Appendix A: 2020 Regional Transportation Plan Regional Forecast Report

Introduction

As part of the 2020 TRPA Regional Transportation Plan (RTP), TRPA prepared regional and transportation forecasts for the years 2035 and 2045. The regional forecast includes changes in development, population demographics, and visitation. The regional forecast and the transportation infrastructure forecast are implemented in the Tahoe travel demand model to allow planners to assess the efficacy of policies and projects that promote the goals of the Regional Plan and the RTP. This document outlines the research and assumptions that informed forecast development.

Development Forecast Summary

The 2035 and 2045 forecast years build upon the 2018 model base year, which was developed during the fall of 2019. More information about the 2018 base year can be found on the Tahoe model website. The forecasts include a variety of projections related to land use and the characteristics of the Regions' traveling population in the forecast years; this population includes residents, visitors, and commuters. The forecast years of 2035 and 2045 were selected to meet specific regulatory requirements of the California Sustainable Communities Strategy (SCS) and Federal RTP requirements.

Residents– The forecast projects Lake Tahoe's full-time residential population to increase slightly. The forecasted increase is a deviation from the declines in the Region's population observed over the last 20 years and is influenced by a suite of factors. First, the number of regional housing units will increase as residential allocations are distributed and workforce housing/affordable housing programs are implemented using residential bonus units. Second, the residential occupancy rate – the proportion of homes occupied by residents – is expected to increase due to an increase in housing supply available for residents from implementation of workforce and affordable housing initiatives as local and regional efforts to increase the housing supply for local residents take effect. The downward trend in regional population in the last 20 years was likely influenced by the declines in gaming and associated job loss. The precipitous declines in gaming revenues observed in the early part of the century following the opening of casinos in northern California have not continued into the second decade as revenues appear to have stabilized. The income distribution of the residential population will remain steady as increased provision of workforce and affordable housing counteract recent upward trends in household income. School enrollment will increase slightly as a result of overall population growth. Employment will also increase as additional Commercial Floor Area (CFA) and Tourist Accommodation Units (TAU) are constructed throughout the Region.

Visitation – The forecast projects both day and overnight visitation to the Lake Tahoe Region to increase during the forecast years. This forecasted increase is based upon the projected population growth in the mega-region (Bay Area/Sacramento/Reno), forecasted increases in traffic counts in adjacent areas, and the increasing popularity of the outdoor recreation experience. This increase in visitation will result in an increase in the number of occupied overnight lodging units, short-term rentals, and seasonal homes.

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Table 1: Forecast Data Summary

Forecast Data Summary				
	Base Year 2018	Forecast 2045	change (#)	change (%)
Residential Units and Population				
Residential Population	**51,624**	**58,041**	**+ 6,417**	**12.4 %**
Occupied Units	**21,624**	**24,315**	**+ 2,691**	**12.4 %**
Unoccupied Units	**26,031**	**28,056**	**+ 2,025**	**7.8 %**
Total Residential Units	**47,655**	**52,252**	**+ 4,597**	**9.6 %**
Income of Occupied Residential Units				
Low Income Units	**10,463**	**11,886**	**+ 1,423**	**13.6 %**
Medium Income Units	**4,891**	**5,437**	**+ 546**	**11.2 %**
High Income Units	**6,254**	**6,843**	**+ 589**	**9.4 %**
Total Overnight Visitor Units				
Short Term Rentals	**6,005**	**5,931**	**-74**	**-1.2 %**
Seasonal Units	**17,129**	**18,544**	**+ 1,415**	**8.3 %**
Campground Spots	**2,120**	**2,120**	**0**	**0 %**
Total Lodging Units	**11,107**	**12,052**	**+ 945**	**8.5 %**
Occupied Overnight Visitor Units				
Occupied Short Term Rentals	**2,227**	**2,240**	**+ 13**	**0.6 %**
Occupied Seasonal Units	**6,396**	**6,911**	**+ 515**	**8.1 %**
Occupied Camping Spots	**1,278**	**1,278**	**0**	**0 %**
Occupied Lodging Units	**6,190**	**7,086**	**+ 896**	**14.5 %**
Other Key Data Points				
Commercial Floor Area	**6,327,319**	**6,533,869**	**+ 206,550**	**3.3 %**
Employment	**28,604**	**29,462**	**+ 858**	**3 %**
School Enrollment	**8,887**	**9,992**	**+ 1,105**	**12.4 %**

Forecast Methodology

The overall approach to forecast development was to apply the best available information and data. The development rate forecast was informed by a review of historical development rates, and an assessment of the performance of past forecasts. The forecast differs from past forecasts in at least two ways:

1. More rational development rates – Prior forecasts have generally assumed that full build out of the Region would occur by 2035. Historic development rates have not kept pace with those forecasts (additional detail on observed rates is available in the data trends appendix). This forecast refines past methodologies by placing greater weight on observed development rates.
2. Recent overhaul of development rights system - This is the first forecast since significant changes were made to the development rights system to accelerate attainment of threshold standards and Regional Plan goals and policies. The changes enable easier conversion between types and facilitates the attainment of State housing mandates.

