
STAFF REPORT

Date: May 20, 2020

To: TRPA Governing Board

From: TRPA Staff

Subject: Discussion and Possible Direction on Land Use Assumptions for the 2020 TRPA Regional Transportation Plan Forecasts

Summary and Staff Recommendation:

The Tahoe Regional Planning Agency updates the Regional Transportation Plan (RTP) every four years. To meet state and federal planning requirements for the 2020 RTP, TRPA forecasts the regional land use pattern for 2035 and 2045. The forecasts are used as input for the travel demand model which is used to identify programs and projects in the RTP and to evaluate the effectiveness of the RTP in meeting vehicle miles traveled and greenhouse gas reduction goals. The methodology and assumptions used for the travel demand model for the 2035 and 2045 forecasts and the forecast will be presented. Staff recommends the Governing Board endorse the assumptions and forecast for use in preparing the updated RTP.

Required Motion:

In order to endorse the requested action, the Governing Board should make the following motion based on the staff report:

- 1) A motion to endorse the proposed development forecast for use in the 2020 Regional Transportation Plan.

Background:

In December 2019, TRPA formally started the 2020 update to the Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS). The RTP/SCS lays out the vision for the transportation system at Lake Tahoe and focuses on transit, trails, technology, and communities to support the environment, economy, quality of life, and visitor experience. State and federal guidelines require that the Regional Transportation Plan include a long-term (minimum 20-year) planning horizon and forecasts for 2035 and 2045 using TRPA's travel demand model.

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 (https://trpa-agency.github.io/travel_demand_model/index.html). The forecasts include a variety of projections related to the number, location, and travel behavior of the Tahoe residents, visitors, and commuters in the forecast years. Highlights from the forecast are included below.

Resident Population:

The resident population of the Tahoe Region peaked in 2000 and has been declining for the last 20 years. There are several initiatives underway to construct new housing units and make existing residential units more affordable for local residents. The forecast assumptions project that these initiatives will stem the tide of regional population loss and will result in 12% population growth by 2045.

Visitation:

The forecast assumptions include an 8% increase in visitation to the Lake Tahoe Region by 2045. The forecast is driven by projected population growth in the mega-region (Bay Area, Sacramento, Washoe County) and the increasing popularity of the outdoor recreation experience.

Land Use:

Analysis of development trends since the adoption of the regional plan in 1987 and update in 2012 revealed that development rates in the region have lagged behind previous forecasts. The proposed forecast assumptions include utilization of all residential units at the end of the forecast period and expects that approximately 250,000 square feet of commercial floor area (CFA) and 230 tourist accommodation units (TAU) remain unallocated and available for future development or conversion past 2045. Consistent with observed conversions, the forecast assumptions include the conversion of TAU and CFA to residential units to satisfy the additional demand for housing in the region. (While local housing needs assessments have identified a greater number of housing units needed beyond that required by state mandates, the forecast will assume housing levels to meet state requirements but not likely to fully meet the local need.)

The presentation and discussion at the May 27, 2020 Governing Board meeting will include a summary of the background development trends and an overview of the forecast assumptions. Staff will also present this information to the TRPA Model Working Group on May 26, 2020, and we will include a summary of any feedback and comments from the Working Group as part of this presentation.

Additional detail about the proposed development forecasts and additional data trends and background information used to develop the proposed forecasts are available in Attachments A and B.

This presentation and accompanying documents outline the background research and the assumptions that supported the development forecast. Future presentations will include the transportation policy, programs, and projects for each scenario.

Lastly, staff recommends maintaining these above assumptions for the forecast scenarios even in light of the COVID -19 pandemic and associated economic downturn. Staff anticipates that by 2045 the unknown, but likely time-limited, economic impacts from the pandemic will be replaced by more stable long-term economic forces.

Contact Information:

For questions regarding this agenda item, please contact Ken Kasman, Research and Analysis Division Manager, at kkasman@trpa.org or (775) 589-5253.

Attachments:

- A. Draft RTP Regional Forecast Report
- B. Draft Data Trends Report

Attachment A

Draft RTP Regional Forecast Report

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.

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 lands², redevelopment successor agency³ parcels and other publicly-owned parcels where large multi-family and affordable/moderate-income housing projects are likely to be constructed⁴. 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.

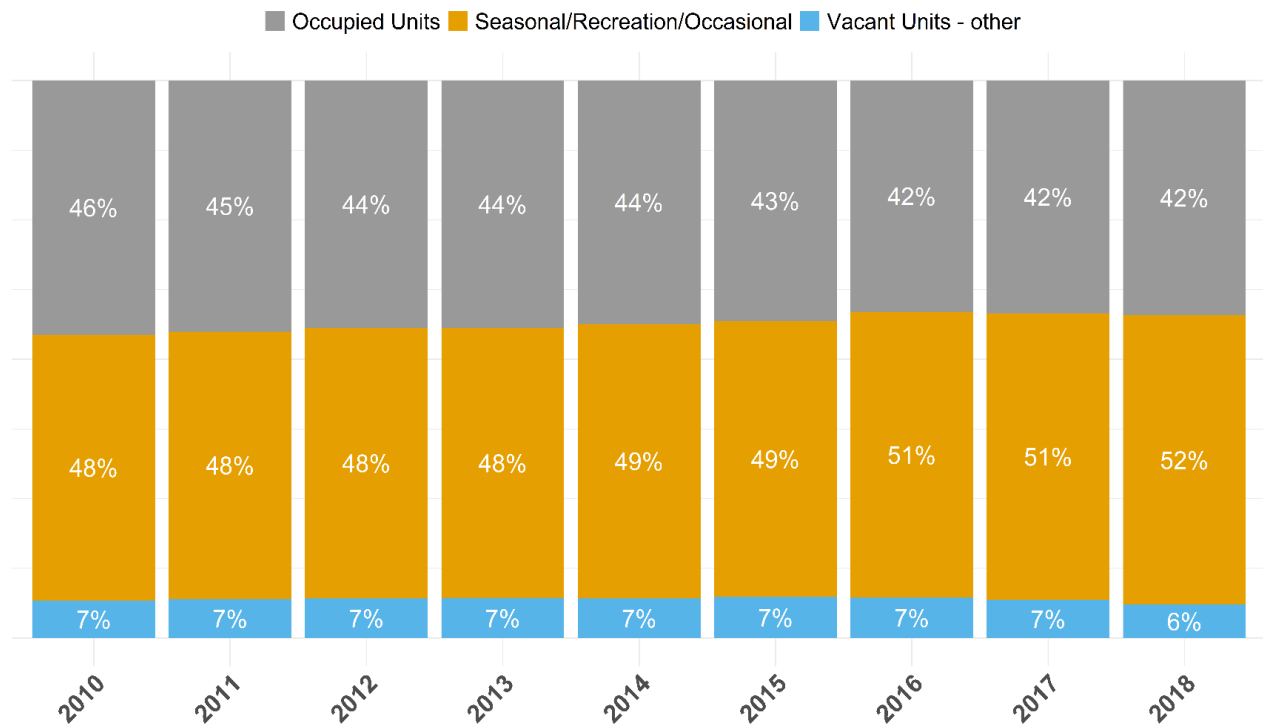
Residential Occupancy rate

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.

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.

⁴Includes 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).

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

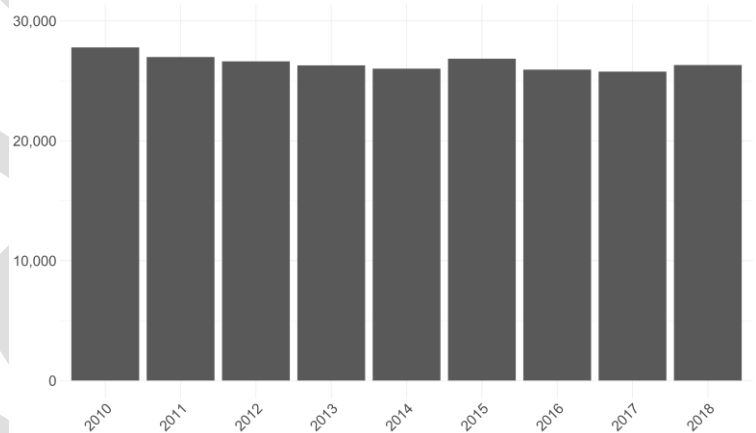
Tourist Accommodation Units			
Net Development Right Conversions from TAUs to RUU	-5	-85	-130

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.

