterials and collectors with a minimum level of traffic) are maintained by the Regional Transportation Commission (RTC). Local roads are maintained by the City of Reno. The developer of a new project is required to build and provide all streets needed to provide access and serve buildings within the project. The extension of a regional street to provide access to the new project must be provided by the developer based on the RTC and City of Reno's plans for the area and the minimum street facility needed to serve the development. Projects served by existing streets must pay for any improvements needed (capacity, signals, turn lanes) to serve the development. In addition, the developer must pay a regional road impact fee (based on the number of units or square feet in the project) to the RTC to offset impacts on regional roadways in the area. The RTC has a program that gives developers credits and/or fee offsets for improvements made by the developer that exceed those needed for their development.

The City of Reno, for the most part, is not involved with or responsible for providing streets to serve new development given that all new local roads are required by the developer and the RTC is responsible for regional roadways. All local streets (and collectors with low traffic levels) are transferred to the City and become the City's responsibility for maintenance. The City does have a major role in the transportation plans (both the City's and RTC's) that determine the street network and street design for new development throughout the city.

Water

Water within Reno is primarily provided by the Truckee Meadows Water Authority. The developer is responsible for extending and building all water lines and mains needed to serve their development. In addition, a developer is required to dedicate water rights and/or pay a water resources fee and a facilities fee to offset the cost to provide water to the new development. The City of Reno has no role in providing water.

Sanitary Sewer

Sanitary sewer services are provided by the City of Reno. A new development project is required to extend sewer collection mains (at the sewer pipe size needed for the development) needed for the project and to build all sewer lines needed to serve buildings. The sewer collection pipes are

transferred to City ownership and the City is responsible for repair and maintenance. The City of Reno also charges a sewer connection fee that pays for building and upsizing sewer mains to serve development and to improve and/or build treatment facilities needed to expand capacity to serve new development. The City can require a developer to build upsized sewer mains, in anticipation of additional new development that will use the sewer main, and repay the developer the pro-rated additional cost using payments from other development projects and connection fee proceeds.

The City has a large role in providing sewer infrastructure for new development. The City must plan and provide a regional sewer network and treatment facilities that can accommodate new development. The City largely relies on developers to build new sewer mains but is an active partner in paying for the improvements.

Parks

Parks and open space are mainly provided by the City of Reno. The City of Reno charges a construction use tax for new residential units (max $1,000 per unit) to pay for new parks and park amenities. A developer may choose to build and/or dedicate land for a park and have the cost offset by waiving the construction use tax and payments from the City. A developer may also provide and maintain a park within a PUD for the housing units in the PUD and have the cost offset, however the park is not required to be public but must meet City requirements for design.

Fire Stations

The City of Reno provides fire services to all residents in the city. New developments that fall outside existing fire service areas trigger the need for new fire stations. Most often this occurs with newly annexed developments. The City of Reno is responsible for providing the fire station but has no formalized mechanism for offsetting the cost for the new station. The City has traditionally negotiated with developers for land dedications or construction of a fire station within the development approval process.

Schools

Schools are provided by the Washoe County School District. The school district has no formalized mechanism for offsetting costs for new schools generated by new development. The largest problem facing the school district is overcrowding and providing school capacity for new students. The school district currently struggles to keep up with on-going repair and maintenance for existing facilities with its current revenue streams (property tax and government service tax) and has limited resources to build new schools. Other school districts in the state have additional funding mechanism (real estate transfer tax, construction use tax, county infrastructure tax, and lodging tax) to help pay for schools. Larger residential developments may voluntarily dedicate land and/or build schools for the school district in order to create a marketable development project. Schools access and quality are often a huge determinant for home purchase locations and can have a big impact on which areas of the region grow and if the region can attract new residents/workers.

Table 3
Infrastructure for New Development Roles

Type	Provider Who builds it	Owner Who maintains it	Funding Source(s) Who pays for it
Streets			
Regional Streets	RTC/Developer	RTC	Regional Road Impact Fee/Developer
Local Streets	Developer	City of Reno	Developer
Water			
Water Supply	TMWA	TMWA	Water Resources and Facilities Fee
Water Mains	Developer	TMWA	Developer
Water Service Lines	Developer	TMWA	Developer
Sewer			
Treatment Capacity	City of Reno	City of Reno	Connection Fee
Sewer Mains/Collection Lines	City of Reno/Developer	City of Reno	Connection Fee/Developer
Sewer Service Lines	Developer	City of Reno	Developer
Parks			
New Parks	City of Reno/Developer	City of Reno/HOA	Parks Construction Use Tax/Developer Dedication
Fire			
New Fire Statiosn	City of Reno/Developer	City of Reno	Reno General Fund and CIP/Voluntary Developer Dedication
Schools			
New Schools	Washoe County School District	Washoe County School District	WCSD CIP/Voluntary Developer Dedication

Reno's Role in Location of Growth

The assessment of the roles of providing new infrastructure provided above highlights the elements where the City can and should have the largest influence on where growth occurs. Typically, the feasibility of greenfield development projects is largely dependent on the cost of providing infrastructure, especially streets and sanitary sewer. The City's plans and policies related to the provision of sanitary sewer and streets (in coordination with RTC) have a big impact on where new development can and will occur.

The previous section illustrates that new infrastructure needed to support new development has to come primarily from a developer, especially in areas without existing infrastructure. Generally, this situation is what the City of Reno would like to see, which is to have development pay its own way. However, placing the burden largely on the developer has implications on where growth can and will go due to the economic feasibility of development.

All of the revenue streams identified for financing new infrastructure are upfront cost, meaning the developer must pay for them before the project is fully built. The current structure places the burden on the developer to raise enough revenue to offset the cost of building infrastructure and the associated impact fees. These costs need to be offset or eliminated by the developer reducing land costs, increasing prices/rents, or increasing the size of the development.

Development pressure and the path of growth has occurred generally where developers have felt they could build a feasible project and less based on the direction the City may have desired within its Master Plan. Additionally, there may be areas within the city and its sphere of influence where growth is desired by the community, but development is not feasible due to lack of infrastructure and the cost to provide it. The northern part of the city, specifically around the Reno-Stead Airport, is a potential example of this situation. The current framework has put the City largely in a reactive role to new development despite its Master Plan and the larger regional plan.

The investment of capital dollars into infrastructure can have a major impact on where development occurs and the type of development. The City has the ability to be more proactive in charting its future growth patterns but needs to lead with investments. This shift in approach and policy can greatly aid in achieving the vision set forth in the Master Plan but is not without risk of missing market demand or lacking revenue options. As well, it's likely the City may have to step outside of its traditional roles and partner with regional agencies to take a more proactive approach given the structure of the region.

There are generally two approaches to a more proactive approach to guiding development in the city. The first is to identify, finance, and build missing basic infrastructure that can make certain areas more feasible for development. An example of this would be building sewer mains to serve areas where the cost is too great for a single development project to absorb the burden. The second is to invest in infrastructure "amenities" that will make areas more attractive for new development. Examples of these investments would be helping finance new schools, trails, parks, paths, enhanced streetscapes, and others. The goal over the second phase of the Master Plan update is to identify areas where growth is desired in the city and its sphere of influence, identify investments that are needed to address gaps or financial barriers, and identify amenities the City could invest in as an incentive to the private development market to implement the Master Plan vision for that area.

The crux to achieving the above goal is finding and implementing the financial tools needed to make this achievable and resorting the roles and responsibilities, where possible, for providing infrastructure. The focus of the Phase II policies and largely the Implementation Plan will be to do this. Some preliminary ideas that will be explored in the second phase, assuming direction from the community and City Council warrant it, are summarized below.

- Development of a strategic CIP with dedicated funding source tied to the Master Plan
- Alignment of revenue streams for new infrastructure with specific areas generating the need. Specific elements of this include:
    - Wastewater Treatment: The City of Reno has three major treatment areas; North Valley, Truckee Meadows, and South Truckee Meadows. Each area has separate treatment facilities and each area has differing estimates for timing of plant upgrades and costs for these upgrades. The City charges one connection fee for the entire city. As well, the City has been rapidly increasing user fees to pay for improvements needed to the overall system. Exploration of the potential for variable connection fees by treatment areas is needed, as well as, identifying any costs funded through user fees that should be paid for by new development.
    - Proactive investments: Identifying investments in infrastructure that will spur the development market in areas of change the City wants to direct growth to will be needed to implement the Master Plan. To facilitate this, area specific financing approaches should be explored to place the burden of cost on the future users and not the community as a whole.
- Shifting portions of the burden of the capital cost of new development from upfront costs to costs paid by users over time. Currently, the majority of revenue tools used to fund new development results in upfront costs for developers, which impacts the location of growth but also the affordability of new development.

- Evaluation of need for revised or new fees or policies to address the impact of new development. Three areas of consideration include;
  - Fire: The City has no mechanism to fund new fire stations or formalized policy for land dedication through development approval.
  - Parks: The City currently refunds developers construction use tax if they provide parks to residents of their developments. In some cases these parks are not public and only for the residents of that PUD. Evaluation of this approach is needed to determine if it is creating the park system the City wants and is effectively funding new parks.
  - Schools: The availability of quality of schools is a huge driver of home purchase decisions and also the region's ability to attract new workers. The City could potentially take a more proactive approach to aid the Washoe County School District in funding new schools through land use policies.
- Development of strategies and funding tools for catalyzing and incenting development through investment in amenities.

Summary of Findings

The preliminary findings from the fiscal impact analysis are summarized below. The summary of findings will be updated throughout the Master Plan update process.

1. Consolidated tax is the largest revenue source for the City but the majority of revenue from consolidated tax is not impacted by new development.

   Consolidated tax accounts for 35 percent of revenues to the City's General Fund. However, due to how the State allocates revenue from consolidated taxes, only a portion of the consolidated tax revenue that the City receives is impacted by new growth. Approximately 80 percent of the consolidated tax revenue is distributed to the City based on growth in CPI applied to the previous year's base revenue. Any excess revenue generated in Washoe County is distributed to the City based on the City's change in population and assessed valuation over a five-year average. Therefore, only the Excess Distribution revenue is applied to new development.

2. Property tax revenue is significantly higher from new buildings compared to older buildings even when market values are the same, which increases the need for new development each year to maintain property tax revenues and creates a fiscal reliance on strong growth rates.

   Property tax is the second largest revenue source for the City's General Fund and generates 24.7 percent of total revenue. The assessed value of buildings and improvements on property depreciate by 1.5 annually in accordance with State law, which gradually reduces the revenue generated by each parcel. Assessed values for buildings are based on an estimate of the replacement value of the building. The replacement value is re-estimated based on comparable sales at least every five years but gains in value are typically offset by the automatic depreciation that occurs each year. Furthermore, owner occupied homes can only have their property tax increase by 3 percent year over year. The gradually decreasing value of buildings puts a greater burden on new or newly renovated buildings.

3. Police and fire expenditures account for 59.2 percent of General Fund expenditures and are impacted directly by new development.

   Police expenditures are primarily associated with traffic enforcement and crime prevention. The expenditures for these are estimated based on actual police calls for the past year and are associated with land use at the location for the call. This allocation results in retail uses having the highest cost per unit/square foot factor of all uses.

   Fire expenditures are primarily driven by fire prevention and emergency response services. Fire service costs increase as population grows and base line cost are applied on a person served basis. However, fire stations serve a defined service area and therefore fire stations with less people (residents and workers) in the respective station area have a higher cost per call than station areas with more people until development in the area generate a need for additional staffing and equipment.

4. The ongoing costs associated with two major expenditures (streets and sanitary sewer) for the City are provided within separate funds with their own revenue sources.

   The City of Reno is responsible for the maintenance and operations of local streets within the city. Regional streets are the responsibility of the Regional Transportation Commission. The City has a dedicated property tax to fund street maintenance.

   Ongoing maintenance and operations of the City's sanitary and storm water network are funded through user fees within a separate enterprise fund. The City has increased user fees for sanitary sewer by 8 percent annually for the past five years to address major upgrades needed to operate the network. There are three distinct sanitary sewer sheds with different treatment facilities serving the city. However, the user fees and connection fees within these areas are the same despite differing costs, remaining capacity, and timing of needed upgrades in each area.

5. Single family detached, office, and industrial uses have a positive net fiscal impact on the City's General Fund, while multifamily residential and retail have a negative net fiscal impact.

   The net fiscal impact for a new single family home generates a net fiscal benefit to the City's General Fund of $157 annually. Office and industrial uses generate an annual net fiscal benefit of $70 and $128 per 1,000 square feet, respectively. Retail generates a negative fiscal impact of $275 annually and multifamily homes generate a slight fiscal negative impact per unit of $22 annually. Retail uses generate a negative fiscal impact primarily due to the police costs generated by retail.

6. The net fiscal benefit decreases for all uses if property values are reduced by 25 percent, which is the equivalent of approximately 28 years of depreciation.

   Due to the provisions governing Nevada's property tax structure, the amount of property tax an individual property generates decreases over time. This has a significant impact on the long-term net fiscal impact of development. The decreased revenue from older buildings results in single family housing and office uses having a net neutral impact on the City and increases the net fiscal deficit generated by multifamily and retail uses.

7. The density of development has an impact on the cost of providing street, sewer and fire service, as denser development patterns have a lower cost per unit or square foot.

   Generally, denser development requires less streets and sewer miles to serve a new residents or business. Fire service costs are less per person within each fire district response area until calls for service trigger the need for additional staffing. The denser development patterns have the greatest impact on streets costs. The net fiscal benefit of a new single family home is nearly two and half times greater if the density of new homes is doubled from 4 units per acre (the average for new single family home developments in Reno) to 8 units per acre.

8. The location within the city of new development impacts the cost for fire service and potentially sewer service.

   The fire cost by four areas of the city (North, West, South and Central) were estimated and the fiscal cost for each area of the city was estimated to reflect existing staffing levels in these areas. The North and West areas were found to have 25 to 30 percent higher costs per person served than the citywide average. The South area was found to have lower costs per person served than the citywide average.

   The City of Reno has three different wastewater treatment sheds with different treatment facilities and needs in each. However, both the user fees and connections fees in the three sheds are the same. The City should consider exploring whether variable rates or connections fees are needed to address the different costs and timing of capacity increases for each treatment shed.

9. The majority of revenue tools used to offset the cost of new development result in up-front cost to the developer, which may make development too costly in certain portions of the city were growth is desired reflecting market pressure and policy goals.

   The cost to provide new infrastructure to attract development may be too high in certain portions of the city. The City should consider ways to diversify the approach to offsetting cost of new growth to align better by specific geography and to spread the burden of new infrastructure to attract development in some portions of the city.