The forecasts contained in this document represent a conservative yet realistic view of the continued build out of the Lake Tahoe Regional Plan. Prior forecasts by TRPA had projected significantly faster growth and a faster consumption of the remaining development rights. The annual rate of consumption for commercial floor area and tourist accommodation units were adjusted to more accurately align with observed trends since the adoption of the 2012 Regional Plan update. Additionally, the forecast assumes that not all of the remaining development potential for commercial floor area and tourist accommodation units will be constructed by 2045.

Staff anticipates that by 2045 the unknown but likely time-limited economic impacts from the COVID pandemic will be replaced by more normal economic forces.[1]

Residential Units

The number of housing units in the region is influenced by market conditions as well as TRPA's development rights system, which caps the total development potential for the region. The residential

[1] Additional detail on the considerations related to COVID-19 are included in an addendum at the end of this document.

occupancy rate of the housing stock is influenced by economic factors, the number of residents, second home ownership, and visitors that frequent the region.

There are currently 47,655 residential units in the Region (based on TRPA records); according to the occupancy rates published by the U.S. Census Bureau 2018 American Community Survey (ACS), an estimated 21,624 residential units (45%) are occupied by full-time residents and 26,031 units (55%) are not occupied by full-time residents (ACS 2018). Currently, approximately 20% of existing residential units in the region are multi-family units (approximately 9,530 units) and 80% of existing units (38,125) are single family units. By 2045, an additional 4,597 units are expected to be constructed, bringing the total number of residential units in the region to 52,252, a 9% increase. This includes the construction of 1,823 additional single-family residential units (40% of additional units) and 2,774 additional multi-family residential units (60% of additional units). Forecasts of residential projects in the three California jurisdictions are sufficient to accommodate the Regional Housing Needs Assessment (RHNA) Cycle 5 (2013-2021) and Cycle 6 (2022-2029). The forecast includes a continuation of the RHNA requirements beyond 2029. These requirements were linearly extrapolated to 2045 based on requirements established to date, and are accommodated in the forecasts.

All remaining residential allocations (2,234) are allocated and constructed in the forecast. This includes the award and construction of all residential bonus units (1,609), and all currently banked residential units (204) by 2045. The forecast also includes the conversion of 100,000 square feet of CFA and 130 TAUs to residential units, which will generate an additional 290 multi-family and 260 single-family units. The projected conversions are consistent with conversion trends since the adoption of the conversion programs and observed development rights utilization rates. The observed trends indicate a net conversion from CFA and TAUs and towards Residential.

Several key assumptions informed the spatial distribution of residential development in the forecast. First, new residential units were allocated to projects known to be in the pipeline, including multi-family and affordable-/moderate-income projects on public lands. This included 580 units expected to be built on California Tahoe Conservancy asset lands[2], redevelopment successor agency[3] parcels and other

[2] See https://tahoe.ca.gov/programs/tahoe-livable-communities/asset-land-sales/ for more details about potential housing development opportunities that have been identified by the California Tahoe Conservancy.
[3] See https://www.placer.ca.gov/3396/Housing for information about potential housing development project opportunities in Placer County.

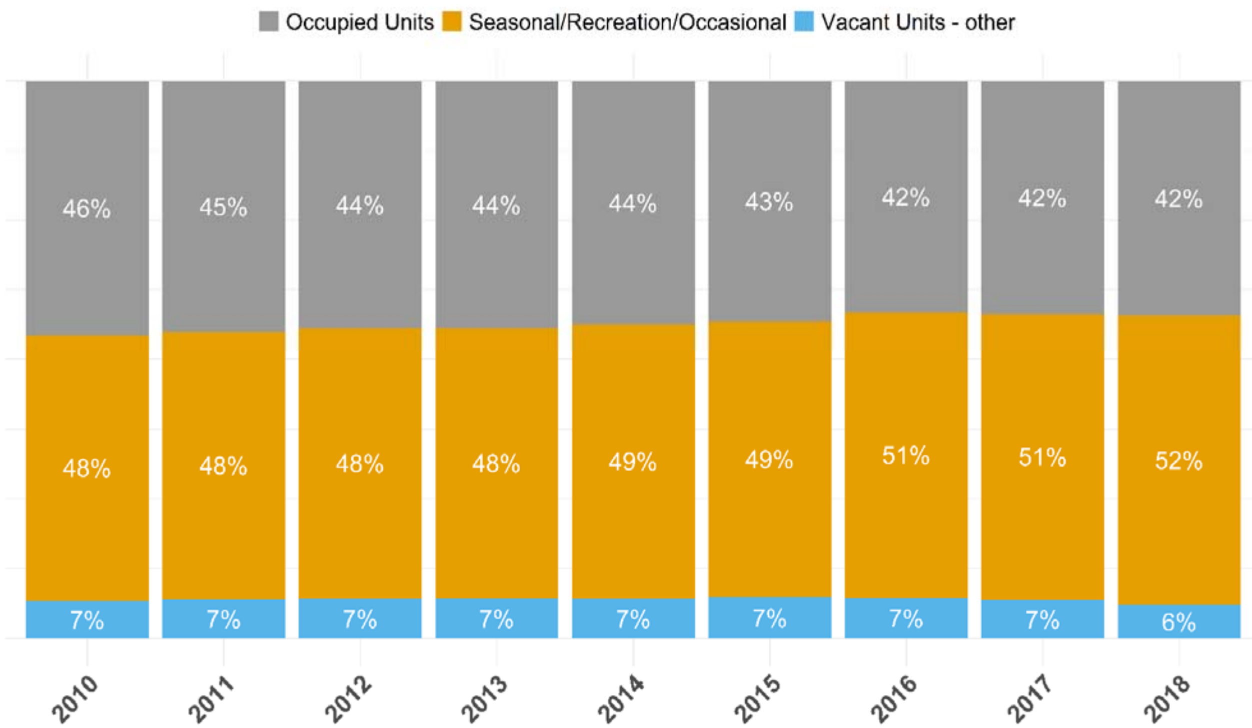
publicly-owned parcels where large multi-family and affordable/moderate-income housing projects are likely to be constructed[4]. For multi-family development on private properties, where the exact number of units to be constructed was not fully known, a computer-generated random selections to distribute units to vacant buildable multi-family and existing underbuilt residential parcels throughout the region. For these parcels, the number of units allocated was 60% of the maximum allowable buildout based on current zoning, coverage constraints, and density restrictions. This assumption is consistent with observed buildout patterns, and conservative in that it distributes new residential development throughout the region (rather than modeling the most compact possible pattern). Multi-family units were only assigned to parcels that are currently zoned for multi-family residential, meet density requirements, and that have remaining coverage available to support additional units. Finally, the remaining private residential units were constructed as single-family units through random assignment to vacant buildable properties throughout the region.