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

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



Visitation

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 region⁵ 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 area⁷ by 2040 and the Carson Area MPO⁸ 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.

Figure 3: Tahoe Mega-Region

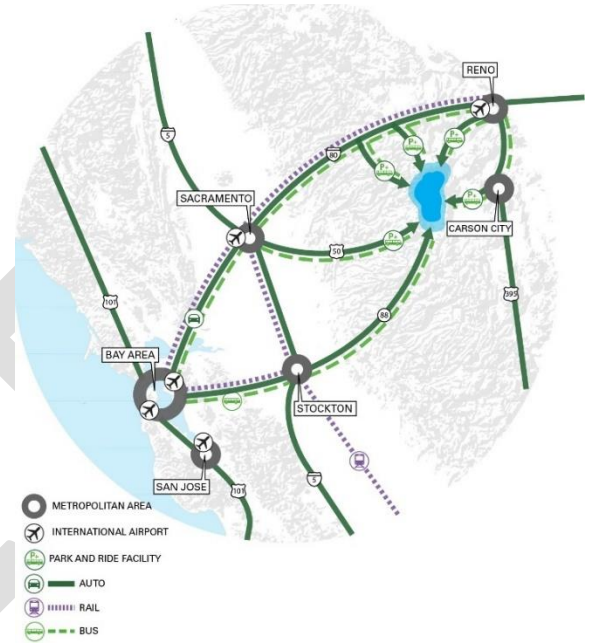


Table 5: Mega-Region Growth Forecasts

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 housing 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)

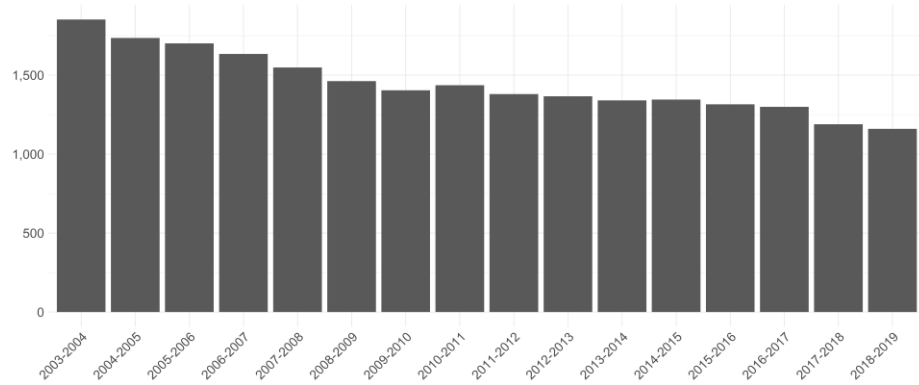
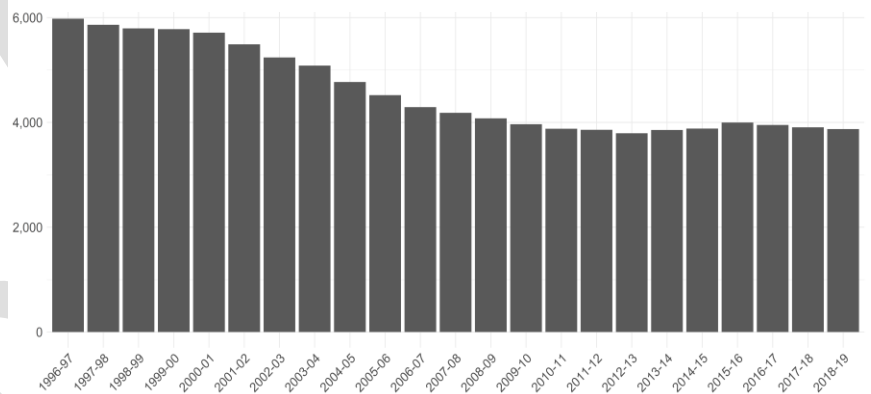


Figure 5: Lake Tahoe Unified School District Enrollment (1996-2018)

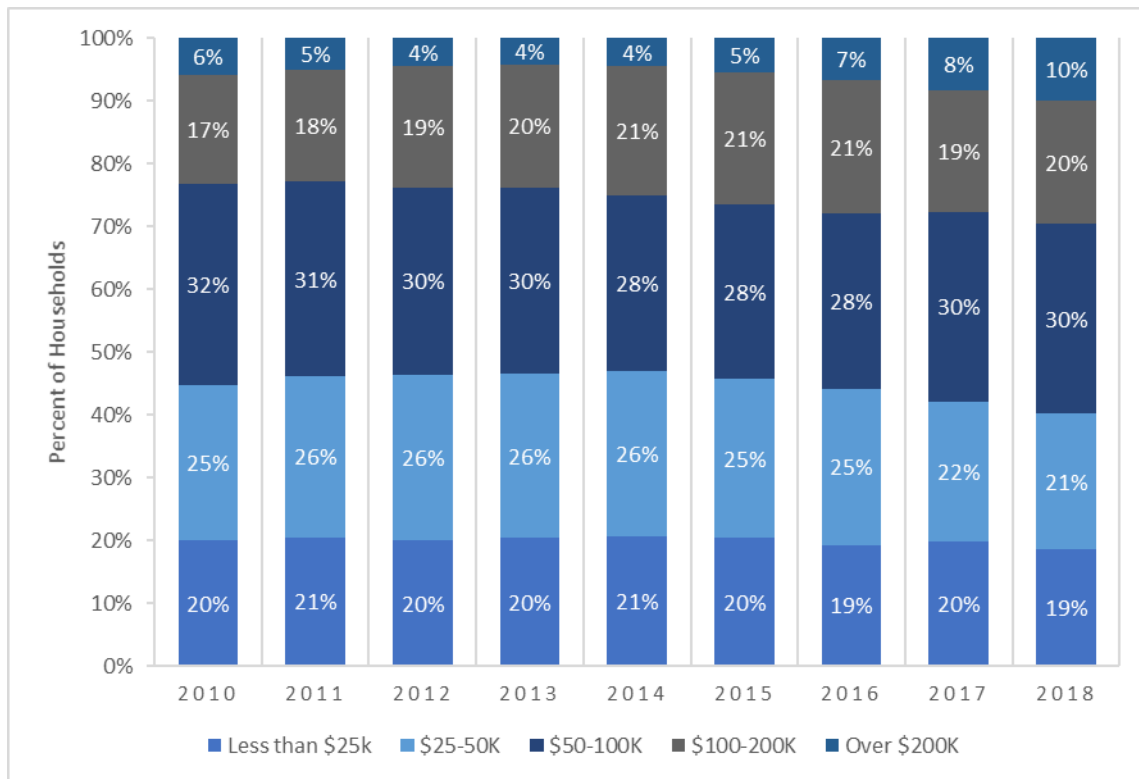


Household Income

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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Attachment B
Draft Data Trends Report