10. The City of Reno should consider a more proactive approach and policies to providing infrastructure to support new growth to have greater influence in the pattern and direction of new development.

    The City should consider policies that allow the City to take a more proactive approach to directing the pattern and location of growth by proactively investing infrastructure to serve new development that either addresses existing infrastructure gaps or create amenities that attract new development. A more proactive approach may require the City to become more involved in the funding of new infrastructure that is not within its current purview, such as schools and/or major transportation improvements.

Additional Major Issues to be Addressed in Phase II

Level of Service Impacts

Both the Police and Fire Departments indicated that they are not operating at optimal levels of service and would like to increase staffing and resources to provide more comprehensive service. As the City's fiscal conditions improve, assessing the impact of new development at optimal levels of service versus the current levels of service can be assessed to illustrate the costs and benefits.

Growth Scenarios Fiscal Impact

Lastly, the fiscal impact model will be used (if necessary) to understand the differences in fiscal impact of alternative growth scenarios. Typically within the development of master plans two or three scenarios are developed to help illustrate growth options/decisions to the general public and decision makers. The model will be used to illustrate any fiscal impact differences generated by each scenario that is generated. The scenarios analyzed may be developed in Phase II or based on scenarios generated by TMRPA within its ongoing efforts.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APPENDIX B:
ECONOMIC, DEMOGRAPHIC, & MARKET FRAMEWORK

CREATIVE COMMONS
PHOTO CREDIT: RENOTAHOE

MEMORANDUM

To: City of Reno

From: Andrew Knudtsen and Matt Prosser,
Economic & Planning Systems

Subject: Master Plan Economic, Demographic, and Market Framework; EPS #153014

Date: January 11, 2016

This memorandum provides a summary of the analysis completed by Economic & Planning Systems (EPS) to form the economic, demographic and market framework needed to underpin policies and strategies developed within the Master Plan process. The purpose of this framework analysis is to use data to inform City of Reno staff, elected officials and the public of market conditions and the implications of future market and demographic trends on the future land use plan. The goal is to provide clarity around the major issues facing Reno to provide a uniform platform for decision making.

The memorandum includes a summary of existing economic, demographic and real estate market conditions and analysis of economic and market data to frame the issues identified in the Issues and Opportunities Summary developed for the Master Plan Update and sets the stage for subsequent analysis to be completed during the next phase of the Master Plan Update.

The economic, demographic and market data summarized in this memorandum was gathered by the University of Nevada Reno, Truckee Meadows Regional Planning Agency, and by EPS. This section provides a summary of the market conditions based on analysis of the data gathered. A PowerPoint presentation of the data collected is provided as an attachment to this memorandum and the slides are referenced within this summary.

The Economics of Land Use

Economic & Planning Systems, Inc.
730 17th Street, Suite 630
Denver, CO 80202-3511
303 623 3557 tel
303 623 9049 fax

Denver
Los Angeles
Oakland
Sacramento

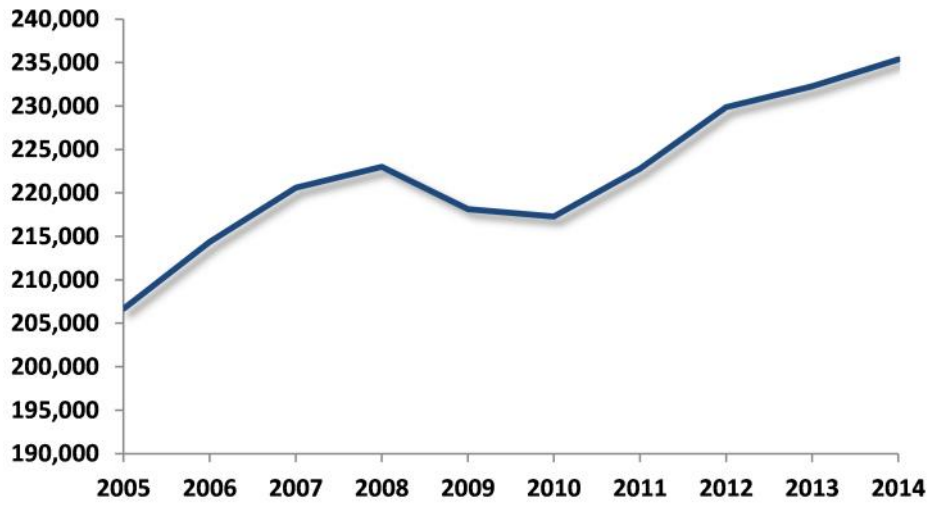
www.epsys.com

Demographic Conditions

Population

The City of Reno is the largest city in northern Nevada and Washoe County. The population of the City of Reno is 236,883, and it accounts for 53.6 percent of the population in Washoe County. The population of the city has increased by 56,403 people since 2000, which equates to an annual growth rate of 1.8 percent. Between 2000 and 2010, the City of Reno grew at an annual rate 2.2 percent annually. The national economic recession of 2008 and 2009 had major impact on the City of Reno and the city decreased in population from 2008 until 2010, as shown in Figure 1. Since 2010, the city has grown by 11,662 residents and grew at an annual rate of 1.0 percent. The City of Reno has been capturing a larger share of growth within Washoe County than it has traditionally, as the city accounted for 60.4 percent of population growth since 2010 in Washoe County.

Figure 1
City of Reno Population, 2005 to 2014



Source: Nevada State Demographer

Median Age (2013)
Reno: 34.4
Washoe County: 37.2
Nevada: 36.3

The residents of the City of Reno are younger (on average), than Washoe County and the State. The median age is 34 years old. The most prevalent age cohort in the city is residents aged 25 to 34 years old, which account for 15.5 percent of the population (Slide 3). The city has a greater share of residents age 20 to 35 than Washoe County as a whole and the State. This cohort accounts for 24.5 percent of the population, while it accounts for 21.3 percent in Washoe County and 21 percent in the State. The students attending the University of Nevada Reno contribute greatly to this larger concentration of younger residents. The median age of residents in Reno has not changed since 2000, despite significant increases in the percent of residents' age 55 to 74 over the past 15 years (14.6 percent to 18.4 percent) (Slide 4).

Reno has a higher concentration of residents with a bachelor's degree than the county and state, as 30.4 percent of residents age 25 and older have a bachelor's degree. The educational attainment of residents has increased since 2000, as the percent of residents with an associate's degree or better has increased by 6.1 percent over this time period (Slides 7&8).

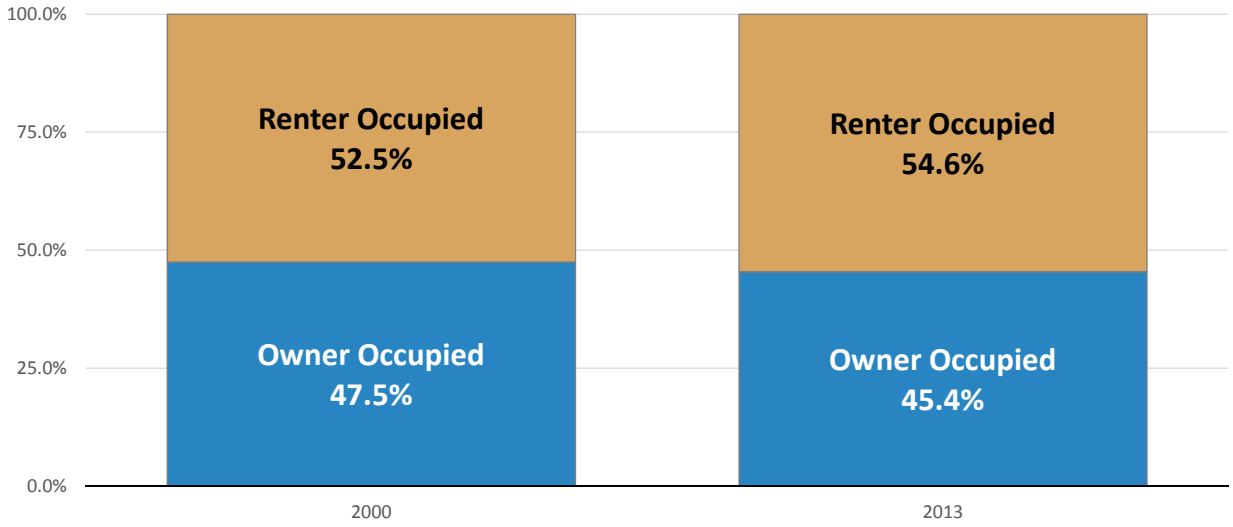
Households and Housing Units

The City of Reno grew by 21,442 households since 2000. The rate of household growth within Reno was the same as the rate of population growth since 2010 (1.0 percent annually). The average household size in Reno has increased from 2.38 in 2000 to 2.48 in 2015. During the same period, the average household size in the County and State of Nevada increased by smaller amount, (from 2.53 to 2.56 and 2.62 to 2.66 respectively) (Slide 2).

The average household income in Reno was $65,747 in 2013, which was lower than the average for Washoe County ($72,974) and the State of Nevada ($67,949) (Slide 5). Reno has a larger proportion of households earning less than $25,000 annually than the county or state.

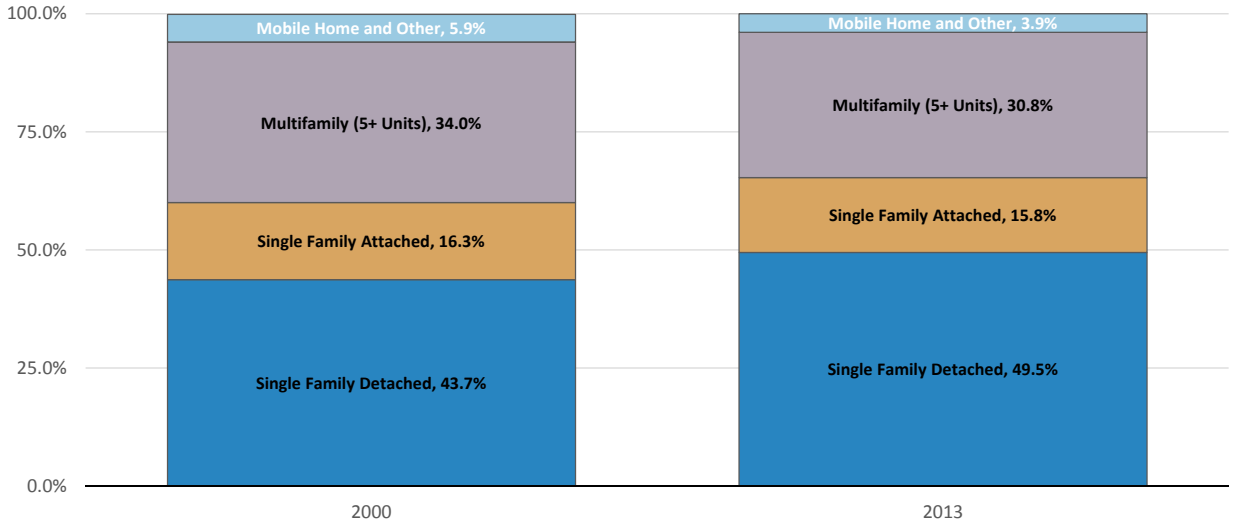
The City of Reno has more renter occupied households (54.6 percent) than owner occupied households (45.4 percent). The percent of renter occupied households has increased slightly since 2000. Despite a higher concentration of renter households, the housing stock in Reno is predominately single family detached and attached housing units. Nearly 50 percent of homes are single family detached units and 16 percent are single family attached units.

Figure 2
Household Tenure, 2000-2013



Source: u.s. Census Bureau; UNR Economic & Planning Systems

Figure 3
Housing Units by Type



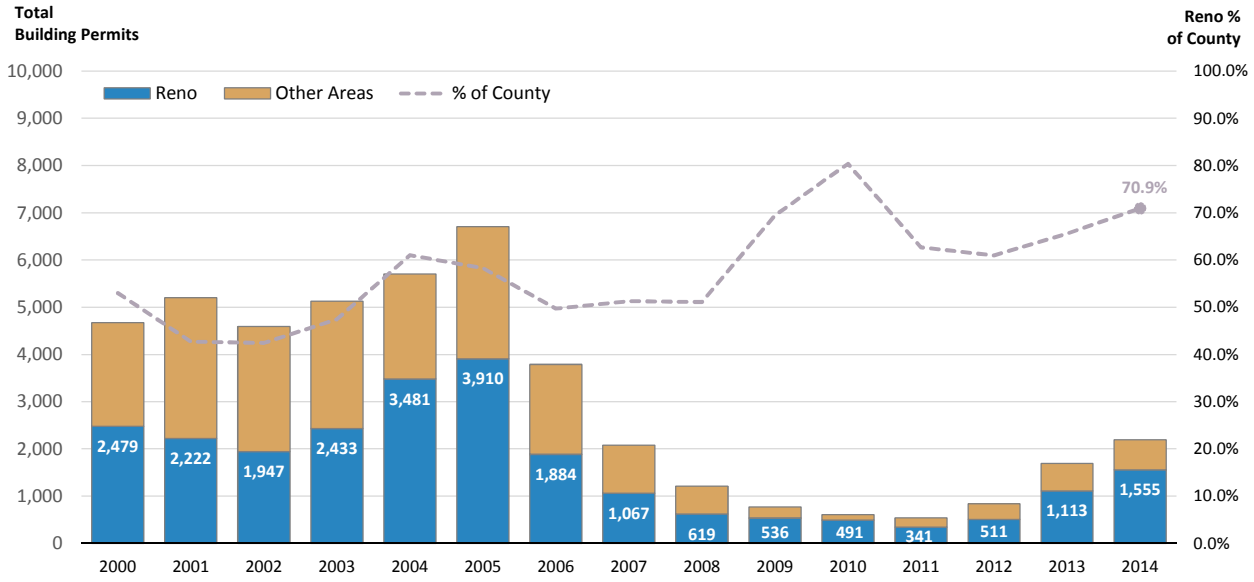
Source: u.s. Census Bureau; Economic & Planning Systems

Housing Development Conditions

Building Permit Trends

Housing development has begun to rebound in Washoe County since a major decrease in production from 2008 to 2012. Between 2000 and 2005, there was an average of 5,335 units permitted per year in Washoe County. Reno accounted for just over half of the units permitted during this period. Between 2008 and 2013, less than 2,000 units were permitted per year. Reno has captured a greater share of residential development since 2009 than from 2000 and 2009. Reno has captured over 60 percent of permitted units in the county every year since 2009. As well, Reno has captured virtually all multifamily units permitted since 2009.