Residential Occupancy rate

The U.S. Census American Community Survey (ACS) estimates that, since 2010, the proportion of occupied housing units in the Tahoe Region has dropped from 46% to 42% in 2018 (U.S. Census Bureau 2020). The remaining 58% of the regional housing supply not occupied by full time residents is classified by the ACS as vacant (ACS classifies houses as "vacant" if they are permanently unoccupied, periodically occupied by seasonal residents, used as a second homes, or rented by visitors, including short-term rentals). In recent years, the total number of seasonal or short-term housing units increased by 24%, from 21,000 in 2010 to 26,000 units in 2018.

[4]Includes housing commitments made by the Tahoe Transportation District as part of the Highway 50 Community Revitalization Project, see https://www.tahoetransportation.org/us50.

Figure 1: Housing Occupancy (ACS 2010-2018)



Despite these trends over the past several years, the forecast includes an increase in the proportion of residential units occupied by full-time residents (owner-occupied and renter-occupied). Three factors are expected to contribute to the shift: 1) Housing Initiatives to promote construction of new workforce, achievable, and affordable housing in the region, 2) Housing initiatives to promote the transition of the existing stock of residential units from second homes and short term rentals to resident-occupied units, and 3) Measure T in the City of South Lake Tahoe. Additional detail on each factor is provided below.

1) *Housing initiatives to promote new workforce and income-restricted housing*: The development forecast includes construction of all of the remaining 1,609 residential units from the TRPA residential bonus unit pool. Residential Bonus Units are awarded as transfer incentives for relocating remote development into town centers, and for the construction of affordable/moderate/achievable housing. New housing constructed with Residential Bonus Units is required by TRPA Code to be deed-restricted to prohibit these housing units from being used for second homes or vacation rentals.
2) *Housing initiatives to transition existing housing stock*: There are a number of initiatives underway to transition second homes, vacation rentals, and vacant house into residential units

for full time residents. The forecast includes significant level of success for these initiatives (and other initiatives unknown at this time) that results in 700 additional units (~1.5% of the 2018 housing stock) occupied by residents in 2035 and 2045. The increase is independent of the forecasted increases described in and 1 and 3.

3) *Measure T in the City of South Lake Tahoe*: Voters passed Measure T in the City of South Lake Tahoe in November 2018. The measure includes broad restrictions on short term rentals (STRs) outside select areas in the city. The restrictions go into effect on December 31, 2021. As a result of the measure, approximately 1,372 currently permitted VHRs will not be renewed. The market value of the existing VHR stock skews higher than median values in the region, so a conservative, but optimistic forecast is that 15% of the units will be transitioned to be occupied by residents (rented or owned); other units are expected to become part of the second home market. A recent study on the economic impact of VHRs in South Lake Tahoe suggested that 10% of existing VHR owners would likely rent to full time if they could no longer use the property as VHR (MBI 2017).

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Commercial Floor Area (CFA)

There are currently 556,796 square feet of un-used commercial floor area in TRPA and local jurisdiction community/area plan pools. Since 2013, a total of 41,928 square feet of CFA has been allocated to projects; an average rate of 6,988 square feet of CFA per year. The forecast includes the construction of an additional of 130,067 square feet of CFA by 2035 and 206,550 square feet by 2045. The forecasted rate of development - 7,650 square feet - is just higher than the observed rate since the 2012 Regional Plan, but lower than rates used in prior regional forecasts. CFA was allocated to known projects that have been permitted or are in the planning phase, but not constructed; remaining CFA was allocated to town centers and area plans using the observed proportions from recent allocations.