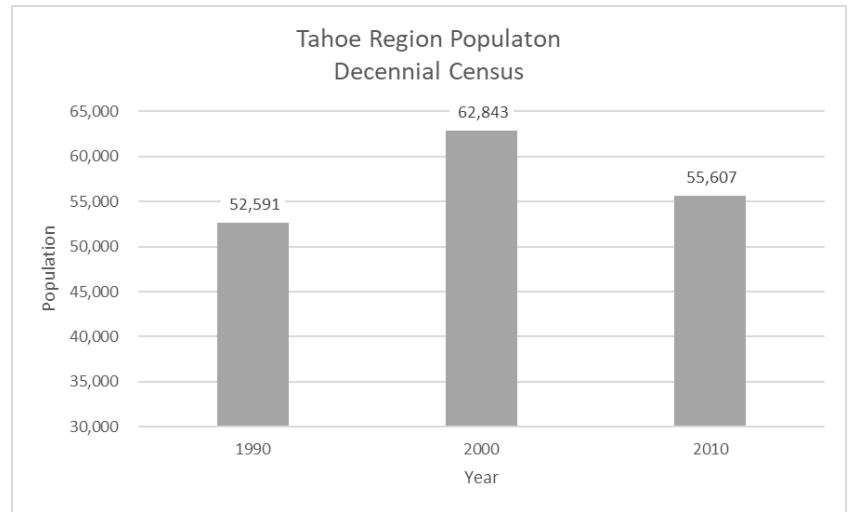
Appendix B: Regional Data Trends Report

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Residential Population

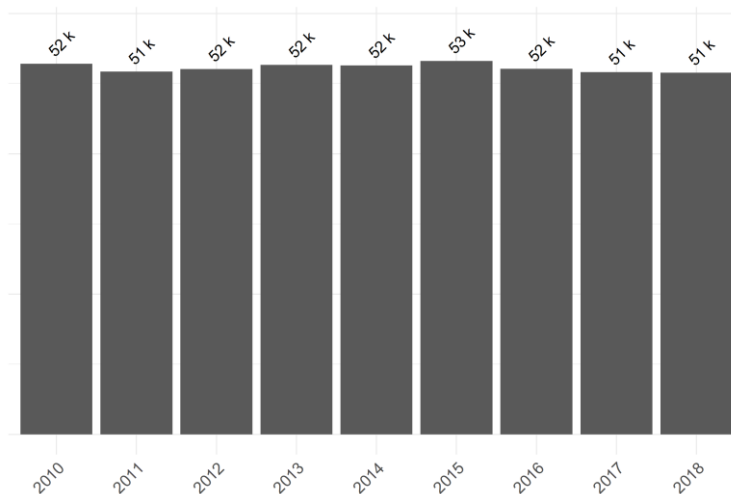
Both California and Nevada have experienced significant population growth in the last 30 years. The population in the Tahoe region has not grown at nearly the same rate. The last three decennial census' demonstrate the divergence between population trends in the Tahoe Region and the two states as a whole. Between 1990 and 2010, Nevada's population more than doubled (1.2 to 2.7 million) and California's population increased by 25% (29.7 to 37.3 million). While the two states added nearly 9 million people, the population of the Tahoe region grew by just 3,016 persons or 6% during this period. The slight increase between the 1990 and 2010 decennial census population masks divergent trends in the last decade of the 20th century and first decade of the 21st; the region's population grew by almost 20% between 1990 and 2000, before declining by 11.5% between 2000 and 2010.

Figure 1: Tahoe Population (1990-2010)



In more recent years, the 2018 American Community Survey (ACS) 5-year U.S. census estimates suggest that the population for the Region has been relatively flat, having declined only slightly between 2010 and 2018. We rely on these statistics cautiously because the margin of error is larger than the estimated change. The decline in resident population in the Tahoe Region between 2010 and 2018 was in stark

Figure 2: Tahoe Population (ACS 2010-18)



contrast to the growth in the states of California and Nevada.

While the change in Tahoe's resident population appears to be anomalous in the context of population growth in the two states, it is consistent with declining populations in rural areas throughout the country (USDA 2018). Rural populations nationally began declining in 2010 and have only

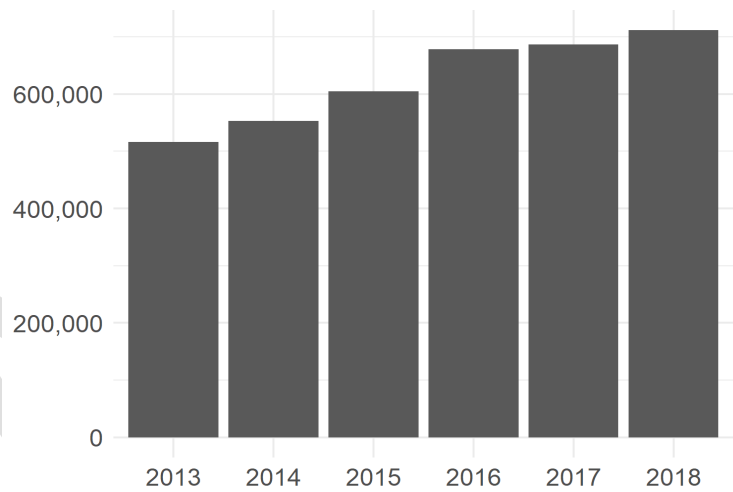
recently shown signs of stabilizing (USDA 2018). The recent stabilization in overall rural populations has driven by population growth in communities with scenic amenities or qualities that make them retirement or recreation destinations (USDA 2018).

Overnight Lodging Occupancy

Overnight lodging occupancy is a key forecast variable, which influences the number of visitors within the forecast.

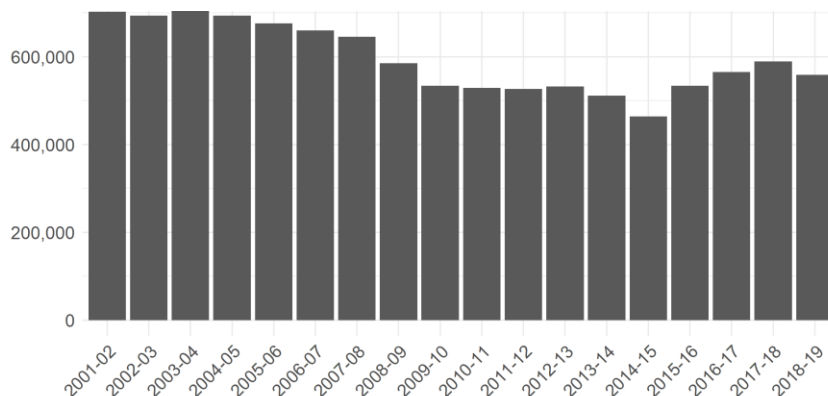
The forecast projects 14.5% increase in occupied lodging units, from 6,190 occupied rooms in 2018 to 7,086 occupied rooms in the year 2045. This increase is the result of an increase in the overall number of overnight lodging units, as well as the impact of Measure T. The forecast assumes that 50% of the visitor parties that would previously stay in STRs within the city limits would now stay in hotels, motels, resorts, or casinos.

Figure 3: CSLT - Hotel/Motel Rooms Rented (2013-18)



This forecast also aligns with recent observed trends in overnight lodging occupancy, which

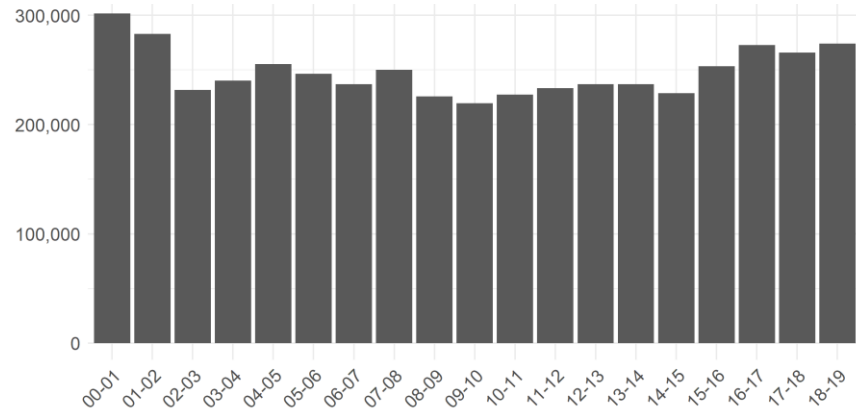
Figure 4: Douglas County (Tahoe) - Casino Rooms Rented