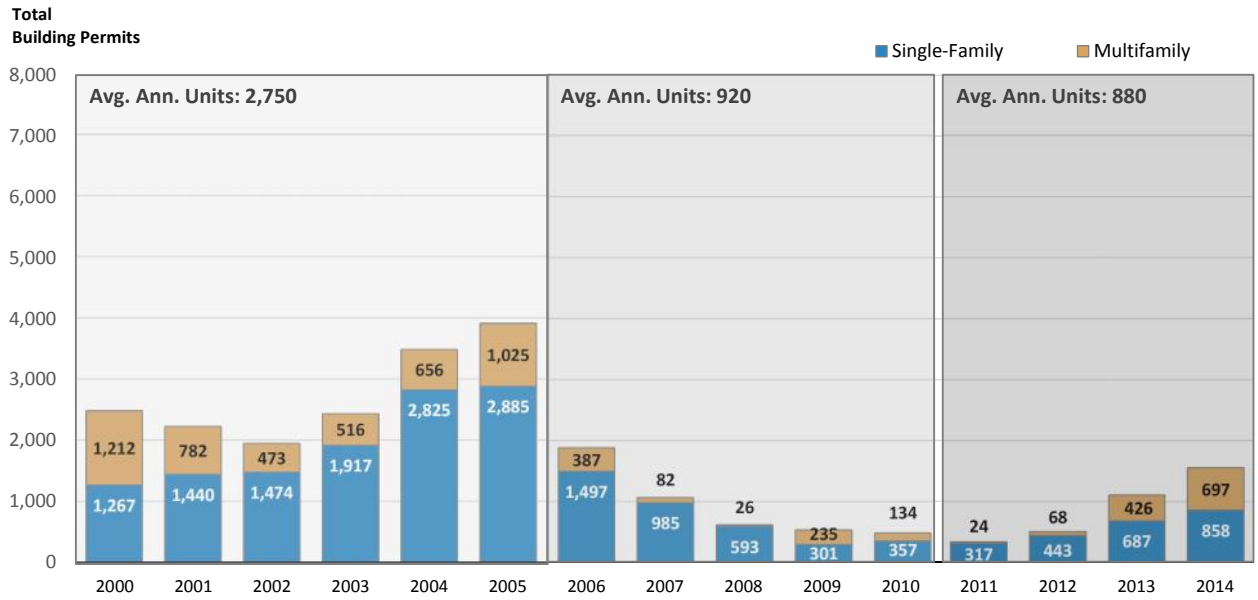
Figure 4
Washoe and Reno Total Permitted Residential Units, 2000 to 2014



Source: City of Reno, Community Development Department; Washoe County, Building and Safety Department; UNR; Economic & Planning Systems

The City of Reno has permitted an average of 880 units per year since 2010, which is approximately a third of the average number of units permitted between 2000 and 2005. In 2014, Reno permitted 1,555 units which was the largest amount since 2006. Single family units were the most prevalent type of unit permitted from 2000 to 2010 accounting for 74 percent of units permitted. Since 2010, 65 percent of units have been single family and only 55 percent of units were single family in 2014.

Figure 5
Reno Permitted Residential Units by Type, 2000 to 2014



Source: City of Reno, Community Development Department; Washoe County, Building and Safety Department; UNR; Economic & Planning Systems

Housing Development Pipeline and Land Capacity

The capacity for residential development is a major consideration in development of the future land use plan for the City. Based on estimates from the Truckee Meadows Regional Planning Agency (TMRPA), there are 20,541 vacant, unbuilt acres that are designated for residential land uses within the Future Land Use Plan for the city currently. This equates to an estimate of capacity of nearly 130,000 units based on current densities. If the City were to permit an average of 1,600 units per year (the average since 2000), this equates to an 80 year supply of residential land. There appears to be an ample amount of residentially designated land within the city's boundaries and planning area. The estimates provided by TMRPA do not indicated if the land is in the City or Sphere of Influence

The TMRPA has commissioned a residential lands needs analysis, which is currently under way. The TMRPA study will generate a comprehensive inventory of supply for residential development in the region including a breakout by single family land and multifamily land based on approved zoning and estimates for transit oriented development (TOD) corridors and potentially underutilized land that could be used for housing. Within the study, possible scenarios will include variable demand factors that can be measured against the capacity. The scenarios may include what future demand will be if current trends continue, what demographic changes may impact demand, the potential for increased multifamily housing, and what impacts increased employment growth related to Tesla could have. These major questions the TMRPA is currently working on have significant implications on the Master Plan. EPS intends to provide estimates of future demand by housing type and an estimate of the range of housing types by area the City of Reno may be able to accommodate.

Table 1
Reno Vacant Residential Designated Acres

Type	Vacant Acres	Average Density (unit/acre)	Estimated Unit Capacity
Single Family	16,913	4.7	80,168
Multi-Family	379	14.3	5,424
Mixed-Use Allowing Residential	3,249	13.6	44,049
Total	**20,541**		**129,641**

Source: TMRPA

H:\153014-Reno Master Plan\Data\[153014-Residential Capacity.xlsx]Vacant Land

Given the high rate of building permit activity from 2000 to 2005 and the drastic drop in permitted units since, it is inevitable that there is a large inventory of planned units within Reno. Based on estimates completed by the TMRPA, there are 35,654 unbuilt residential lots that have been approved within planned unit developments (PUDs). This amount of unbuilt lots, primarily for single family homes, equates to at least a 30 year supply of lots based on historical population trends. Active developments within the city within approved tentative maps include 4,526 unbuilt lots, which indicate active projects are matching current market demand. Similar to the vacant land issues described above, the inventory of approved unbuilt lots in the city needs further analysis to understand if these lots can be serviced with infrastructure effectively and if they are in locations that will be in demand by the market.

Table 2
Unbuilt Residential Lot Inventory

Type	Dwelling Units Allowed	Dwelling Units Existing	Dwelling Units Remaining
Planned Unit Developments	52,958	17,304	35,654
Approved Tentative Maps	6,681	2,355	4,526

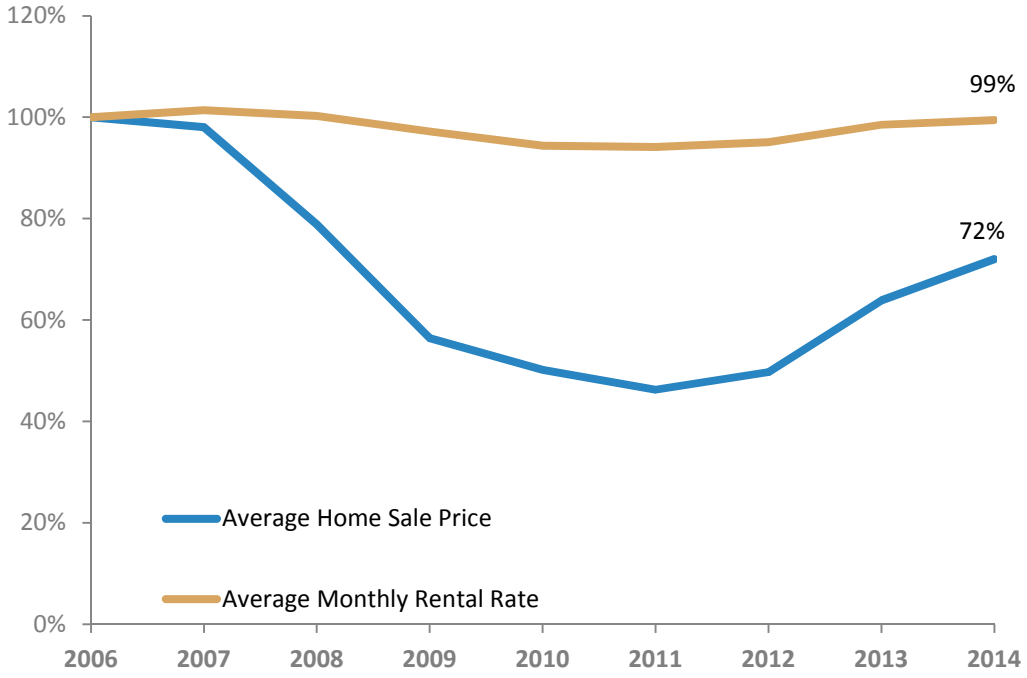
Source: TMRPA

H:\153014-Reno Master Plan\Data\[153014-Residential Capacity.xlsx]Unbuilt Lots

Housing Market Trends

The Great Recession had a significant impact on for-sale housing in Reno but less of an impact on the for-rent market, in terms of rental rates. Figure 6 illustrates the percent change in the average home price and apartment rental rate in Reno from 2006, the height of the national housing bubble, to 2014. The average home price in Reno in 2014 was 28 percent lower (approximately $126,000 lower) than the average price in 2006. The average rental rate in Reno, however, has not changed substantially since 2006.

Figure 6
City of Reno Percent Change in Home Price and Rent, 2006 to 2014

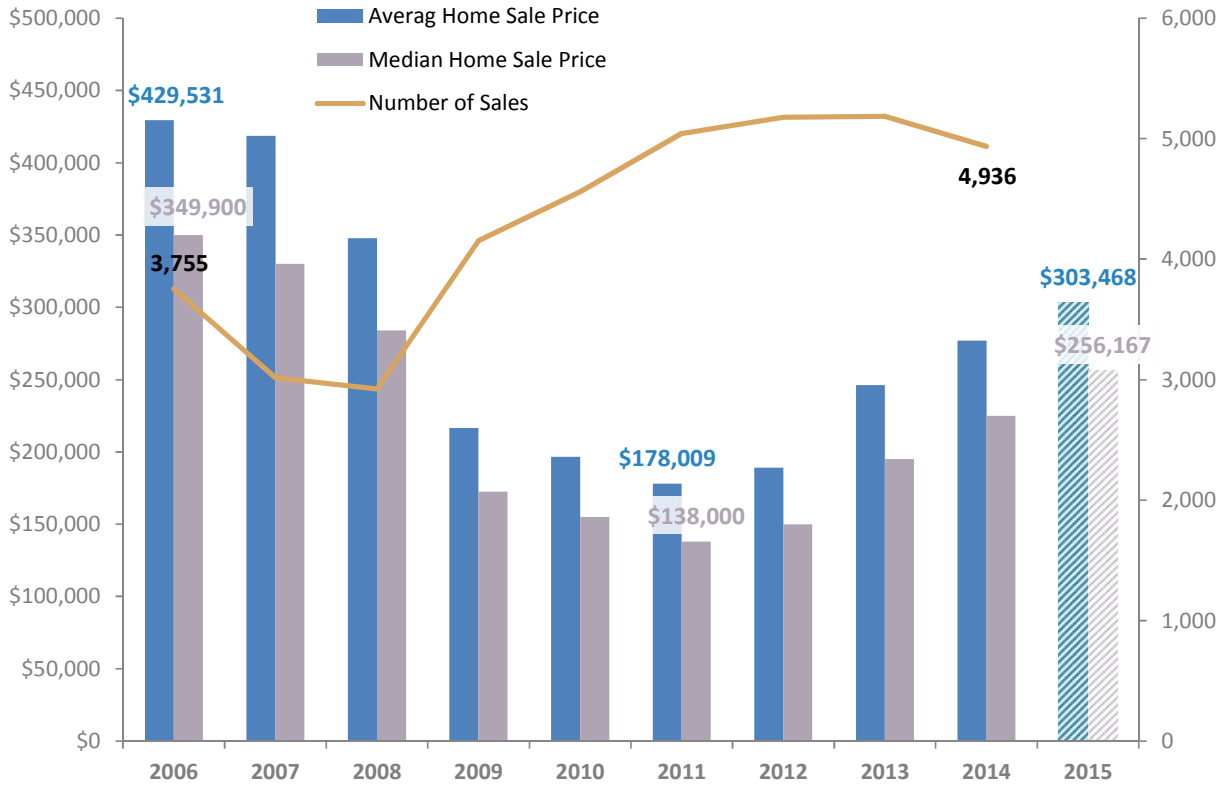


Source: Reno-Sparks Association of Realtors; Center for Regional Studies - UNR; Johnson-Perkins & Associates

For-Sale Housing

The for-sale home market went through substantial turmoil through the Great Recession. The average home price in Reno in 2006 was $249,531, as shown in Figure 7. The average home price dropped to $178,000 in 2011, which is 60 percent lower than the peak in 2006. Home prices have risen steadily since 2011. The average home price in Reno in the third quarter of 2015 was $303,468 and the median home price was $256,167. The volume of home sales rose to over 4,000 sales annually in Reno during the Great Recession and has remained at or around 5,000 sales per year from 2011 to 2014.

Figure 7
City of Reno Percent Change in Home Price and Rent, 2006 to 3Q 2015



Note: 2015 Data Through 3rd Quarter
Source: Reno-Sparks Association of Realtors; Center for Regional Studies - UNR;

The average home sale price in Reno for 2015 will likely be higher than in 2014. Through the first three quarters of 2015, the average home price in Reno was $309,248, as shown in Table 3. The average home price in Washoe County, as a whole, was $303.633. The average price in Sparks in 2015 was $261,375.

Single family homes in Reno are selling for an average of $345,745, or $162 per square foot, while condos and townhomes have been selling for an average of $151,342, or $126 per square foot. Single family home sales have accounted for 82 percent of total sales in Reno in the first three quarters of 2015 and townhome and condo sales have accounted for 15 percent.