The forecast includes the conversion of 100,000 square feet of CFA to residential units, consistent with conversion trends since the adoption of the conversion program; recent trends indicate the net conversion from CFA and TAUs towards Residential. The converted CFA is forecasted to result in the construction of 400 additional residential units --200 multifamily units, and 200 single family units. At the end of the forecast period, 250,246 square feet of CFA remains unallocated and thus unconstructed.

Tourist Accommodation Units (TAU)

The forecast includes the construction of an additional 629 TAUs by 2035 and 945 TAUs by 2045. The forecast includes the completed construction of all currently permitted projects using 807 banked TAUs and the use of all 138 awarded TAU bonus units. Not all TAUs allowed in the Regional Plan are forecast to be constructed by 2045; an estimated 230 TAUs will remain undeveloped through 2045 (74 TAU bonus units and 156 banked TAUs). The TAU development rights pool is not exhausted within the forecast horizon, because of the slow rate of TAU right utilization and construction over the past 30 years. No TAUs have been allocated to projects and constructed since adoption of the 2012 Regional Plan, and only 58 TAUs have been allocated since the adoption of the 1987 Regional Plan. TAUs were allocated to projects that are permitted but not yet constructed (Homewood, Boulder Bay, Edgewood Casitas, Tahoe City Lodge, and Chateau/Project 3), and the forecast includes the removal and banking of some existing units. Bonus TAUs were assigned to permitted projects (Homewood, Boulder Bay, Tahoe City Lodge) and no additional allocations other than existing permits were included.

The forecast also includes the conversion of 130 TAUs to residential units, consistent with recent conversion trends since the adoption of the conversion programs; observed trends indicate the net conversion from CFA and TAUs and towards Residential.

Development Rights Forecast Summary

Total development in the Tahoe Region is capped by the Regional Plan. The type and rate of that development is further controlled by a complex system governing development rights in the Region. Development rights are land use units someone must acquire before a property is developed. Development rights include tourist accommodation units (TAUs), single and multi-family residential units of use (RUUs), and commercial floor area (CFA). Residential units of use (RUUs) are formed by combining a potential residential unit of use (PRU) and a residential allocation. The forecast differentiates between when a development right is allocated from TRPA or another jurisdiction's pool and the final use of that development right. Development rights can be utilized in one of two ways; they can be used to construct a project (e.g. a house) or converted to a different type of development right. The forecast is grounded in projections about the utilization, transfer, conversion, and construction of development rights. Tables 2-4 summarize the fate of development rights in the forecast period.

- Table 2 summarizes new construction which influences land use in the future scenarios. Tables 3 and 4 provide background detail on the underlying accounting that enabled the development.

- Table 3 summarizes the expected utilization of development rights in their current type.
- Table 4 summarizes the expected conversion of development rights between types.

The forecast includes the annual construction of 172 residential units, 7,650 square feet of commercial floor area and 35 tourist accommodation units (Table 2).

Table 2: Construction Forecast Summary

Development Right Construction	Annual Construction Rate	2035 Net Change	2045 Net Change
Residential Units			
Total Development of Residential Units	**+172**	**+2,924**	**+4,597**
Commercial Floor Area (in Square Feet)			
Total Utilization of CFA	**+7,650**	**+130,067**	**+206,550**
Tourist Accommodation Units			
Total Development of TAUs	**+35**	**+629**	**+945**

The forecast includes the utilization of allocation pools held by TRPA and local jurisdictions in the area plan, community plan, or plan area statement pools, as well as the use of bonus and incentive pools, special projects pools, and banked development rights (Table 3).

Table 3: Development Rights Utilization Forecast Summary

Development Right Utilization	Annual Utilization Rate	2035 Net Change	2045 Net Change
Residential Units			
Residential Allocations	+83	+1,411	+2,234
Residential Bonus Units	+60	+1,020	+1,609
Banked Residential Development	+8	+136	+204
Total Development of Residential Units	**+151**	**+2,567**	**+4,047**
Commercial Floor Area (in Square Feet)			
Commercial Floor Area Allocations	+6,413	+109,021	+173,142

Commercial Floor Area Allocations (TRPA special projects pool)	+2,963	+50,371	+80,000
Banked Commercial Development	+1,979	+33,643	+53,408
Total Utilization of CFA	**+11,355**	**+130,067**	**+306,550**
Tourist Accommodation Units			
TAU Allocations	+5	+85	+130
TAU Bonus Allocations	+6	+102	+138
Banked TAU Development	+31	+527	+807
Total Development of TAUs	**+42**	**+714**	**+1075**

The forecast includes the conversion of development rights between the various types of development (Table 4). TRPA approved a comprehensive update to Tahoe's development rights system in 2018. This allows conversions between different types of development rights using environmentally-neutral exchange rates and makes development rights simpler to transfer around the Basin, keeping limits on Tahoe's total development potential. The changes make it easier for the private sector to invest in redevelopment projects that benefit Tahoe's environment and communities and provide needed workforce housing. The projected conversions are consistent with conversion trends since the adoption of the conversion programs and observed development rights utilization rates. The observed trends indicate a net conversion that reduces CFA by 3,700 square feet and 5 TAUs and creates an additional 21 residential units each year.