show generally flat or increasing occupancy in recent years, depending on

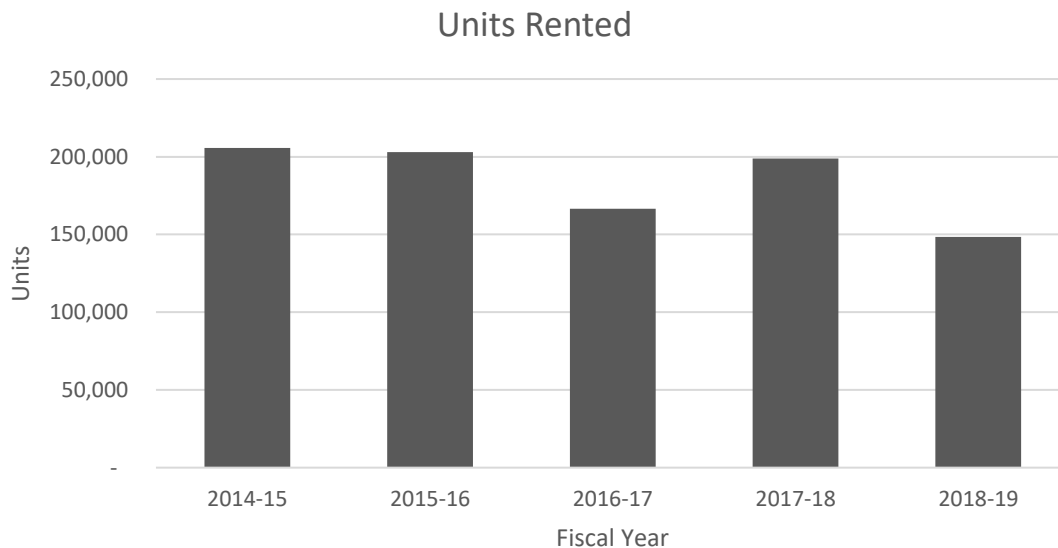
location. Between 2013 and 2018, the number of hotel/motel rooms rented in the city of South Lake Tahoe increased by 37%. On the other hand, Douglas county casino occupancy (South Shore) has declined over the

Figure 5: Washoe County (Tahoe) - Lodging Rooms Rented



last two decades (Douglas County Room Tax Reports, 18-19); total rooms sold in the 2018-2019 fiscal year was 80% of the number sold in 2001-2002. The majority of the decline in Casino occupancy occurred between 2000-2010, and more recently occupancy has been relatively stable. Occupancy in Washoe county has varied between years over the last 20 years but overall is generally flat. The five-year average number of rooms rented between 2000-2005 is just 2% higher than the most recent five-year average 2015-2019.

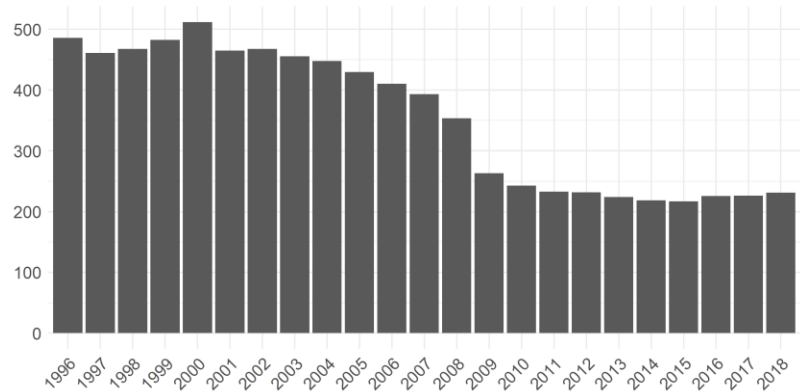
Figure 6: Placer County (Tahoe) – Units Rented



Gaming Revenue

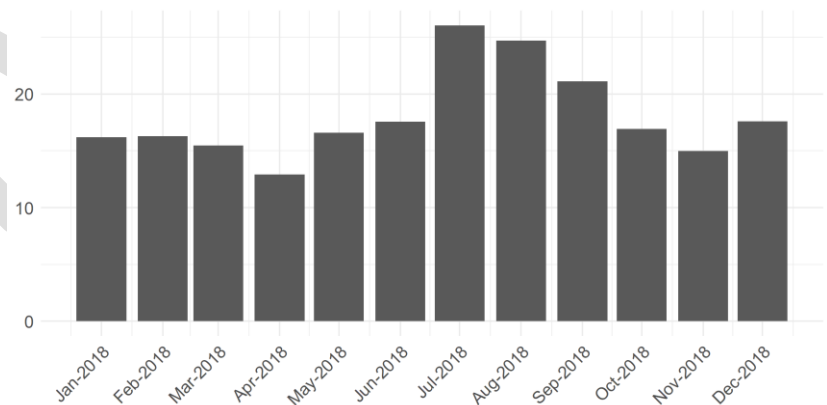
Gaming revenue is an important metric in the Tahoe region because of the historic and present-day attraction of visitors to the casino industry. Although the casinos still attract a large number of visitors traveling to the region, within the last 20 years gaming revenue in Tahoe has declined significantly. Adjusted for inflation, revenue in 2018 was half of what it was during the decade between 1996-2005 (LTVA-NGCB 2019). Gaming revenues steadily declined between 2005 and 2010 but have been relatively stable over the last five years.

Figure 7: Tahoe Casino Gaming Revenue (\$M)



On average, 90% of gaming revenue in the Region is generated on the South Shore and exhibits strong seasonal patterns. Revenue generally peaks during the highest levels of visitation, which occur in July. Over the last five years, monthly average revenue has been \$18 million. Monthly average revenue peaks in July, when it has averaged \$26 million, more than double average revenue in April (\$12.9). Partitioning monthly revenue into quartiles, a distinct high season (July, August, September) can be identified, where revenue averages nearly \$24 million. Monthly revenue remains within a relatively narrow band for six months of year (January, February, May, June, October, December) when revenue average \$16.9 million and varies by less than a million dollars on average. A less distinct low season (March, April, November) is also visible when revenue remains under 16 million and averages \$14.5 million.

Figure 8: 2018 Monthly Tahoe Casino Gaming Revenue (\$M)



Employment in the gaming sector has followed the larger trend of gaming revenues of the last 20 years. In 2018, the South Shore casino employed 3,118 people, a 45% decline from the 5,660 employed 15 years earlier (NGCB 2003, 2018).

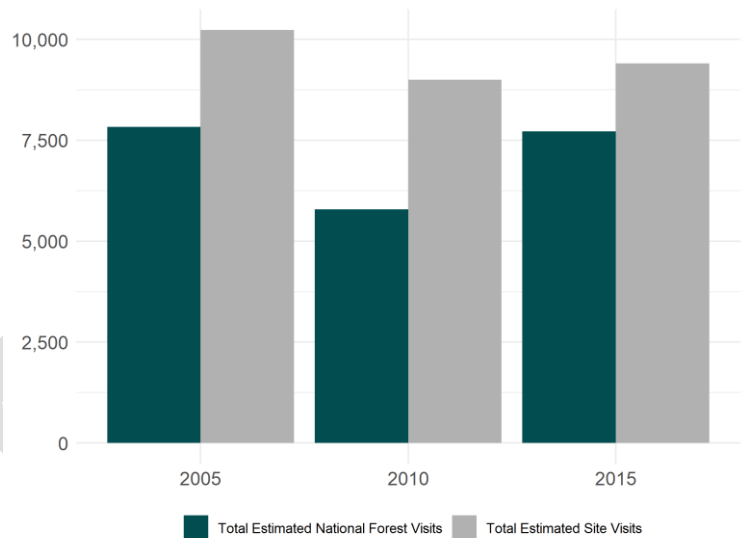
Forest Service Visitation

The U.S.D.A. Forest Service (USFS) owns and manages approximately 78% of the land area in the Tahoe Region, including nearly 155,000 acres of beaches, campgrounds, developed recreation areas and hiking/biking trails. Every five years the USFS conducts its National Visitor Use Monitoring (NVUM), which “provides reliable information about recreation visitors to national forest system managed lands at the national, regional, and forest level.” USFS standardized the NVUM survey methodology in 2005 and three surveys (2005,2010,2015) are available for the Tahoe region (USFS LTBMU 2018, 2019a, 2019b).