Table 3
Washoe County Home Sale Volume and Average Price, Quarters 1-3 2015

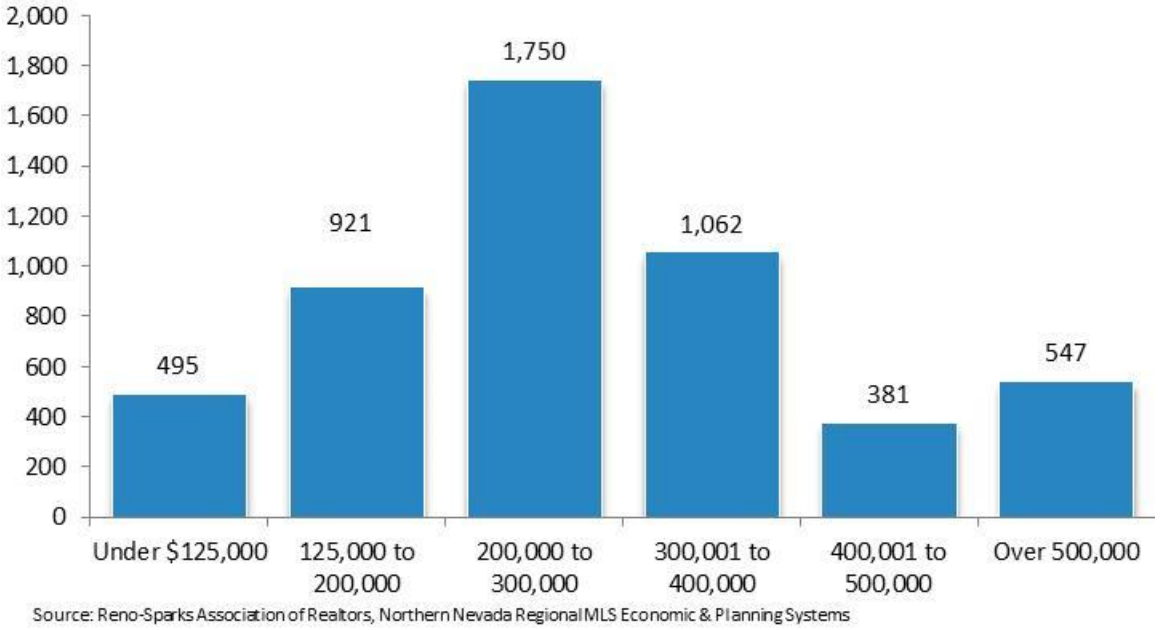
Description	Sales Voume Qtrs 1-3 2015	Avg. Sales Price	Avg. Sales Price per Sq. Ft.
Washoe County Total			
Single Family	5,703	$334,864	$160
Condo/Townhome	924	$165,483	$132
Modular	284	$132,580	$93
Other	14	$67,174	$55
Subtotal	**6,925**	**$303,633**	**$153**
Reno			
Single Family	3,781	$345,745	$162
Condo/Townhome	694	$151,342	$126
Modular	158	$133,525	$96
Other	1	$130,500	$79
Subtotal	**4,634**	**$309,248**	**$154**
Sparks			
Single Family	1,676	$277,143	$146
Condo/Townhome	151	$120,146	$105
Modular	12	$134,100	$98
Other	13	$62,302	$54
Subtotal	**1,852**	**$261,375**	**$142**

Source: Northern Nevada Regional Multiple Listing Service (MLS); Economic & Planning Systems

H:\153014-Reno Master Plan\Data\[153014-MLS-12-21-2015.xlsm]T-Summary

The majority of homes sold in Reno over the past 12 months have been priced from $200,000 to $400,000. Thirty four percent of homes sold in the past year have been priced between $200,000 and $300,000. There were 495 homes that sold for less than $125,000, of which 84 percent were condos/townhomes or modular homes (73 percent condo/townhome).

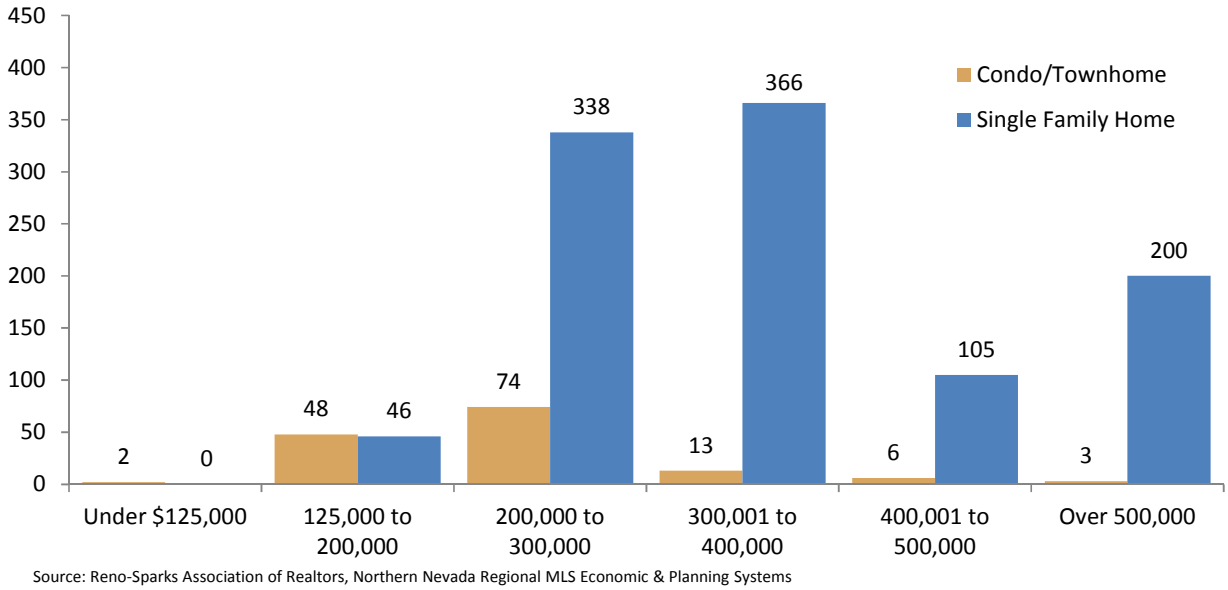
Figure 8
Home sales by Price Range - ALL homes, Q4 2014 through Q3 2015



Source: Reno-Sparks Association of Realtors, Northern Nevada Regional MLS Economic & Planning Systems

The average price for a new home (defined for this report as built after 2005) in Reno was $398,326 during the past 12 months (Quarter 4 2014 through Quarter 3 2015). The average price for a new single family home was $420,212 and $249,613 for a new condo/townhome. The number of new home sales over the past 12 months for each price range is shown in Figure 9.

Figure 9
Home sales by Price Range - NEW homes, Q4 2014 through Q3 2015

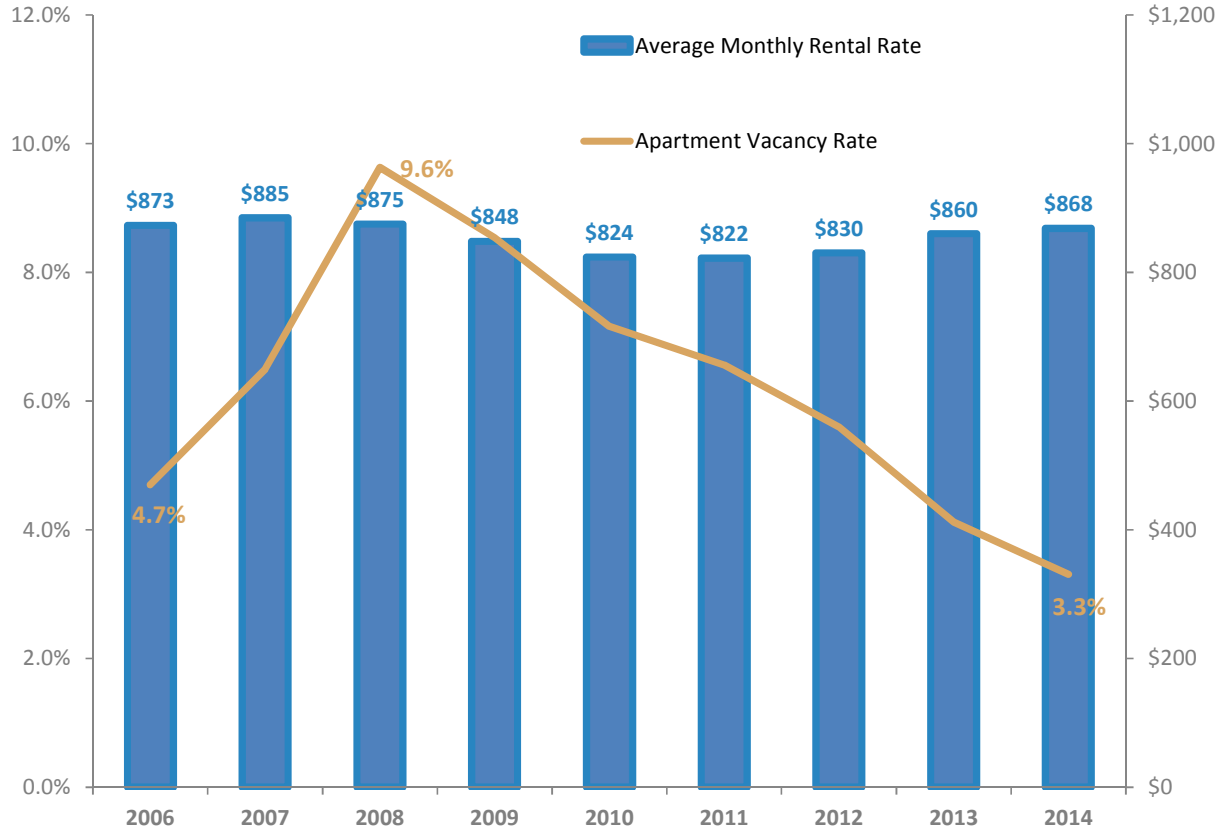


Source: Reno-Sparks Association of Realtors, Northern Nevada Regional MLS Economic & Planning Systems

For-Rent Housing

The average apartment rental rate in the Greater Reno area (Washoe County) has remained relatively consistent since 2006, unlike the for-sale housing market. The average apartment rental rate in Greater Reno in 2014 was $868 per month, which is just lower than the rate in 2006 of $873 per month. The vacancy rate for apartments in Reno at the end of 2014 was 3.3 percent, as shown in Figure 10. The vacancy rate was 9.6 percent in 2008 and has dropped steadily ever since. Vacancy rates below 5 percent typically indicate unmet demand in the market and would typically result in an increase in rental rates. This increase in rates was not evident yet in the 2014 averages. The most recent apartment survey completed by Johnson-Perkins & Associates in the third quarter of 2015, found the average apartment rental rate in the Greater Reno area to be $942 per month, which is nearly a 10 percent increase in less than a year. The vacancy rate has lowered since the end of 2014 and is now at 2.7 percent. The rental rates in Reno are likely to increase in the short term as vacancy rates remain low and the region continues to grow in employment.

Figure 10
Greater Reno Average Apartment Rental Rates, 2006 to 2014



Source: Johnson-Perkins & Associates

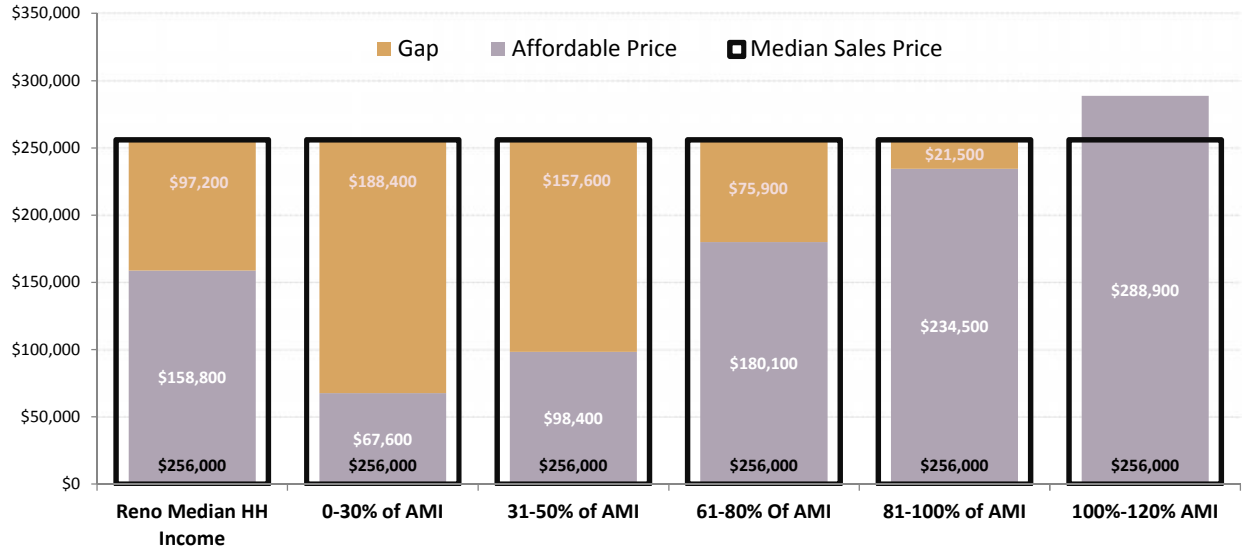
Housing Affordability in Reno

The affordability of housing is a growing issue nationally and in Reno. The Great Recession had a significant impact on housing tenure and housing costs in Reno. The region experienced high rates of foreclosure and home prices are 30 percent of the prices in 2006 prior to the Great Recession, as shown earlier. The housing market is recovering in Reno, which is a good sign of economic vitality but is bringing housing affordability back to the forefront in Reno.

According to the City of Reno's 2015-2019 Consolidated Plan, incomes in the region increased by 17 percent from 2000 to 2014, but once adjusted for inflation incomes only increased by half of the rate needed to keep pace with inflation. Real incomes in the region are lower today than they were 15 years ago.

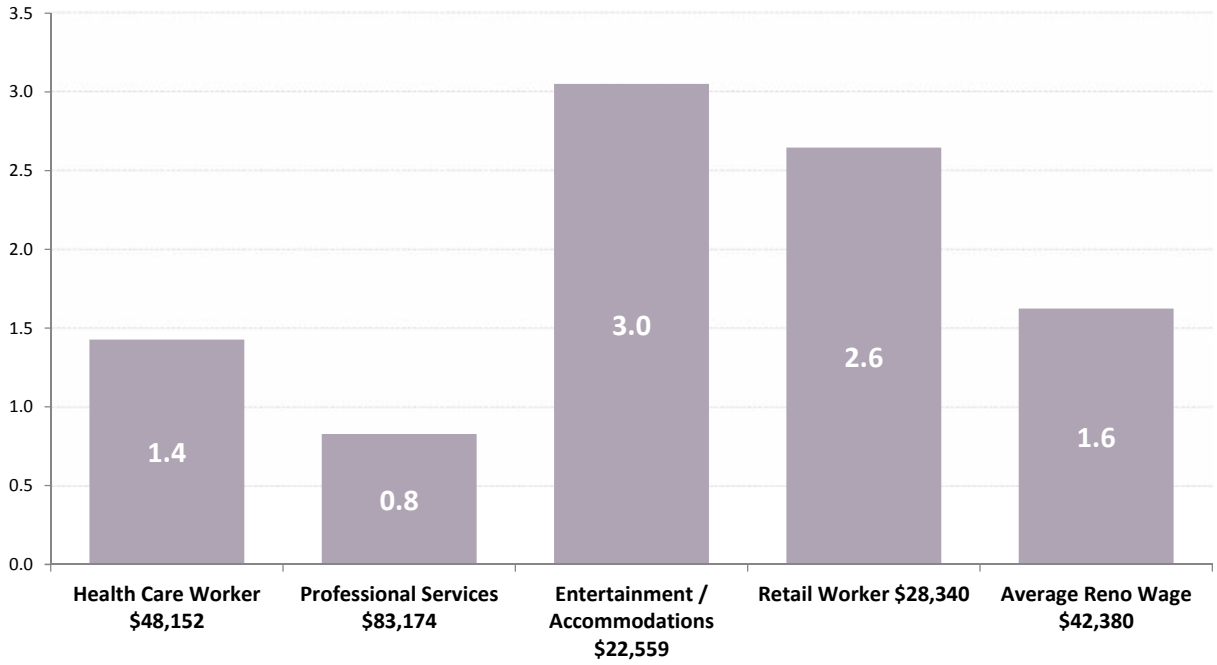
Housing is relatively affordable in Reno today, but growing housing prices in the region are starting to impact affordability. The median household income in Washoe County, according to HUD, in 2015 was $63,500 (for a household of 4 persons). Assuming 30 percent of income is spent on housing, a household earning the median income in the county can afford a home priced at $235,000 or less. Looking just at Reno residents, the median household income is approximately $46,000 and, assuming no more than 30 percent of income is spent on housing, a Reno household earning the median income can afford a home priced at $160,000. The median home price in Reno was $256,000 through the first three quarters of 2015 according to the Reno-Sparks Association of Realtors. A Reno household earning the median income has a gap of $97,000 between their affordable home price and the median home price in Reno, as shown in Figure 11. The median sale price in Reno was just $225,000 one year ago (2013), so the affordability gap is a recent issue and the growing cost of for-sale homes is making ownership less attainable in Reno.