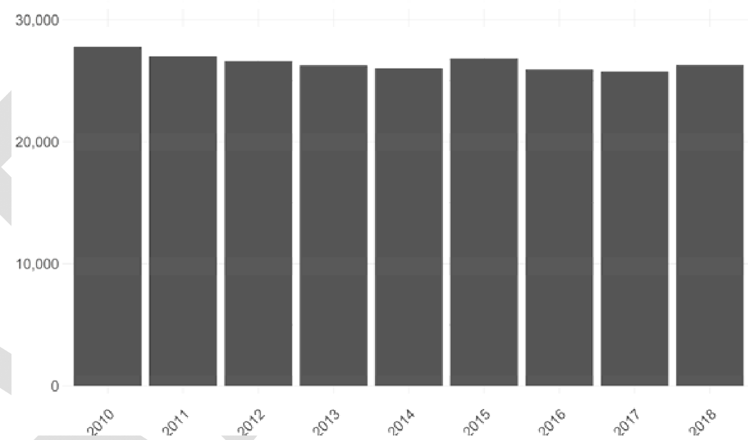
Table 4: Development Rights Conversion Summary

Development Right Conversion	Annual Change as a Result of Conversion	2035 Net Change	2045 Net Change
Residential Units			
Net Development Right Conversions to Residential	+21	+357	+550
Commercial Floor Area (in Square Feet)			
Net Development Right Conversions from CFA to RUU	-3,704	-62,968	-100,000
Tourist Accommodation Units			
Net Development Right Conversions from TAUs to RUU	-5	-85	-130

Employment

The most recent region-wide data estimates that summer-time work opportunities in the Tahoe region increased by 5% between 2014 and 2018, from 26,637 to 28,053 jobs. While employment increased, the number of workers estimated to be living in the region decreased by 6%, from 27,785 in 2010 to 26,314 in 2018 (ACS, 2018). This indicates that an increasing number of workers may be commuting into the region for employment.

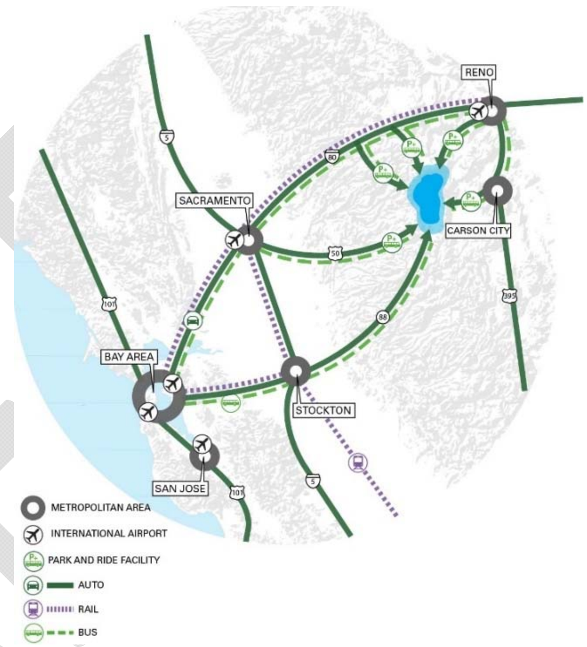
Figure 2: Number of Workers (ACS 2010-2018)



The forecast projects a small increase in employment in the region as a result of increased visitation, construction of new CFA and TAUs, and population growth. In the 2018 model base year there are an estimated 28,604 workers in the Tahoe region (some residents hold jobs outside the region). The forecast projects continued growth of jobs in the region, with 572 (+2%) and 858 (+3%) new jobs in the region by 2035 and 2045 respectively. The number of external workers (those commuting into the region for work) is not expected to grow because more workers are expected to find housing locally as a result of the regional housing initiatives

Visitation

Figure 3: Tahoe Mega-Region



The forecast includes an increase in visitation which is influenced by several factors. The Tahoe region is located near and draws visitors from several regions that are projected to experience between 20% and 40% growth in the coming decades (Figure 3, Table 5). The Sacramento Council of Governments (SACOG), predicts that population in the greater Sacramento region[5] will grow 26% by 2045. SACOG models traffic volumes on Interstate-80 and US Highway-50 leading into the Tahoe Region, and forecasts between 18% and 22% increases in volume in the next two decades (SACOG 2019). Farther west, but still within the Tahoe Mega-Region, the Association of Bay Area Governments (ABAG)[6] forecasts 27% population increase by 2040 (MTC & ABAG 2017). To the north and east of Tahoe, RTC-Washoe predicts a 27% growth in population in the Reno/Sparks Metropolitan area[7] by 2040 and the Carson Area MPO[8] predicts a 28% growth in population (CAMPO 2016; RTC-Washoe 2018). Population growth in the mega-region is likely to create increased demand for the recreation opportunities and the unique experience that Tahoe provides.