USFS does not recommend comparing visitation data collected prior to 2005 to the NVUM data sets. The survey quantifies visitation across a number of dimensions, but to assess overall trends in aggregate visitation in the Tahoe region, two measures stand out for their importance: Total Estimated Site Visits and Total Estimated National Forest Visits. Total Estimated Site Visits count the number of individual visitors to each National Forest site or area to participate in recreation activities in a national forest. Individual visitors that visit multiple sites in the same national forest are counted individually in this measure. Total Estimated National Forest Visits quantifies the total number of visitors to the national forest. Total Estimated Site Visits reflects the number of people estimated to have visited the individual sites (e.g., Nevada Beach, Meeks bay) so is likely to best reflect the experience of visitors to individual forest sites.

Visitation to the LTBMU sites appears relatively stable over the period between 2005 and 2015 (USFS LTBMU 2018, 2019a, 2019b). Both Total Estimated National Forest and Site Visits declined significantly during the recession, as evidenced by the 2010 data (USFS LTBMU 2018, 2019a, 2019b). The 2015 survey revealed that visitation had recovered nearly to pre-recession levels. In 2015, site visits were 8% lower than pre-recession levels, and total number of visitors was just 1.5% lower than in 2005.

Figure 9: Lake Tahoe Basin Management Unit (USFS) Visitation

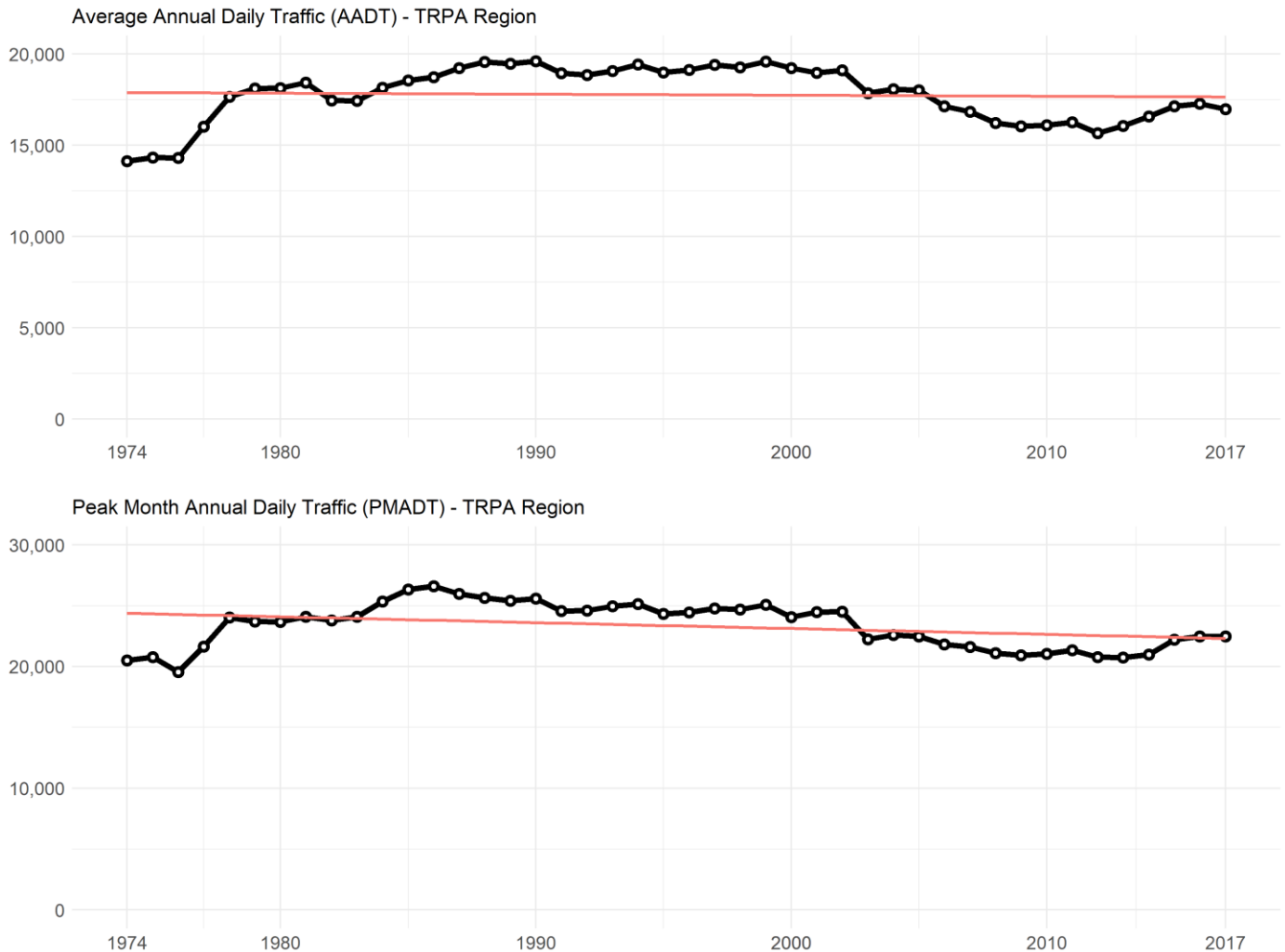


Traffic Volumes

Future year traffic volumes are a key forecast output which help TRPA understand potential future traffic conditions and create appropriate plans and policies. Trends in historic traffic volume will not necessarily continue into the future but can provide an indication of potential visitation and residential travel scenarios. Moreover, historic observations can help ground truth and put the forecasted volumes in perspective.

Historic traffic volume data is available for 20 different permanent traffic count stations that have been maintained by Caltrans and NDOT on highways throughout the Tahoe region for several decades (CalTrans and NDOT). The available data shows an annual average of between 14,000 and 20,000

Figure 10: Average Traffic Volumes Over Time -TRPA Region



Average Annual Daily Traffic (AADT) from as far back as 1974. The highest AADT occurred in 1990 at 19,600, while the most recent year (2017) was estimated at just under 17,000. AADT was the highest during the 1980s and 1990s, fell during the 2000s, and then has generally been on an upward trend during the last 10 years. It is important to note that AADT represents an estimate of daily traffic throughout an entire year. Data for Peak Month Annual Daily Traffic (PMADT) in the region, which represents the typical traffic volumes during the peak travel month, shows a similar flat trend; volumes were the highest during the 1980s and 1990s, fell during the 2000s, and have been generally increasing in the last 10 years.

Although the aggregate trend for all 20 count stations in the region is relatively flat, the trends for different count stations in different areas can vary significantly. There are more count stations with an increasing AADT trend than there are with a decreasing or flat trend. For example, there are a several stations on the North Shore with increasing AADT trends, such as SR 267 and DL Bliss, while several stations on the South Shore show noticeable decreasing trends. For example, AADT on SR 89 at DL Bliss has doubled since the 1970s and SR 267 at North Avenue increased by 119%. On the other hand, AADT at Park Avenue in the Heavenly Village shows the most prominent decreasing trend of any station in the region; counts at this station in 2017 were 23% lower than those in 1974 and 44% lower than the peak year of 1988. Other stations around the South Shore, such as Stateline, Al Tahoe, and Tahoe Keys, show noticeable decreasing trends. Although a handful of sites outside of the South Shore showing increase AADT trends, the decreasing trend in the South Shore influences an overall regional flat pattern in AADT. For the peak travel periods, the trends for PMADT at individual stations are similar but slightly less pronounced; stations on the South Shore show a decreasing trend while stations in other portions of the region show flat or increasing traffic volumes