Figure 11
Reno and Washoe County For-Sale Housing Affordability



According to the Nevada Department of Employment, Training, and Rehabilitation (DETR) the average worker in the City of Reno earns $42,380 annually (in 2013). At this wage, a person or household would need 1.6 jobs to afford to buy a home at the median home price. Figure 12 illustrates the number of jobs a worker in Reno would need to afford a home based on the average wage for workers in Reno in 2013 by industry. The average annual wage for workers in Reno in the accommodations and retail industries, two of the largest in Reno, require three jobs per household to afford a home.

Figure 12
Number of Jobs by Industry Needed to Afford Median Home Price



The average rental rate in the city is not experiencing the same rate of change as home prices but may be increasing in the future. The average apartment rental rate in the city is $860 per month, which is approximately the same rate found in 2006 as described earlier. However, apartment vacancy rates in Reno are lower than 3 percent, indicating a growing demand for rental units and will likely result in an increase in rental rates. The average worker in the accommodations and retail industries cannot afford the median rental rate in Reno. Workers in these industries need more than one job to afford the median rent in Reno, as shown in Figure 14.

Figure 13
Reno and Washoe County For-Rent Housing Affordability

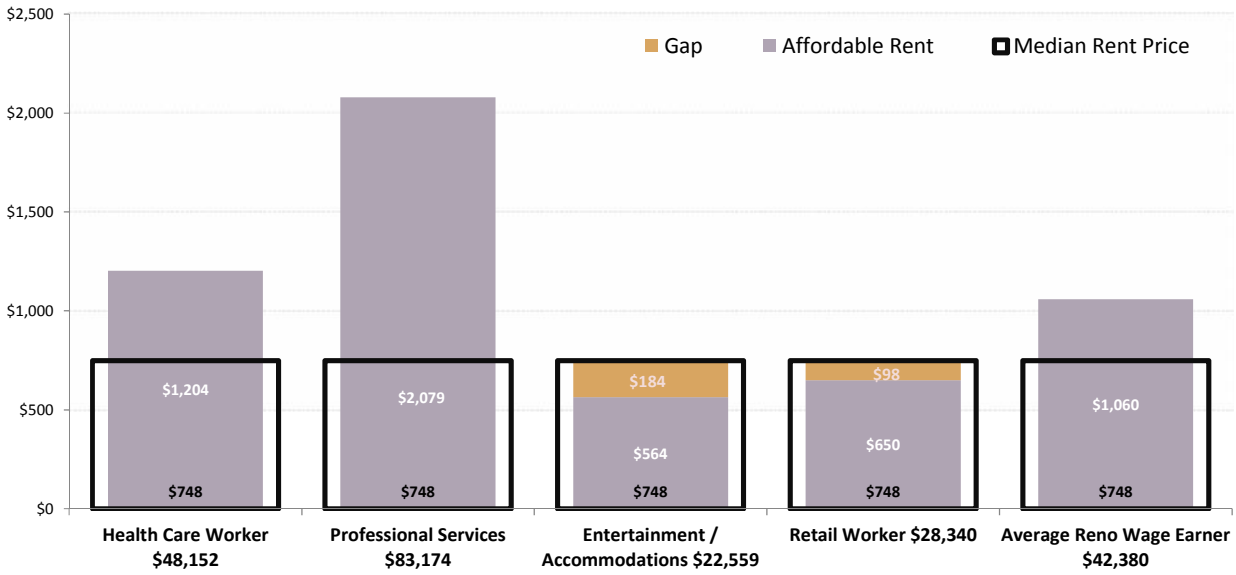
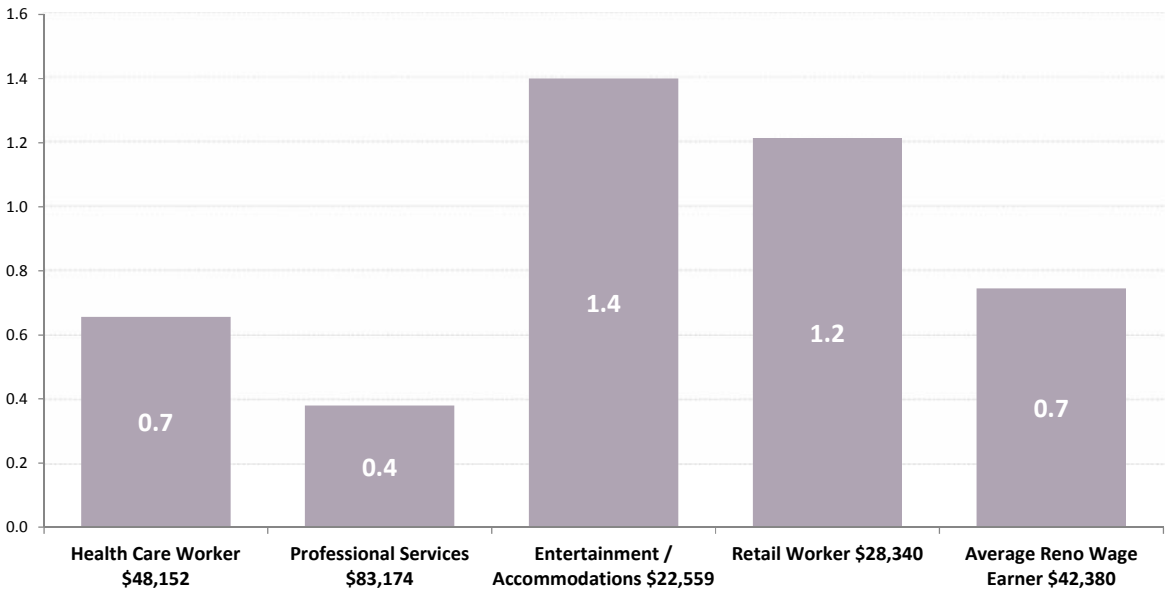


Figure 14
Number of Jobs by Industry Needed to Afford Median Rent Price



The most common housing problem in Reno is cost burden, defined as spending 30 percent or more of household income on housing. Based on U.S. Department of Housing and Urban Development (HUD) estimates, 10,500 renters in Reno are severely cost burdened (defined as spending 50 percent or more of income on housing) and 4,500 homeowners are severely cost burdened. According to the City's most recent Consolidated Plan, many of these homeowners are seniors who struggle with the cost of maintaining their home despite not having a mortgage. The Consolidated Plan also found the majority of the renters who are cost burdened are single person households or households with unrelated roommates.

The City of Reno has traditionally had a large transient community, which results in greater housing needs for low income housing and homeless services. A 2015 count of persons who are homeless in Reno, completed by the City of Reno, found that 3,179 individuals live in motels, and 1,098 of these people were living in longer term hotel leases (weekly or monthly rental units). The City estimates that between 3,000 and 9,000 residents are at risk for homelessness. The housing needs analysis completed for the consolidated plan indicated the city has a significant lack of housing units affordable to renters earning less than 40 percent of Area Median Income (approximately less than $30,000 annually). The housing need assessment also indicated that affordable housing for seniors is a significant issue for Reno.

Future Housing Demand

The future demand for housing in Reno is dependent on many factors, but is largely driven by growth in employment in the region and the demographic make-up of Reno. Reno has a large number—35,000—of approved housing units in planned unit developments (PUD) largely on the outskirts of the City. The City of Reno is forecast to grow by approximately 77,000 residents (consensus forecast) by 2034, which equates to demand of about 30,000 new households. This means there are more approved units within the city than households expected. The vast majority of these units are planned to be single family homes. The future housing demand will likely not match with the current mix of units approved within the city, which means the City will have to deal with trying to provide a mixture of housing units that will meet future demand while having a large inventory of approved units that do not provide this mixture.

Other conditions and trends are impacting housing preferences that will also create friction between the planned, approved development in the city and the future market realities. The Truckee Meadows Regional Planning Agency (TMRPA) last regional plan has a framework that is trying to encourage more infill, higher density housing near transit. This planning framework is largely not consistent with the mixture of approved lots. Lastly, there is a growing shift in housing preferences nationally, and perhaps locally, that will impact the demand for housing type and neighborhood type in Reno going forward. The following section attempts to serve as primer for the discussion for how to plan for housing in the Master Plan Update given the existing inventory of approved units, changes in consumer preferences and the demand for housing based on income. A summary of housing preference surveys nationally is provided to set the context for shifting housing preferences. A future housing demand analysis was completed based on the existing income distribution within Reno to illustrate that housing options need to be diverse in order to provide an affordable housing stock within the City of Reno.

Housing Preference

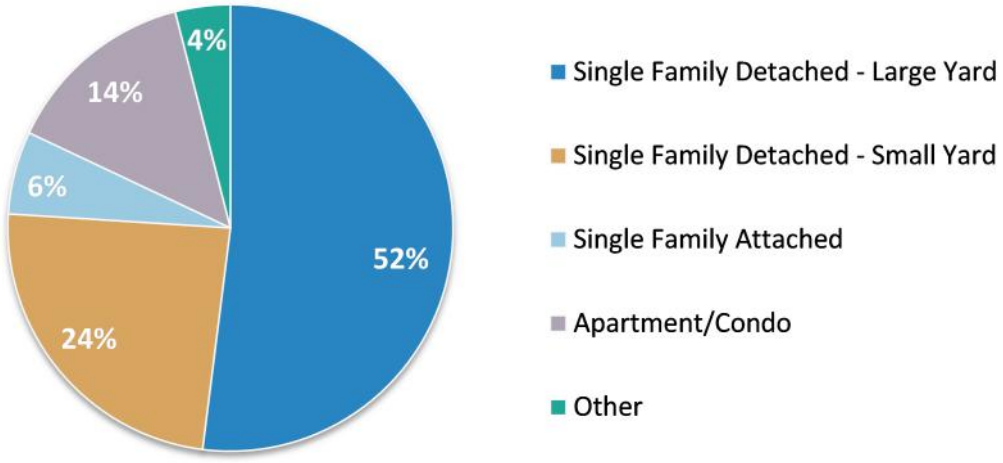
EPS reviewed the latest editions from a national survey on housing preference to illustrate national trends. The survey editions were the National Association of Realtors' (NAR) 2013 Community Preference Survey and 2015 Community and Transportation Preference Survey. The findings from the national surveys are similar to the findings of the ReImagine Reno community survey and indicate a demand for neighborhood types that are largely not present in Reno.

2013 NAR's Community Preference Survey

The NAR has done a consumer preference survey three times over the past five years in 2011, 2013, and 2015. The 2013 and 2015 survey had similar general findings to the 2011 survey, but some impactful changes have emerged that will be summarized below. The 2015 survey included 3,000 responses from people over the age of 18 by both phone and online. The survey response pool was selected to ensure the responds used reflect the population proportion for each state and total adult age population across the nation.

The analysis of the 2013 survey results completed by the NAR illustrated that housing preferences have not shifted greatly, declaring "Americans overwhelmingly prefer to live in a detached home", backed by the finding that 76 percent of respondents said they would prefer to live in a single family detached house, which was down from 80 percent in 2011. As well, when asked whether respondents would prefer a large yard or small yard, over 52 percent responded with preference for a large yard, as shown in Figure 15.

Figure 15
NAR 2013 Community Preference Survey - Housing Type Preference



These survey responses in isolation do not indicate any change to the housing preferences of the past 60+ years in America. However, the survey had a series of community style and community trade-off type questions, which illustrate a shift in historic trends and better indicates which elements of their house and community respondents valued.

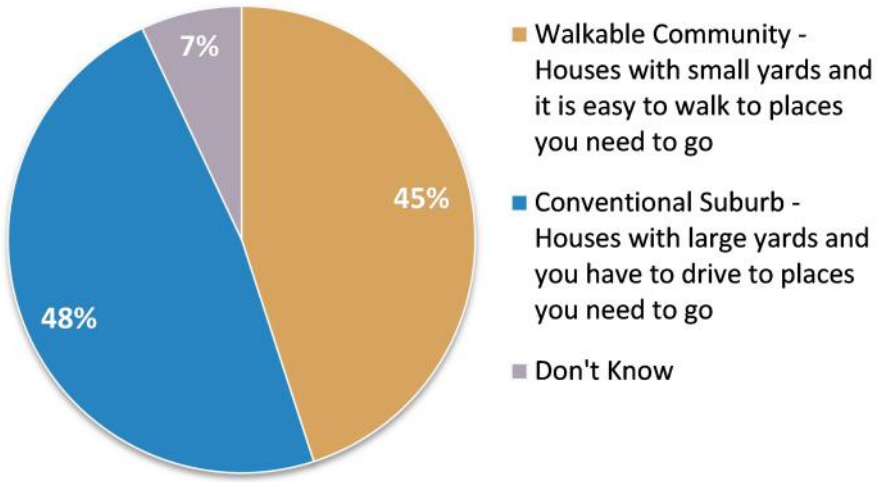
Respondents were asked to choose between two types of communities:

- "Walkable Community" defined as a community where: There is a mix of single-family detached houses, townhouses, apartments and condominiums. Places such as shopping, restaurants, a library, and a school are within a few blocks of your home and you can either walk or drive. Parking is limited when you decide to drive to local stores, restaurants and other places. Public transportation, such as bus, subway, light rail, or commuter rail, is nearby.