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Table 5: Mega-Region Growth Forecasts

Location	Metric	Growth	Forecast Year	Source
Sacramento Region	Population	+26%	2045	SACOG 2020 MTP/SCS
Sacramento Region	Employment	+25%	2045	SACOG 2020 MTP/SCS
Interstate-80	Traffic Volumes	+22%	2040	SACOG 2020 MTP/SCS
US Highway-50	Traffic Volumes	+18%	2040	SACOG 2020 MTP/SCS
Reno/Sparks Metro	Population	+27%	2040	RTC-Washoe 2040 RTP, 2018
Reno/Sparks Metro	Employment	+37%	2040	RTC-Washoe 2040 RTP, 2018
Carson City Region	Population	+28%	2040	CAMPO 2040 RTP, 2018
San Francisco Region	Population	+27%	2040	ABAG 2040 RTP, 2017

[5] The Sacramento Area Council of Governments (SACOG) includes the counties of El Dorado, Placer, Sacramento, Sutter, Yolo, Yuba and the 22 cities within this six-county region.
[6] The Association of Bay Area Governments (ABAG) region encompasses Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma counties.
[7] Regional Transportation Commission (RTC) of Washoe County, Nevada serves the Reno and Sparks areas along with unincorporated areas of Washoe County.
[8] The Carson Area Metropolitan Planning Organization (CAMPO) covers the Carson City urbanized area, which consists of Carson City, northern Douglas County, and western Lyon County.

Population growth outside the Region over the last 20 years has not translated to a linear increase in visitation into the region. Therefore, the forecast does not project increases in visitation in proportion to the projected growth in the mega-region. It is uncertain why past population growth has not translated in a linear fashion to increased visitation, but working theories include the decline in popularity of the local casinos as the gaming experience has become more widely available, limited tourist accommodation capacity, the limited roadway capacity into the region and associated willingness to travel to the region given the longer travel times.

The visitation forecast is comprised of related but independent projections regarding the expected characteristics of both the number and occupancy of overnight lodging accommodations types, and day visitation. The visitation forecast can be broken down into overnight visitors (staying in Hotels/Motels/Casinos/STRs/Private homes*)* and day visitors. The number of occupied overnight visitor units is forecast to grow by 9% by 2045.

Overnight Visitors in Hotels/Motels/Casinos – In the 2018 model base year, 6,190 of the region's 11,107 TAUs are occupied (56%) during the modeled day. The forecast includes the construction of an additional 945 TAUs by 2045, an 8.5% increase in tourist accommodation units. Forecasted occupancy of TAUs was increased slightly to account for the impact of Measure T in the City of South Lake Tahoe, which is expected to affect where visitors to the city can stay but not the overall demand (MBI 2017). The forecast estimates that 50% of the visitor parties that may have previously stayed overnight in STRs within the City of South Lake Tahoe would now stay in TAUs, because of the expected lower supply of STRs in the City. As a result, the regional overnight lodging occupancy rate (in TAUs) increases from 56% to 59% in the forecast years. As a result of both additional unit availability from new TAU construction and the higher occupancy rate, the actual number of occupied Hotel/Motel/Casino units increases by 14.5% in 2045.

Overnight Visitors in STRs – In 2018, TRPA estimated that there were 6,005 permitted STRs in the Tahoe Region, which comprised approximately 13% of all existing residential units and 23% of the vacant housing units. On the model day, 37% of the units (2,227) are occupied. The forecast projects that both the total number and occupancy of STRs is relatively flat in the forecast years. This projection is highly influenced by the City of South Lake Tahoe's Measure T, which eliminates STRs within most of the City's jurisdiction. Measure T will reduce the number of available STRs in the City of South Lake Tahoe but is unlikely to reduce the overall regional demand for the home-based stay experience in Tahoe. As a result, the forecast includes the displacement of STRs from the city to other jurisdictions in the region. The result will be more STRs (in absolute and proportional terms) in other jurisdictions in the Region and in areas of the City where STRs are still allowed. As a result of Measure T, approximately 1,372 STRs within the City of South Lake Tahoe but located outside of the Tourist Core area will not have their licenses renewed. During the model analysis period (model day), 508 of those 1,372 STRs were occupied. The forecast assumes that all 508 visitor parties will still visit the region and find overnight accommodations elsewhere. Of the visitor parties that would have been staying at one of the STRs impacted by Measure T, half are forecasted to find accommodations in STRs in the Tourist Core areas within the City of South Lake Tahoe, where STRs remain allowed, or in STRs in other jurisdictions, and half of visitor parties are forecast to shift to accommodations in the casinos, hotels, motels, and resorts in the Region.

Overnight Visitors in Seasonal Units – Seasonal units are residences within the model that are not claimed as the primary residence for the owner. Within the model they could be occupied by the owner, friends of the owner, time-shares, informally rented, but are not accounted for included in the total of STRs. These units comprise approximately 36% of the total housing market in the region, of which 37% were estimated to be occupied on modeled day in the 2018 base year. The forecast maintains these percentages into the forecast years. The proportion of seasonal units in the region has grown in the last 10 years. The proportion of seasonal units is not forecast to continue to increase in the forecast, due to three factors: 1) the construction of additional workforce housing units which cannot be used for second homes, and 2) initiatives focused on making the existing stocking more affordable for workers and residents, and 3) the conversion of some existing vacation rentals in the City of South Lake Tahoe to resident housing because of the Measure T requirements. The forecast projects the occupancy rate of second units will remain the same, maintaining the 37% occupancy of the base year in 2035 and 2045. As a result of the increase in the total number of homes in the Region the number of seasonal units increases by 8% in 2045.