Figure 11: Traffic Count Stations

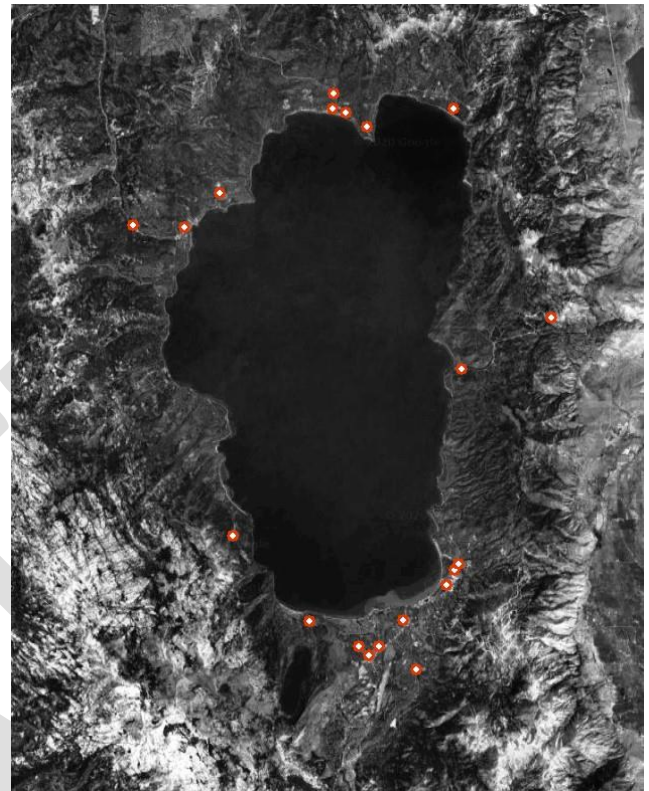


Figure 12: Traffic Station Annual Average Daily Traffic (AADT) Over Time - TRPA Region

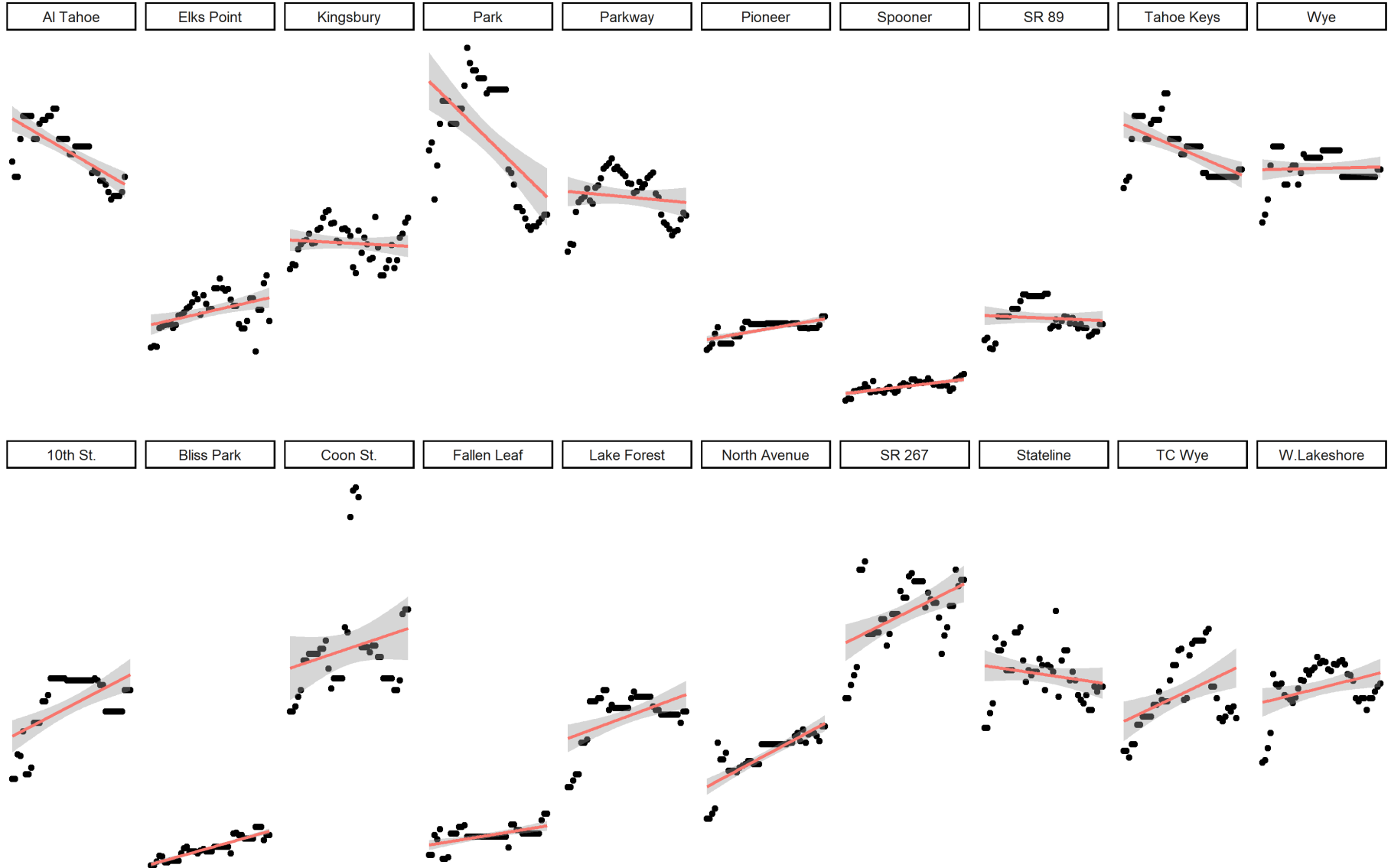
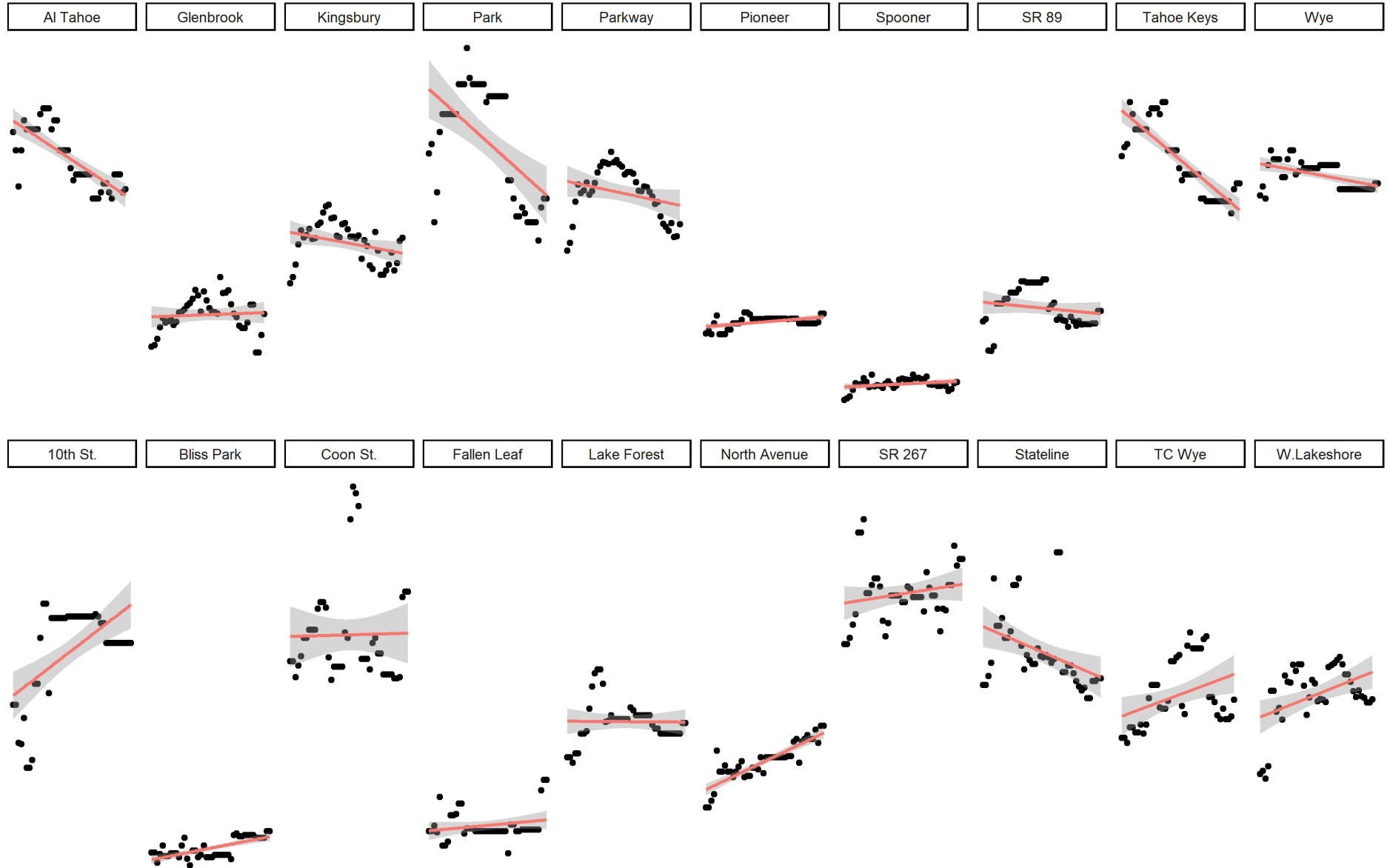