- "Conventional Suburb" defined as a community where: There are only single-family houses. Places such as shopping, restaurants, a library, and a school are within a few miles of your home and you have to drive to most. There is enough parking when you drive to local stores, restaurants and other places. Public transportation, such as bus, subway, light rail, or commuter rail, is distant or unavailable.

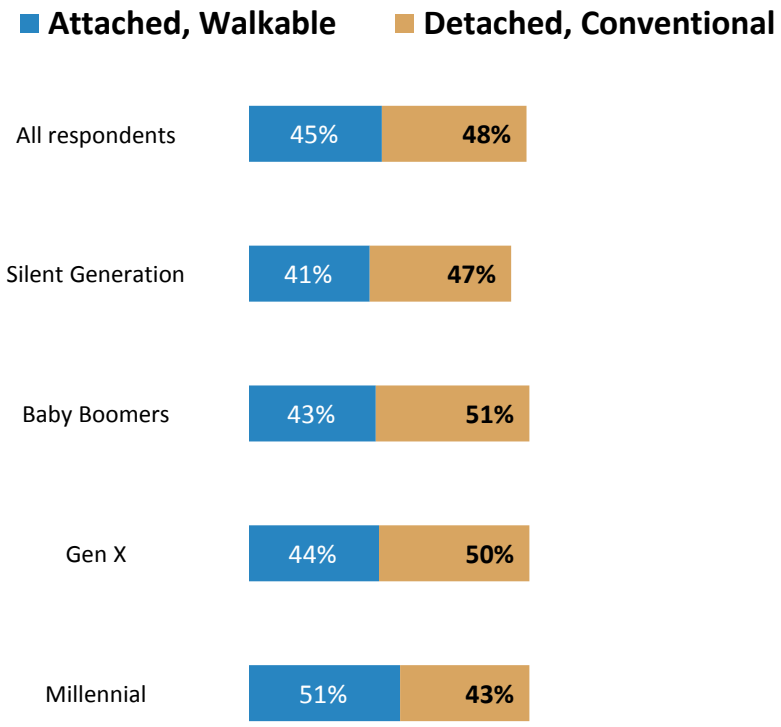
The responses in both the 2013 and 2015 surveys were split evenly. Forty-five percent (50 percent in 2013) of the survey respondents preferred a "Walkable Community" as shown in Figure 16, while 48 percent (45 percent in 2013) preferred a conventional suburb. This survey indicates a split preference for both walkable and conventional neighborhoods. However, in the majority of America and Reno the existing housing stock and neighborhoods are predominately a "Conventional Suburb".

Figure 16
NAR 2015 Community and Transportation Preference Survey - Neighborhood Type Preference



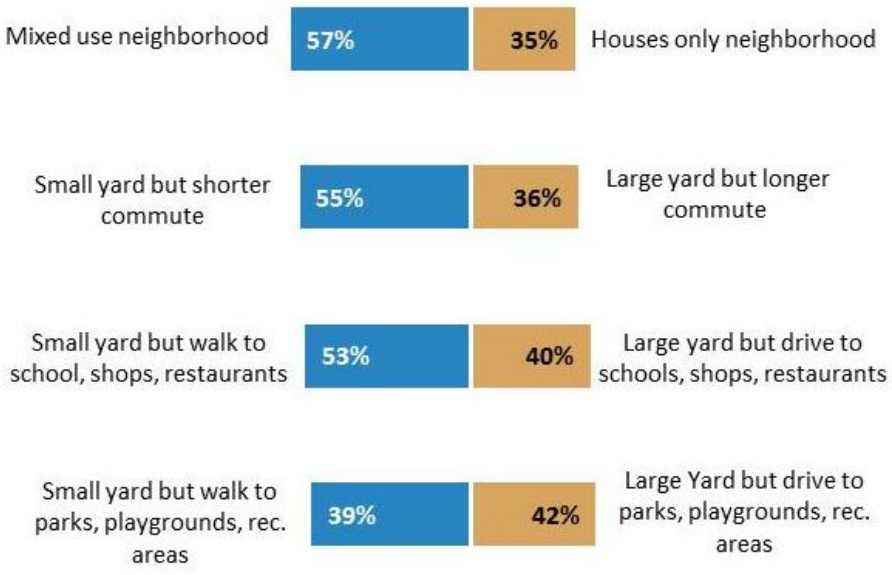
Responses by age group also illustrate the split in preferences. The responses found fairly even split among respondents by age group for both options, as shown in Figure 17, but millennials (born 1981 or later) have a greater preference (51 percent) for the walkable option.

Figure 17
NAR 2015 Community and Transportation Preference Survey - Neighborhood Type Preference by Age



A series of four additional trade-off questions were asked in the 2013 survey that help illustrate which elements of housing types and community amenities are more important. The results reinforced the previous question measuring preferences for walkable or conventional suburban neighborhoods. Figure 18 shows the respondents' preference for the four questions. Sixty percent of respondents said they would prefer to live in a mixed use community as opposed to 35 percent who would like to live in a neighborhood with houses only. Fifty-seven percent of respondents said they preferred a small yard if it meant a short commute. Over half of respondents indicated they would prefer a smaller yard if it meant they could easily walk to schools, shops and restaurants, and parks, playgrounds, and recreation areas, as opposed to having a large yard but having to drive to these amenities.

Figure 18
2013 NAR Community Preference Survey – Preference Trade-off Responses



For all respondents, regardless of neighborhood preference, the proximity to walkable community amenities such as stores, restaurants, schools, and libraries was the most appealing attribute of walkable communities. Also, the preference for and importance of neighborhoods with availability of sidewalks and places to walk, as well as being within an easy walk to other places and things in the community, increased substantially from 2011 to 2013 and 2015. The two major themes found were a growing demand for walkable neighborhoods and a desire to live somewhere that doesn't require a long commute to work.

Income Based Housing Demand Forecast

Forecast for new population and households were completed to estimate the demand for housing by income cohort. The forecast is intended to illustrate the diversity of product types needed to meet future needs based on income.

The Nevada Department of Employment, Training and Rehabilitation (DETR) releases 10-year employment forecasts by industry for each metro area in the state. The average annual growth rates for each industry were applied to the job total in each industry for Washoe County to estimate the demand for future jobs by industry for the next 20 years. The average annual wage for each industry from 2014 was then applied to the forecast of new jobs by industry to estimate total wages by industry. This analysis was ultimately done to estimate how the forecast for employment mix in Washoe County would impact average wages. The result was a nominal increase in average annual wages from $47,996 in 2014 to $51,108 in 2034, which is an annual average increase of 0.3 percent. The forecast growth in employment in Washoe County, at least based on the forecast completed by the DETR, results in minimal changes in average wages.

Table 4
Washoe County Current and Estimated Future Average Annual Wage, 2014 and 2034

Industry	2014 (Jobs)	Total / Average (Wage)	Est. Avg. Ann. % Growth (2014-2034 Jobs)	2034 (Jobs)	Total / Average (Wage)
Agriculture	117	$34,528	-1.4%	88	$3,025,676
Mining	161	$92,404	0.7%	185	$17,067,449
Utilities	663	$96,616	-1.3%	514	$49,687,717
Construction	11,770	$53,196	3.4%	23,090	$1,228,313,089
Manufacturing	12,103	$61,100	1.4%	16,010	$978,215,277
Wholesale Trade	9,016	$61,412	0.6%	10,070	$618,447,772
Retail Trade	23,062	$30,420	0.9%	27,510	$836,854,402
Transportation and Warehousing	12,204	$49,816	1.8%	17,269	$860,271,416
Information	2,013	$59,904	1.1%	2,528	$151,466,442
Finance and Insurance	5,657	$102,882	1.2%	7,178	$738,527,138
Real Estate and Rental and Leasing	3,595	$41,964	1.2%	4,563	$191,471,682
Professional, Scientific, and Technical Services	9,795	$89,726	1.8%	14,117	$1,266,703,087
Management of Companies and Enterprises	2,771	$165,256	0.3%	2,967	$490,258,974
Administrative and Support and Waste Management	15,220	$28,600	1.7%	21,518	$615,410,503
Educational Services	2,008	$38,012	0.9%	2,413	$91,727,078
Health Care and Social Assistance	22,699	$67,730	1.9%	32,960	$2,232,370,627
Arts, Entertainment, and Recreation	5,351	$25,931	0.8%	6,332	$164,203,402
Accommodation and Food Services	29,926	$22,568	-0.1%	29,460	$664,847,110
Other Services (Except Government)	5,430	$39,312	1.3%	6,994	$274,928,853
Government	8,393	$58,465	0.2%	8,791	$513,959,013
Total	**181,953**	**$9,069,358,604**		**234,558**	**$11,987,756,707**
Average		**$47,996**		**11,728**	**$51,108**
Average Annual Growth Rate (2014-2034)				**1.3%**	**0.3%**

Source: Nevada Department of Employment, Training and Rehabilitation; Economic & Planning Systems
H:\153014-Reno Master Plan\Data\[153014-Wage and Income Forecast.xlsx]Housing Forecast

The future of employment and average wages can change and will likely change in the future dependent on several factors not considered in the above analysis, including the policies and strategies the City and the region can enact. The Master Plan can have a large impact on helping set the course for a shift in the economic base of the City. However, these affects remain to be demonstrated and EPS will estimate future demand for housing based on the existing distribution of incomes in Reno.

The consensus forecast estimates an additional 77,000 people in Reno over the next 20 years. This amount of population growth equates to approximately 30,000 new households. The forecast of new households was distributed among income and also by renter and owner households based on the City's current distribution of households by income and tenure by income, which is shown in Table 5.

Table 5
Forecast New Households by Income and Tenure, 2014 to 2034

	2015				2035					
Household Income	**# of Households**	**% of Households**	**% of HHs that Rent**	**% of HHs that Own**	**Total Households** 2035	**New Households** (2015-2035)	**Renter HHs**	**Affordable Monthly Rent**	**Owner HHs**	**Afforable Home Price**
<$15,000	15,582	16.3%	80%	20%	20,486	4,904	3,923	$375	981	Under $100,000
$15,000 - $24,999	11,923	12.5%	72%	28%	15,676	3,753	2,702	$625	1,051	Under $100,000
$25,000 - $34,999	11,200	11.8%	67%	33%	14,725	3,525	2,350	$875	1,175	$112,400
$35,000 - $49,999	12,852	13.5%	60%	40%	16,897	4,045	2,427	$1,250	1,618	$176,100
$50,000 - $74,999	15,924	16.7%	45%	55%	20,936	5,012	2,255	$1,875	2,757	$283,100
$75,000 - $99,999	10,453	11.0%	39%	61%	13,743	3,290	1,283	$2,500	2,007	$389,900
$100,000 - $149,999	11,723	12.3%	26%	74%	15,413	3,690	959	Over $2,500	2,730	$496,700
$150,000 - $199,999	3,026	3.2%	14%	86%	3,978	952	133	Over $2,500	819	Over $500,000
$200,000+	2,635	2.8%	14%	86%	3,464	829	116	Over $2,500	713	Over $500,000
Total	**95,318**				**125,318**	**30,000**	**16,149**		**13,851**	

Note: Grey shaded cells indicate household income groups that could not afford the median rent or median home price.

Source: US Census 2014 ACS; Economic & Planning Systems

H:\153014-Reno Master Plan\Data\[153014-Wage and Income Forecast.xlsx]Housing Forecast

The estimated new households by income are organized at a general level by potential housing type to illustrate the diversity of demand. The organization by housing type is based on the affordability of certain housing types by income cohort. Figure 19Figure 19 identifies the range of income cohorts and the forecasted households by cohort that can generally afford to buy a home based on existing market conditions and prices. The figure illustrates that a large portion of future households likely cannot afford to buy the average home in Reno.

Figure 19
Home Ownership Affordability by Income Cohort, New Households 2014 to 2034

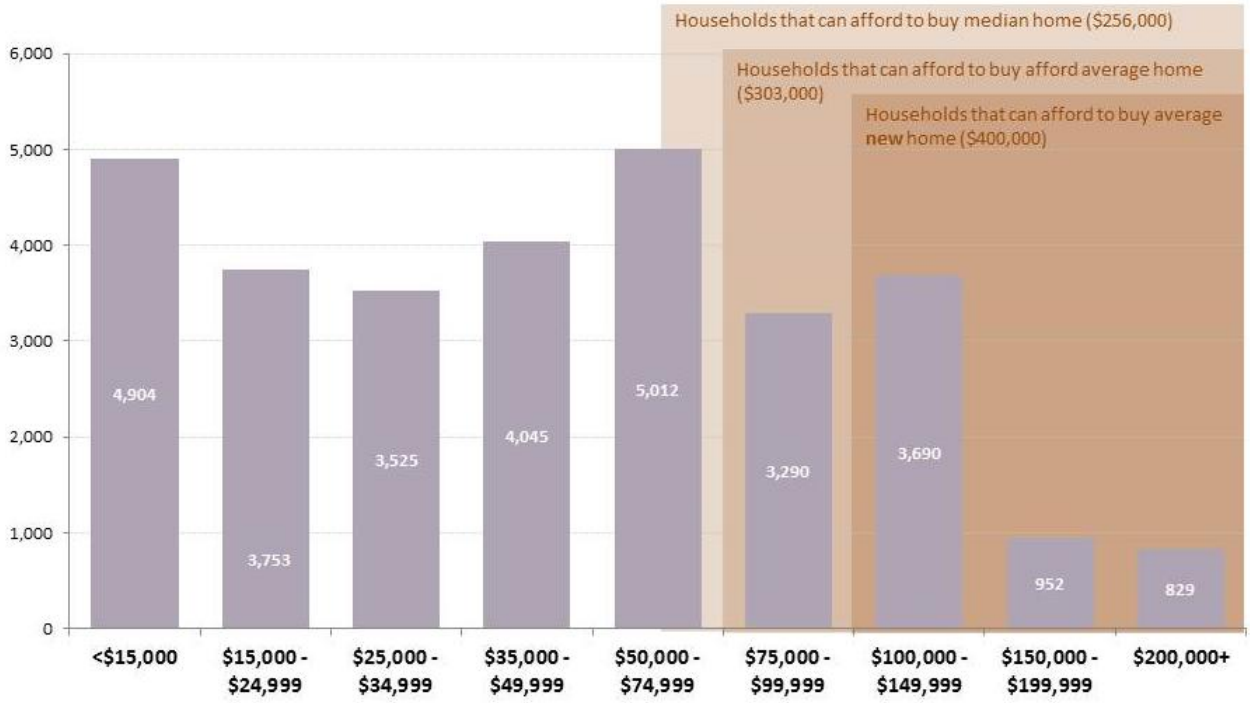


Figure 20 identifies the income cohorts that can afford to rent a home at the median and average apartment rental rates in the City. There is still a portion of households that, based on their income alone, seem not able to afford to rent a home. Some of these households may not have a housing affordability problem, as some may be students or seniors who have no or minimal incomes but are able to pay for rent through other means.