Day Visitors – Day visitation is forecast to increase as a result of population growth in the mega-region, at a similar rate as overnight visitation. Day visitors are one of the more challenging travel parties to forecast. The model assumes the factors that drive overnight visitation are positively correlated with factors driving day visitation. The relationship between these two types of visitors was established as part of the calibration and validation for the 2018 base year and is not expected to change in the forecast years.

School Enrollment

Like the overall population, school enrollment in the region has decreased in the last two decades, but in most recent years has been relatively steady. Between 1996 and 2018, enrollment in the Lake Tahoe Unified School district in South Lake Tahoe, California decreased by 35%, while enrollment on the Nevada side decreased by 37%, from 1,852 in 2003 to 1,160 in 2019. The forecast projects that school enrollment will increase by 12.4% as new employment (858 additional jobs) and residents (6,417 additional full time residents) are added to the region.

Figure 3: Tahoe - Nevada School Enrollment (2003-19)

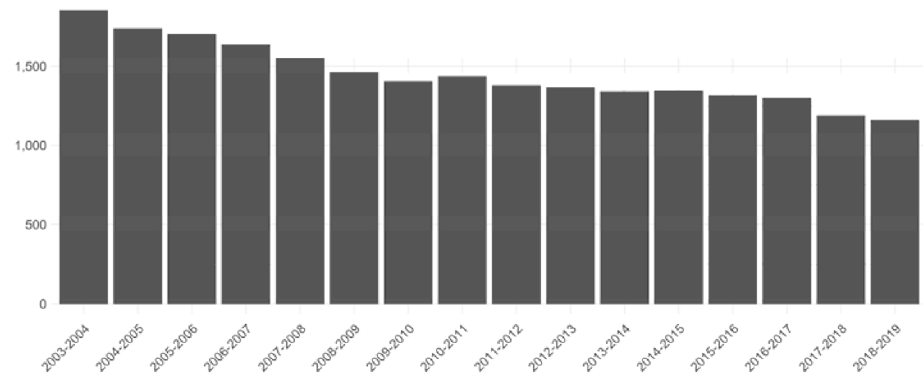
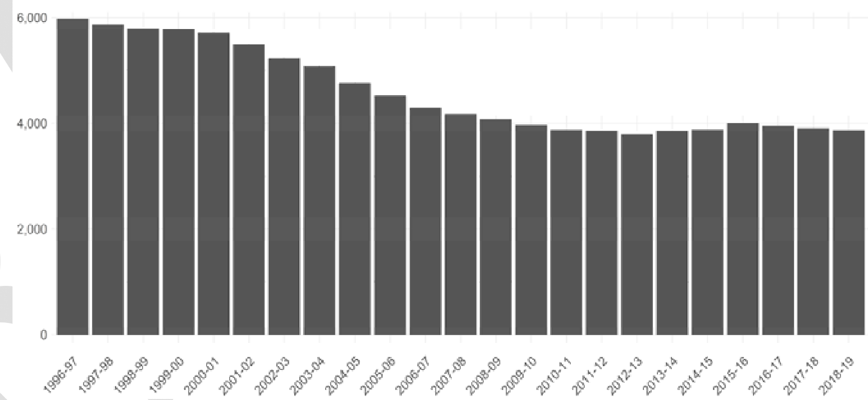


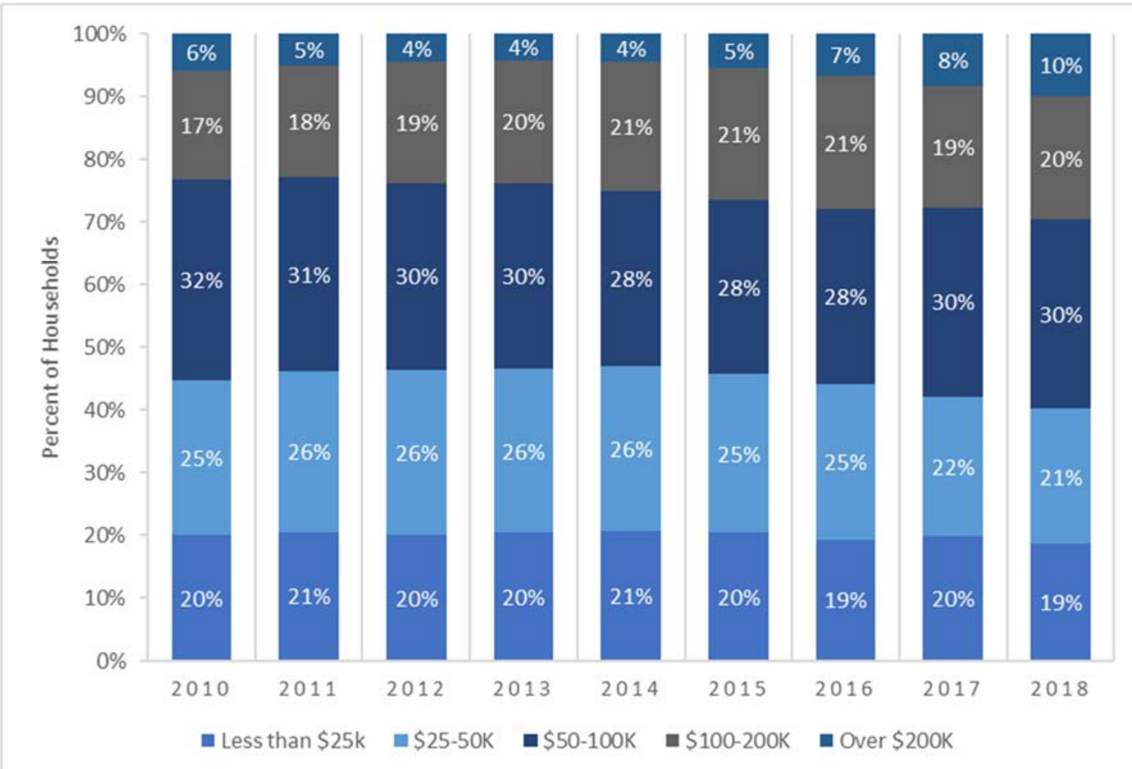
Figure 5: Lake Tahoe Unified School District Enrollment (1996-2018)