Figure 13: Traffic Station Peak Month Average Daily Traffic (PMADT) Over Time - TRPA Region



Regional Development Trends

The TRPA Lake Tahoe Regional Plan, Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and other agency documents must assess their environmental effects. Prior agency documents, including the 2012 Regional Plan and 2017 RTP/SCS took a conservative approach by assuming complete build out (100% utilization of all remaining development rights) by 2035. This methodology assessed environmental impacts if the Basin were to reach maximum development capacity. However, the observed rate of development in the six-year period after the adoption of the 2012 Regional Plan (2013-2018) has significantly lagged behind the rates that were forecasted in both the 2012 Regional Plan and the 2017 RTP/SCS (Table 1).

Table 1: Years to Build Out, Previously Forecasted Rates and Observed Rates of Development

	Remaining Development Rights	Observed Rate	Prior Forecasts		Rate Required to Achieve Build Out by 2035
		Actual Rate of Utilization 2013-2018 (per year)	2012 RP Utilization Rate (per year)	2017 RTP/SCS Utilization Rate (per year)	
CFA	556,796	6,988	25,374	28,475	32,753
TAU	342	0	15	17	20
Residential Allocations	2,234	72	130 (to 2032)	144 (to 2032)	131 (186 by 2032)
Residential Bonus Units	1,609	2	74	87	95

In order to account for full build out of the plan, the 2017 RTP/SCS accelerated the forecasted rate of utilization from the 2012 RP for the remaining development rights. For example, the 2012 Regional Plan assumed that 130 residential allocations would be used each year until the allocation pool would be exhausted in 2032. The 2017 RTP/SCS increased the forecasted rate per year to 144 units through 2032. For the 2020 RTP/SCS, in order to maintain the assumption of full utilization of development rights by 2035, the forecasted rates would have to be accelerated again. For example, to maintain the forecast of utilizing all residential allocations by 2035, we would have to assume a rate of 131 per year for the current RTP/SCS.

1. Build Out Assumptions

The Regional Plan caps development capacity in the Basin using allowable land coverage and the development rights program. As of 2018, the Region is 93% built out (Table 2) relative to these Regional Plan caps.

Table 2: Regional plan development capacity of each development right.

	Existing (includes banked)	Remaining Allocations (Non-TRPA)	TRPA Bonus /Incentive Pools	Total Development Potential
Commercial Floor Area (CFA)	92.0%	5.3%	2.6%	100.0%
Tourist Accommodation Units (TAUs)	97.1%	1.1%	1.8%	100.0%
Residential (RUUs, RBUs and Residential Allocations)	92.5%	4.4%	3.1%	100.0%
All Development Rights	93.1%	4.2%	2.8%	100.0%

Note: Rights expressed as a fraction of total development, that is constructed or banked (existing), remaining in allocation pools held by local jurisdictions, and remaining in TRPA bonus/incentive pools.

The sections below provide a more detailed discussion of the observed utilization rates and the previously forecasted rates by each development right type.

1.1 Residential Allocations

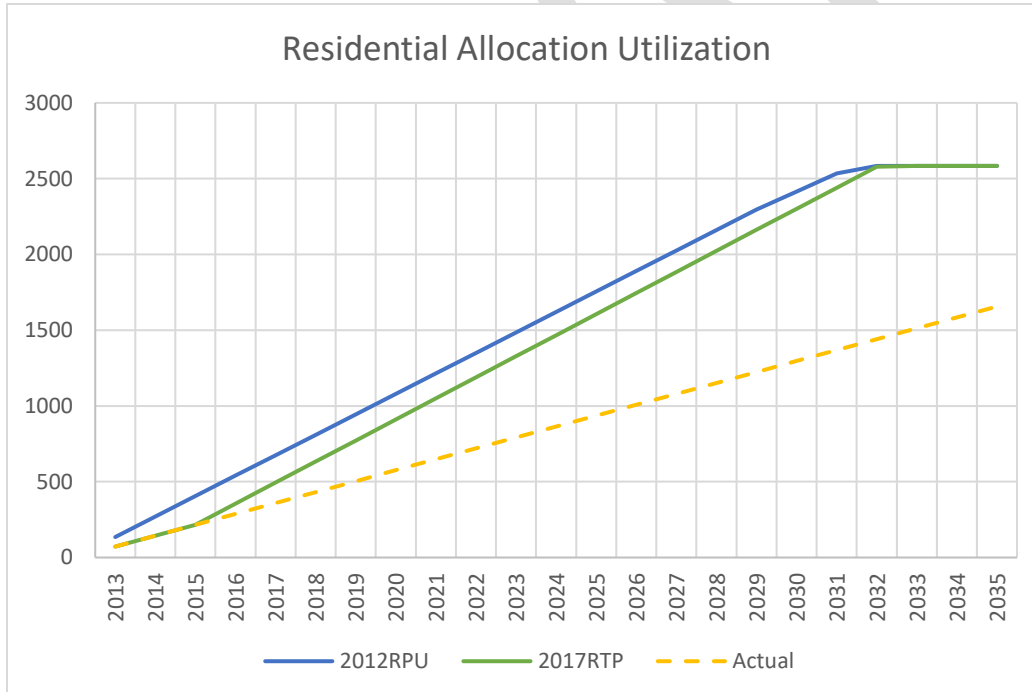
There are currently 2,234 residential allocations remaining that can be constructed for residential development. Every year, TRPA releases 120 residential allocations to the local jurisdiction pools and 10 units are released into the TRPA residential allocation incentive pool. Since 2013, an average of 72 residential units per year have been allocated to projects by TRPA and the local jurisdictions from these pools. The current rate of residential allocation use is 47% lower than was forecast in the 2012 Regional Plan and 32% lower than the 2017 Regional Transportation Plan forecast. The 2017 RTP forecasted that all remaining residential units would be constructed at a rate of 130 per year until the remaining supply was exhausted in 2032. At the rate of utilization over the past six years (72 units per year), the pool would not be exhausted until 2050, 31 years from now. Table 3 shows the historical rate of utilization

for residential allocations, as well as the rates necessary to achieve full use of residential allocations by 2035 and 2045 respectively.

Table 3: Residential Allocations, Previously Forecasted Rates and Observed Utilization Rates

	Observed Rates		Utilization Rates Needed to Reach Full Build-Out	
	1987-2018 Rate	2013-2018 Rate	By 2035	By 2045
Residential Allocations	200 / year	72 / year	131 / year	83 / year

Figure 14: Residential allocation utilization since the adoption of the 2012 Regional Plan, relative to the forecasted rate of utilization in the 2017 Regional Transportation Plan and the 2012 Regional Plan. The ‘actual’ line uses the development rate observed between 2013-2018 to forecast the rate between 2019-2035.



1.2 Residential Bonus Units (RBUs)

Residential bonus units are awarded as an incentive for affordable, moderate-income, achievable, or workforce housing¹ or for the retirement of a sensitive parcel. A total of 10 residential bonus units have been allocated to projects since 2013, a rate of just under two per year. The 2017 RTP forecasted that all remaining residential bonus units would be utilized by 2032, including the utilization of 399 units by 2020. The current rate of utilization is just 3% of the forecast used in the 2017 RTP. There are currently 1,609 residential bonus units remaining in TRPA and local jurisdiction pools.