Figure 20
Rent Affordability by Income Cohort, New Households 2014 to 2034

Four larger income cohort groups were used to illustrate the variety of potential housing types that are affordable to each group. The estimated potential housing type affordable to each cohort is listed in Figure 21 with the corresponding new household projections to show the diversity of housing types that will be needed based on income in Reno in 2034. There is currently a wide variety homes at different price points within Reno and housing available for purchase for potential homeowners with incomes that are traditionally homeowners. However, the vast majority of new for-sale homes recently built or planned for in Reno are single family detached units. As shown previously, the average home price for a new home is $400,000, and the average price for a new single family detached home is $420,000. The analysis illustrates that only a portion (approximately 20 percent) of future new households will be able to afford to buy a new single family home. While some existing residents may end up purchasing homes at a higher price point than they currently own in the future, most homes available to new residents will either be new single family detached homes or for-rent apartments. The major take-away from the analysis is that there is likely going to be the need for a diversity of new housing types in Reno in order to provide affordable options for new households in Reno.

Figure 21
Estimated Potential Affordable Housing Types for Projected New Households in 2034 by Income Cohort

Household Income	New Households by 2035	Potential Housing Type (Current Conditions)
Under $35,000	8,660	Below market rate apartment Student apartment
$35,000 to $49,999	7,570	Market rate apartment Condo/townhome Small, older single family home
$75,000 to $99,999	8,300	Above market rate apartment New condo/townhome Average single family home
$100,000 or Greater	5,470	New single family home
Total New	**30,000**	

This simple analysis is meant to illustrate how diverse new housing demand will be solely based on distribution of households matching the City's current conditions. The analysis does not factor in housing preference, potential diversification of jobs and incomes, and the age of residents in Reno. Within Phase II of the Master Plan, EPS will complete a comprehensive housing demand forecast to help estimate housing demand by not only income but by demographic groups and locations to help guide the future land use plan.

Employment Conditions

Total employment within Washoe County was 197,928 as of the end of 2014, according to the U.S. Bureau of Labor Statistics. Washoe County accounts for 16 percent of jobs within the State of Nevada. Washoe County has been capturing a decreasing share of job growth in the state as the county accounted for over 18 percent of jobs in the state in 2000 (Slide 15 and 17). Employment in Washoe County reached a high in 2007 of 219,678 and the county is still has 21,750 fewer jobs now than it did before the recession (Slide 16). The average annual wage of people employed in Washoe County is $44,993.

The total employment in Reno is 137,543, as of 2013. The City of Reno accounted for 73 percent of employment in Washoe County in 2013 (Slide 18). Reno has captured a greater share of employment in the county as the city only accounted for 63 percent of jobs in Washoe County in 2005. Between 2005 and 2010, the City of Reno decreased in employment by 256 jobs (according to DETR) while the county decreased by 26,488 jobs (according to U.S. BLS). From 2010 to 2013, Reno increased in employment by 4,900 jobs and accounted for the vast majority of employment gains in the county. The rest of the county lost employment during this time period.

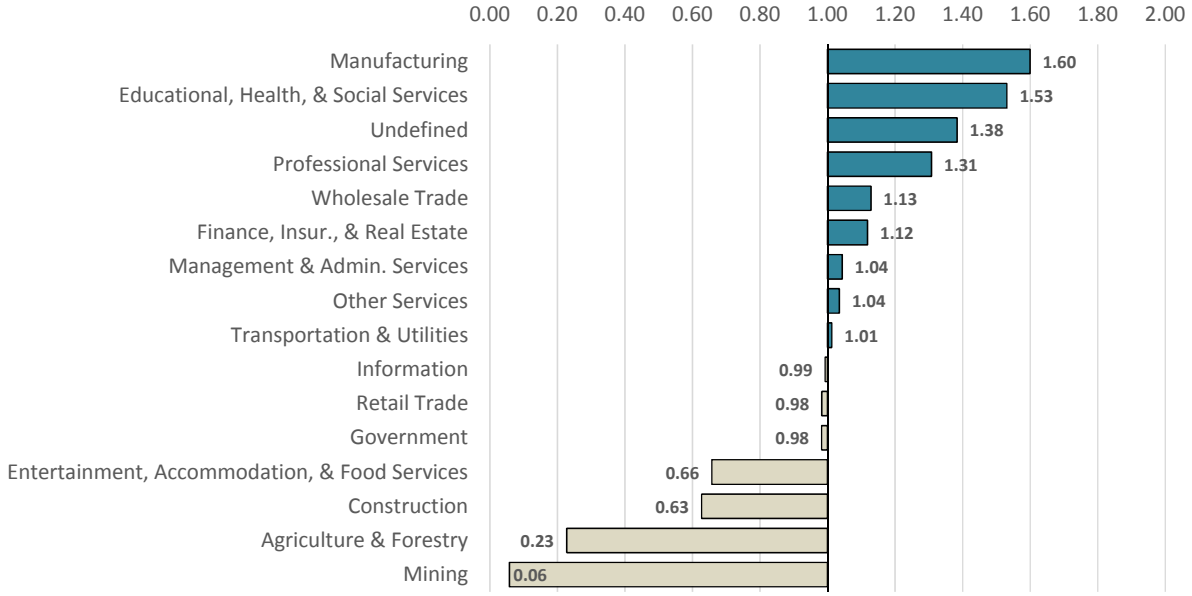
The three largest industries (in terms of employment) in Reno are:

- Education, Health, & Social Services – 33,600 jobs
- Entertainment, Accommodations and Food Service – 25,423 jobs
- Retail Trade - 15,522 jobs

Reno serves as the regional hub for services and goods for northern Nevada and is the gateway to the recreational activities in and around Lake Tahoe. The city has also traditionally been a major hub for casino gaming. The construction and entertainment industries were the most impacted industries during the recession. The Entertainment and Accommodations industry lost 1,278 jobs between 2005 and 2013, and the Construction industry lost over 4,200 jobs during the same time period.

Since 2010, the Education, Health and Social Services industry and the Management and Administrative Services industries have increased by the most jobs with 2,924 and 1,687 jobs since 2010, respectively. Reno has a higher concentration of Manufacturing, Educational and Health, and Professional Services jobs than within the state as a whole. These three industries have experienced gains in employment since 2010. Also gaining in employment is the Transportation and Utilities industry, which increased by 1,372 jobs since 2005, as Reno has become an attractive location for distribution activities serving California and the western United States.

Figure 22
City of Reno Location Quotient (Reno vs Nevada) by Industry, 2013



Source: Bureau of Labor Statistics; UNR; Economic & Planning Systems

Employment Forecasts

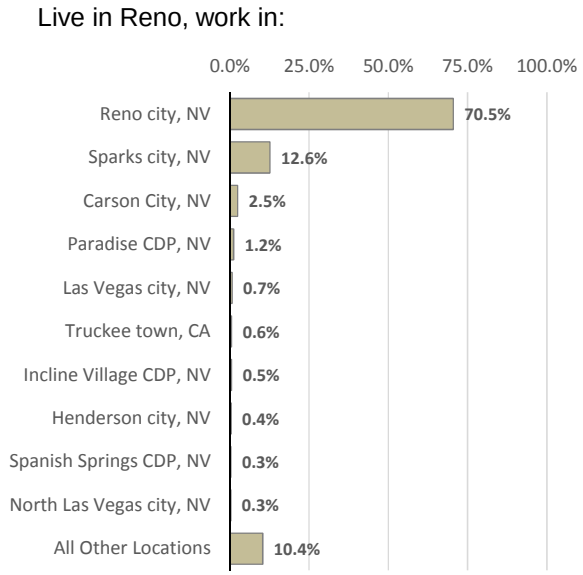
The 2014 consensus forecast estimates that employment in Washoe County will increase by 84,000 jobs over the next 20 years, which is an annual growth rate of 1.4 percent. Growth in employment over the next five years (2014 to 2019) is expected to occur at an annual rate of 1.9 percent annually and result in an increase of 25,000 jobs. The Economic Development Authority of Western Nevada (EDAWN) developed an employment forecast in 2014 (Epic Study) to estimate employment growth considering the impact of Tesla Motors, an American automotive and energy storage company, locating in Storey County. The study developed three scenarios with "Scenario B" summarized as the preferred scenario. The scenario estimated population, household and employment growth for a large portion of the State of Nevada including Washoe County and Reno. The forecast estimates employment in Washoe County will increase by 35,000 jobs between 2015 and 2019, which equates an annual rate of 3.2 percent annually. Employment in Washoe County grew by 0.7 percent annually between 2010 and 2013.

The EDAWN Epic Study forecast for population in Washoe County estimates the county to grow by 36,500 residents between 2015 and 2019, which will result in an increase of 14,500 households over this period. This rate of population and household growth would match the rate of growth that occurred between 2000 and 2010, but is double the rate of growth the county has experienced over the past five years.

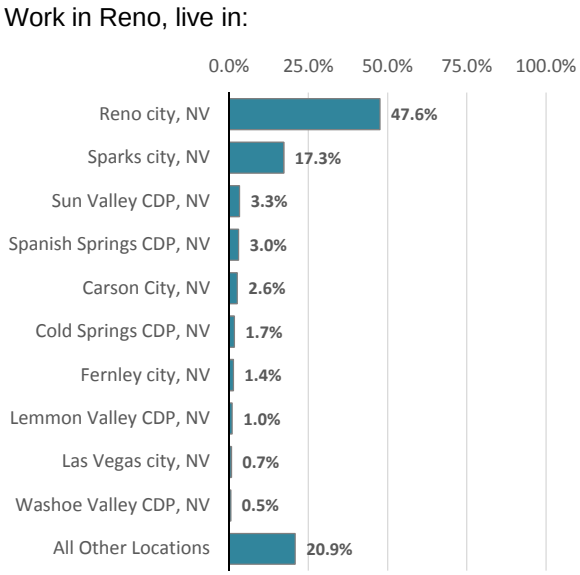
Commuting Patterns

Reno's workforce lives primarily within Washoe County and the City of Reno. Forty-seven percent of workers in Reno also live in Reno and 17 percent live in Sparks. The majority of Reno residents work in Reno (70.5 percent), as well.

Figure 23
Reno Commuting Patterns in 2012



Source: LEHD; Economic & Planning Systems



Source: LEHD; Economic & Planning Systems

Non-Residential Market Conditions

Commercial Development

Despite employment gains within the City of Reno since the recession, non-residential development has occurred at a slower pace absorbing existing buildings before sparking new development. Office space within Reno totals 13.4 million square feet and has increased by 326,000 square feet since 2008. During this period vacancy rates have decreased from 15.4 percent to 12.6 percent but rental rates have fallen during this period. Reno has captured 95 percent of the office development that has occurred in the county since 2008, but it only represents a 0.3 percent annual increase in inventory.

Retail development in Reno has increased at a slow rate with only 533,000 square feet built since 2008, which is a 0.4 percent annual growth rate. Households in Reno have increased by over twice the rate. This is partly due to decreasing capture of new retail space within Reno, as Reno only captured 44 percent of new retail space in the county since 2008 but accounted for over 60 percent of household growth during this period. Similar to the office market, the retail demand has been met somewhat by existing space vacated during the recession.

Industrial Development

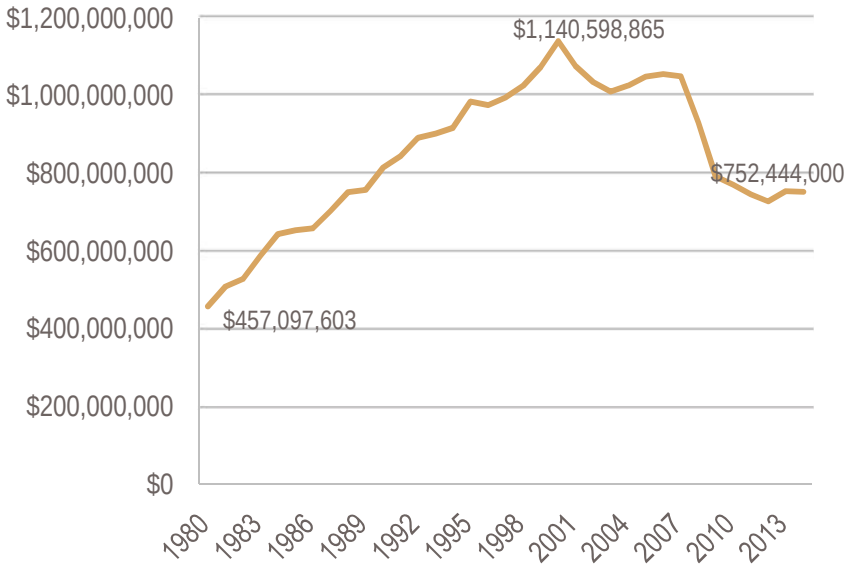
Industrial development has occurred at a faster pace than office development. The industrial inventory in the county has grown by 1.1 percent annually since 2008 and has increased by 5.8 million square feet over this period. Reno captured 1.7 million square feet of this growth which accounts to 29.6 percent, far less than the historic capture of industrial space. Reno currently accounts for 50 percent of the industrial space in the county. There has also been significant industrial development within Storey County to the east of Washoe County and Reno. Industrial space in Storey County has increased by 2.0 million square feet in the past 8 years, of which 1.8 million was built in the past two years. The development is occurring primarily within in the Tahoe-Reno Industrial Center (TRIC), which is a 107,000 acre industrial park located in Storey County. The park is anchored/adjacent to Tesla's 900,000 square foot gigafactory, which is currently under construction and expected to be open (Phase 1) in 2016.

The supply of industrial land within Washoe County and Reno may have impacted the amount of growth occurring in Storey County. The TMRPA commissioned a study in 2013 to determine if the Truckee Meadows region has an adequate supply of development-ready land for new industrial development. The study found a supply of 2,800 acres of land zoned for industrial uses that is considered to have the most development potential. The study measured the suitability of these sites for development and found that only 420 acres of the 2,800 acres were served adequately by industrial scale infrastructure and/or had only moderate constraints to development. The study also estimated potential demand for industrial acreage and estimated that 1,600 acres were needed to accommodate demand over the next 20 years. The comparison of supply and demand indicated that the region has an ample supply of total land for industrial development but the region lacks development ready sites for large users (20 acres or more) and the lack of sites will push interested developers and businesses to TRIC. As well, a large portion of the vacant land is within the control of the Reno-Tahoe Airport Authority and near the Reno-Stead Airport, which lacks the infrastructure needed to serve potential users. The City has begun researching how to address infrastructure near the Reno-Stead Airport, specifically how to address a potential lack of capacity for sanitary and sewer water. TMRPA is currently updating its 2013 study to determine how recent development has impacted the supply findings of the study specifically where development has gone and what tier of site the development is occurring on.