Household Income

Household income is a key characteristic of the residential population, which influences travel behavior. Census data over the last nine years show that household income in the region is trending upwards towards higher incomes (ACS 2010-2018). Median annual income for households nationally rose to $61,937 in 2018, within California it is $75,277, and in Nevada it is $58,646 (Guzman 2019). Median income in the Tahoe Region has grown over the last five years as the region emerged from the Recession and is now close the national average. However, the proportion of households earning less than $25,000/year annually has remained at relatively stable, at about 20% of households. Between 2010 and 2018 the number of households earning over $200,000/year grew by 67% and those earning between $100,000 and $200,000 increased by 11%. Despite these gains, households earning less than $100,000/year outnumber households earning more than $100,000/year by two to one. Some have suggested the decline in lower-income households has been driven by workers leaving the region in search of more affordable housing. The forecast projects that the relative distribution of household incomes will be maintained at the current level. Initiatives to provide workforce and affordable housing are expected to increase the regional housing availability at the lower end of income distribution.

Figure 7: Household Income Categories (% of Households - ACS 2010-18)



Addendum

COVID-19

The research and majority of the forecasts for the 2020 Regional Transportation Plan were developed prior to the impact of COVID-19 on our community and the world. The immediate impact of COVID-19 on our community has been severe. Both states issued stay-at-home orders and the casinos, ski resorts and many other businesses closed in March 2020, furloughing or laying off thousands of employees. The Lakeside Inn and Casino announced that it would not reopen. The hotels, motels, restaurants, bars, and many of the recreation areas, beaches and parks that are the lifeblood of our tourism-based economy were closed for weeks. The impacts on transportation were apparent in the traffic volumes around the region. In early May, VMT in the counties that make up the Tahoe region was estimated to be down 30-50% from levels observed in the same period in prior years.

The long-term impacts of COVID-19 on the region are uncertain. Some believe that the job losses, business closures, and economic hardship will continue. Others think that urban flight will result in a mass movement from cities to rural areas, as remote work continues and people seek to escape crowded cities for open spaces, resulting in massive population shifts and increased housing needs in the region.

Given this uncertainty, staff recommends maintaining the above assumptions for the forecast scenarios even in light of the COVID -19 pandemic and associated economic downturn. The Harvard Business Review (HBR) recommends that in “moments of unprecedented uncertainty”, one must “know when not to make a forecast” (Saffo, 2007). HBR suggests that “even in periods of dramatic, rapid transformation, there are vastly more elements that do not change than new things that emerge” (Saffo,2007).

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References

CAMPO. 2016. 2040 Regional Transportation Plan. Carson Area Metropolitan Planning Organization. Available from http://carson.org/home/showdocument?id=51018.

Guzman GG. 2019. Household Income: 2018: American Community Survey Briefs. American Community Survey Briefs. U.S. Census Bureau.

MBI. 2017. Socioeconomic Impacts of Vacation Home Rentals in South Lake Tahoe. Michael Baker International for The City of South Lake Tahoe, Rancho Cordova, CA.

MTC, ABAG. 2017. Plan Bay Area 2040: Final Travel Modeling Report. Metropolitan Transportation Commission (MTC), Association of Bay Area Governments (ABAG), San Francisco, CA. Available from http://2040.planbayarea.org/sites/default/files/2017-07/Travel_Modeling_PBA2040_Supplemental%20Report_7-2017_0.pdf.

RTC-Washoe. 2018. 2040 Regional Transportation Plan. Regional Transportation Commission (RTC) of Washoe County. Available from https://www.rtcwashoe.com/mpo-projects/rtp/.

SACOG. 2019. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy. Sacramento Area Council of Governments. Available from https://www.sacog.org/post/adopted-2020-mtpscs.

Saffo P. 2007. Six rules for accurate effective forecasting. Harvard Business Review. 2007 Jul-Aug;85(7-8):122-31, 193.

U.S. Census Bureau. 2020. American Community Survey. U.S. Census Bureau, Washington, D.C. Available from Data.census.gov.