Casino Gaming in Reno

Casinos have been a large driver of economic activity in Reno for several decades. The gaming industry is going through significant shifts that are impacting the future of casinos in Reno. The City of Reno receives a significant portion of revenue from casinos, through property tax, business license and gaming license fees, consolidated tax, and lodging tax. However, the revenue from commercial gaming has been largely declining since 2000. Gaming revenue in Washoe County has declined from $1.1 billion in 2000 to $752 million in 2014, as shown in Figure 24.

Figure 24
Washoe County Annual Gaming Revenue, 1980 to 2014



Source: Clarion Associates, Nevada Gaming Control Board

The decline in gaming revenues in Washoe County is due to an overall decline in gaming revenues in the U.S., but also to growing competition from within the U.S. Gaming revenues have begun to grow again in the United States., but Nevada is not keeping pace. In 2014, overall national gaming revenues were up 2.45 percent but revenues in Nevada were down 1.22 percent, as shown in Table 6. A similar trend has occurred over 2015 as gaming revenues are slightly up in the U.S. but down in Nevada. There are a growing number of states that are allowing more gaming activity, which is increasing competition and driving the need for casinos to diversify themselves to capture visitors.

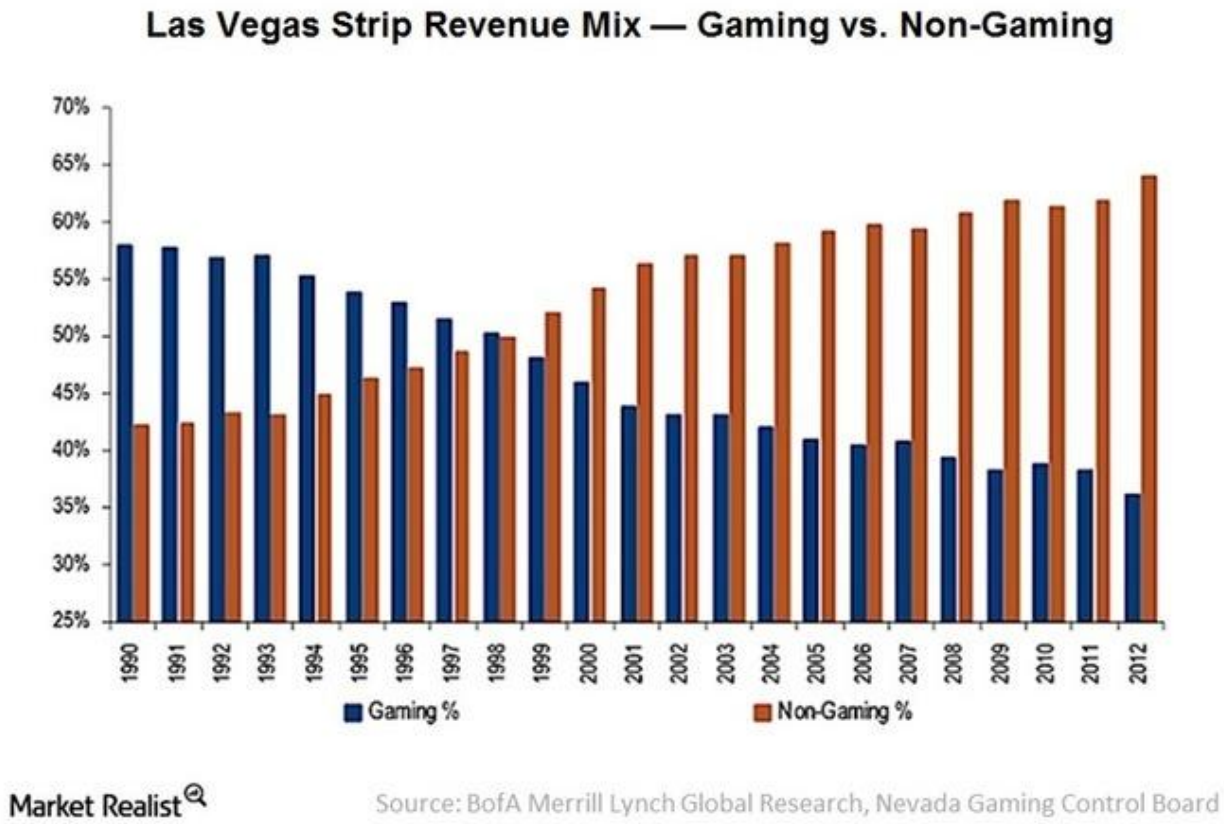
Table 6
Commercial Gaming Revenues by State, 2014 and 2015

	2014	2015
Colorado	-0.38%	7.07%
Delaware	-6.58%	-1.65%
Florida	8.53%	5.40%
Illinois	14.69%	11.51%
Indiana	-7.50%	-0.12%
Iowa	-1.46%	2.60%
Kansas	-3.16%	5.25%
Louisana	0.71%	7.61%
Maine	-1.36%	-4.87%
Maryland	24.66%	20.95%
Michigan	-1.24%	3.10%
Mississippi	-2.84%	-8.01%
Missouri	-2.73%	2.53%
Nevada	-1.22%	-0.02%
New Jersey	-4.20%	-8.31%
New York	-1.41%	2.16%
Ohio	36.14%	14.11%
Pennsylvania	-1.44%	3.33%
Rhode Island	2.58%	0.46%
South Dakota	1.12%	-9.29%
National	**2.45%**	**0.18%**

Source: UNLV Center for Gaming Research

The gaming industry has been responding to declining revenues by diversifying the attractions and amenities provided by casinos. The revenue from non-gaming activities on the Las Vegas Strip became larger than gaming revenues in 1999, as shown in Figure 25. The casinos in Las Vegas have been increasing the diversity of amenities for entertainment and leisure to diversify their revenue streams and continue to attract visitors to their casinos. This trend can be seen in Reno as most of the casinos have tried to diversified offerings. However, the newer casinos located outside of downtown, on larger, self-contained sites have been more successful in offering a wider variety of opportunities. The downtown casinos have been more impacted by the drop in revenues because they are primarily gaming oriented.

Figure 25
Gaming vs. Non-Gaming Revenue on the Las Vegas Strip, 1990 to 2012



Going forward, gaming will always have a role in the Reno economy but its overall impact will likely continue to decline. The existing casinos will need to continue to adapt and diversify to continue to attract visitors. Within the next phase of the Master Plan, strategies will be needed to help identify how casinos can continue to fit within Reno, especially in downtown as the City and downtown diversify their economic bases.

Master Plan Policy Considerations

The consideration of demographic, economic and market trends within Reno has generated a set of policy questions that need to be explored further during Phase II of the Master Plan Update. The questions identified related to the economy and future growth are described below and set the framework to help develop the scope of work for Phase II of the Master Plan Update. The questions generally fall within three categories; Housing, Downtown, and Economic Growth.

Housing Questions

The main consideration going fore-ward is how demographic and housing market trends will impact the future pattern of growth. There is a variety of considerations to address in terms of both market preference and market feasibility, and these are sometimes in conflict with each other. The City's supply of residential land is dominated by sites planned for prior to the recession and reflects a land use pattern that presumed at the time to match the pattern that had occurred in the region for several decades. Determining if this pattern suits the needs of future residents and whether the pattern benefits the city is paramount to development of the Master Plan. Specific issues and questions to be explored include:

1. How will shifting market preferences and demographic trends impact Reno?

   As shown above, there is a growing preference nationally for more walkable, compact residential developments that place homes near services, retail and jobs. Much of the existing pattern within Reno and planned development does not match with these newer preferences. The community outreach completed by the City helped to illustrate that the preferences of Reno residents generally match national trends, especially concerning the desire for walkable neighborhoods. Understanding the potential depth of the market for more-dense, compact, walkable housing within Reno will be assessed to help shape growth scenarios developed in the next phase of the Master Plan Update.

   A major topic of debate nationally is the impact of housing preferences of the millennial generation (ages 20 to 35). Driven by shifting preferences, delayed household formation, debt, and other factors, younger people are choosing more often to rent homes and choosing to live in more walkable and mixed use environments. Reno's largest age cohort is residents age 20 to 34. The housing decision made by this demographic group will have a large impact on the future growth pattern of Reno and potential economic success of the region in attracting and retaining young people. Understanding the impact on market demand for a variety of housing types and locations from this demographic group is needed to help form the land use plan.

2. How does Reno reconcile a large pre-determined land use pattern with a Regional Plan and current Master Plan that calls for a different pattern of growth?

   As shown above, the City of Reno has an inventory of nearly 36,000 approved residential lots and demand for only 30,000 total households over the next 20 years. While some of these projects may never come to fruition, the inventory of approved lots still represents a large portion of the future demand for housing in Reno. The vast majority of these lots are located on the edges of Reno in traditional suburban single family home developments. However, the TMRPA Regional Plan and the City's own Master Plan have a framework to support a significant amount of growth within infill and redevelopment sites in the region's centers and along major transportation corridors. Despite the Regional Plan's intentions, there has been

limited market activity that has occurred within the identified centers and corridors at the densities originally contemplated as part of the Regional Plan. Understanding the potential demand for infill and redevelopment is needed to assess the viability of land use designations and help the City prioritize investments to facilitate redevelopment and infill projects for housing. As well, understanding the demand by housing unit type (detached, attached, apartment, condo) and project type (greenfield, infill, areas of the city) will help inform how well the current approved inventory of buildable residential land meets the needs of the City.

Downtown and Central Reno

The revitalization of downtown has been identified as a priority of the City. As part of the citywide Master Plan Update process, updates to the Downtown Reno Regional Center Plan should be a major consideration. In order to inform these updates, several key issues and questions need to be analyzed to set the realistic perimeters for the vision for downtown and to provide guidance on how to best address issues the area is facing. The following issues and questions need to be explored.

1. What can Reno do to help spur development activity in its downtown areas?

   The City and its partners have made efforts to help spur activity within the urban core of Reno. Major projects such as the ReTRAC, Reno Aces Baseball Park, and Truckee River corridor improvements provide building blocks for changes downtown but have not spurred as much development as hoped, at least as of yet. Best practices from comparable communities are needed to be explored to help form actions and strategies for Reno to consider.

2. What are realistic expectations for development activity within downtown?

   There have been a few notable projects such as the reuse of old hotels for condos and development of a mixed-use center anchored by a downtown movie theatre, but there is little track record or trend of development to help assess future market potential. Analysis of the capture rate for housing downtown in a set of a half-dozen comparable downtown areas will help set realistic expectations for capture for Reno.

3. How can the City of Reno and the University of Nevada Reno develop a joint vision and collaborative strategy for creating an active University District that links the core campus and downtown?

   The framework for a strategy has been developed within the UNR's campus master plan, which needs to be reinforced within the Master Plan, through both boundary updates and more strategic actions. A set of comparable City-University partnership were identified within the campus master plan effort and will help inform this plan. Partnerships identified include examples from the University of California-Berkeley, University of Arizona, University of Maryland, Western Kentucky University, Ohio State, UPENN, and others. These case studies should be augmented with others to identify best practices to be considered with an emphasis on specific implementation strategies used to advance planning efforts.

4. How does the City of Reno encourage and regulate the adaptive reuse of buildings downtown?

   While the city has a few good examples of reuse projects of former hotels in condos, it is also facing a growing trend of old hotels being used for weekly rental units that are not desired. As well, there is a sizeable inventory of vacant buildings in downtown in need of reinvestment. Best practices related to addressing vacant buildings (San Antonio, Oklahoma

City), weekly rentals, and encouraging re-use of outmoded buildings need to be studied to provide direction within the Master Plan.

5. How can the gaming and casino industry fit within the future vision of downtown?

   The success or failure of casino gaming in downtown has a major impact on the future of the area. Recent trends might suggest that gaming is slowly leaving downtown but this may not be the case. Understanding the future potential for gaming and how casinos and gaming can fit within a downtown plan focused on activities not related to casinos is needed.

Economic Growth Questions

1. What impact will Tesla Motors have on Reno and how can Reno position itself to benefit and mitigate negative impacts?

   Tesla's decision to locate its gigafactory in the region will have major impacts on Reno both positive and negative. Understanding the realistic implications and opportunities stemming from Tesla is important to creating a Master Plan that can best leverage the benefits Tesla creates. The impact of Tesla is a hotly debated topic with the region and an analysis of the estimates for growth is needed to help the City understand what implications each growth forecast has. The EDAWN EPIC Study forecasts a significant amount of employment growth over the next five years, and, if true, the forecasts related to housing and population growth are likely under-estimated. Tesla and TRIC's location in Storey County have major implications on Reno and Washoe County, which also need to be planned for.

2. What opportunities for industrial development does Reno have and is the City willing and able to make the improvements necessary to capture opportunities?

   Washoe County and the greater Reno-Tahoe area has become an attractive location for industrial development with the region being well positioned for logistics operations and other economic opportunities. The Industrial Lands Analysis completed by TMRPA highlights the lack of larger industrial sites in Washoe County and Reno. Furthermore, the land within Reno with the best potential for large scale industrial users has barriers that need to be addressed in order to capture future growth. The fiscal impact analysis completed for Phase I found that industrial development has a net fiscal positive impact for the City's General Fund. However, does this benefit make investing in infrastructure to help capture industrial development a priority for the City, which has limited resources to invest?

3. How can Reno diversify its economy and lessen its reliance on gaming and tourism?

   The national economic recession of 2008 and 2009 had a major impact on Reno in part due to the impact on Reno's major driving industries, such as gaming and tourism. Furthermore, changing climate patterns have had an impact on the winter recreational opportunities in the Tahoe area. Reno needs to identify ways to diversify its economy and find economic opportunities that can help complement the activity generated by the existing industries in Reno. Planning for where future opportunities for economic diversification can and should occur will be a major driver of land use decisions in the Master Plan Update.

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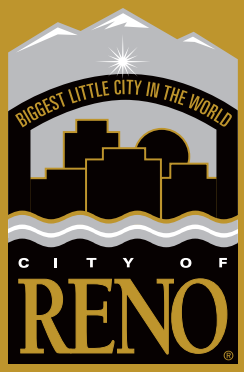
planning for the future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