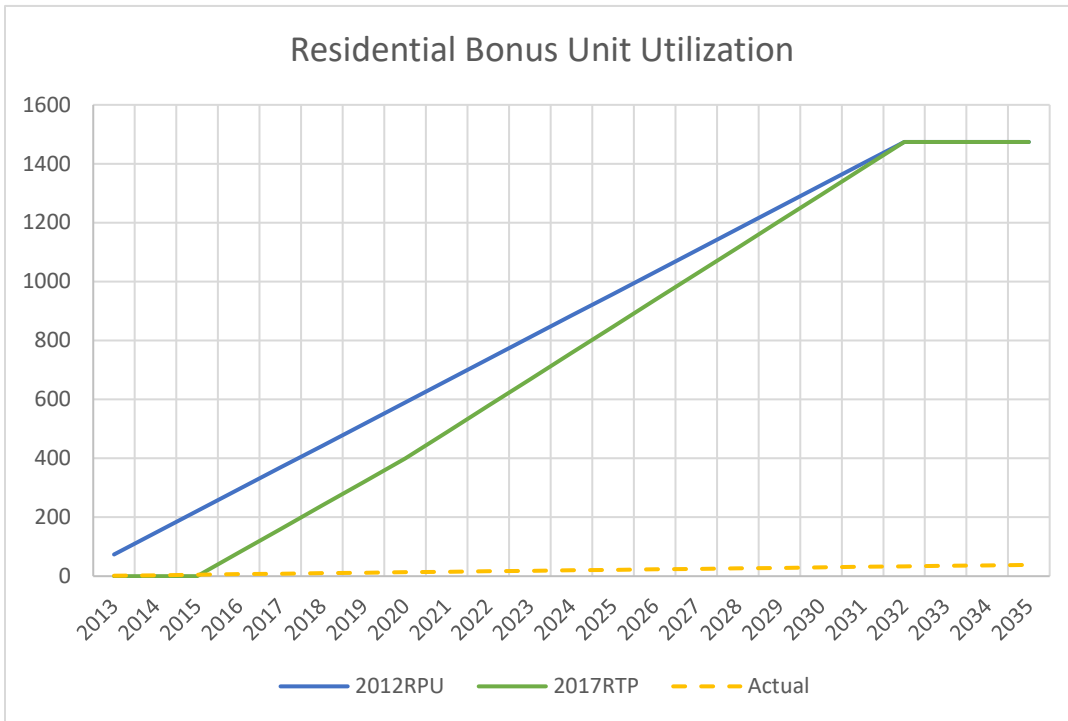
The table below (Table 9) shows the historical rate of utilization for residential bonus units, as well as the rates necessary to achieve full build-out of residential bonus units by 2035 and 2045 respectively.

Table 4: Residential bonus unit utilization between 1987-2018, 2012-2018, and required future rates to utilize all remaining units by 2035 and 2045 respectively.

	Observed Rates		Utilization Rates Needed to Reach Full Build-Out	
	1987-2018	2012-2018	Rate to Utilize All	Rate to Utilize All
	Rate	Rate	Units by 2035	Units by 2045
Residential Bonus Units	16 / year	2 / year	95 / year	60 / year

Figure 15: Residential bonus unit utilization since the adoption of the 2012 Regional Plan, relative to the forecasted rate of utilization in the 2017 Regional Transportation Plan. The ‘actual’ line uses the development rate observed between 2013-2018 to forecast the rate between 2019-2035.

¹ TRPA defines “affordable” homes as for ownership or rental by families who make up to 80% of Area Median Income (AMI), “moderate” as homes that are affordable for ownership or rental by families who make between 80% and 120% of AMI, and “achievable” as a variable percentage based on the area median income, buying power, and the median-priced home for the area.



1.3 Commercial Floor Area (CFA)

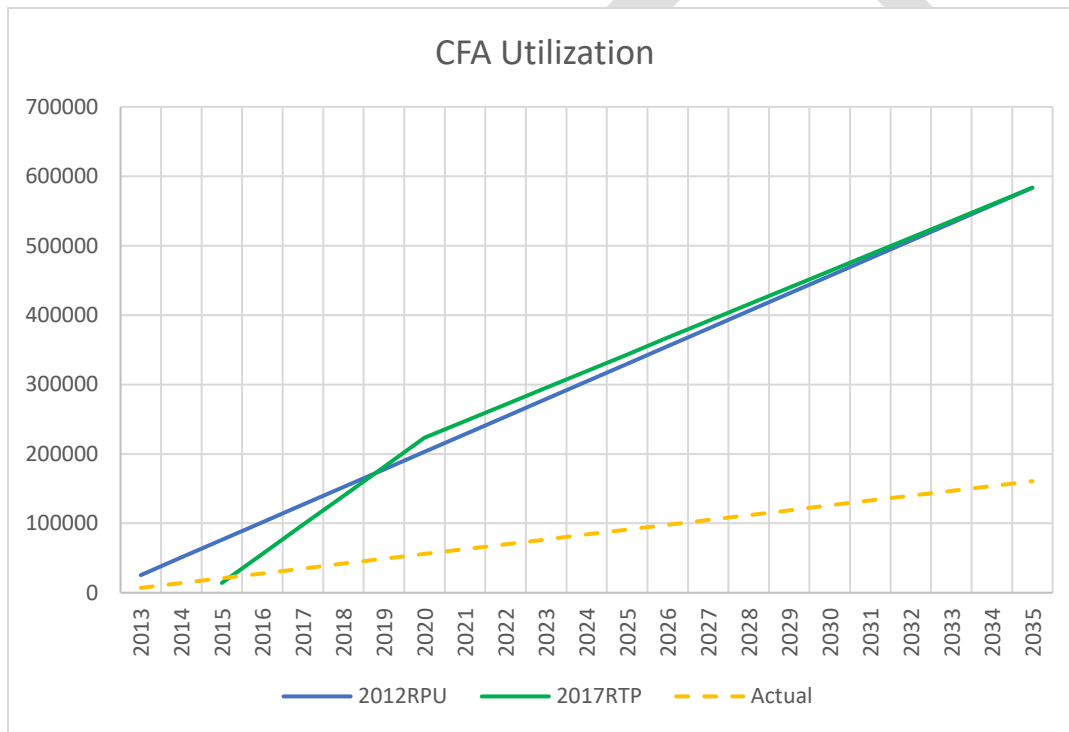
There is currently more than 556,000 square feet of un-used commercial floor area in TRPA and local jurisdiction community/area plan pools. Since 2013, a total of 41,928 square feet of CFA have been allocated to projects; an average rate is 6,988 square feet of CFA per year. The 2017 RTP modeled the complete build-out of all remaining CFA between 2015 and 2035, equivalent to an annual rate of 28,475 sq. ft per year. That allocation rate is more than four times the current allocation rate, and more than double the rate of CFA allocations observed since adoption of the 1987 Regional Plan (14,430 square feet per year). At the current rate of utilization, the remaining CFA would not be completely developed for 80 years. Table 5 shows the historical rate of utilization for commercial floor area, as well as the rates necessary to achieve full use of CFA by 2035 and 2045 respectively.

Table 5: Historical commercial floor area utilization between 1987-2018, 2012-2018, and required future rates to utilize all remaining CFA by 2035 and 2045 respectively

	Observed Rates	Utilization Rates Needed to Reach Full Build-Out

	1987-2018 Rate	2012-2018 Rate	Rate to Utilize All CFA by 2035	Rate to Utilize All CFA by 2045
Commercial Floor Area (sq. ft.)	14,430/ year	6,988 / year	32,753/ year	20,622 / year

Figure 15: CFA utilization since the adoption of the 2012 Regional Plan, relative to the forecasted rate of utilization in the 2017 Regional Transportation Plan. The ‘actual’ line uses the development rate observed between 2013-2018 to forecast the rate between 2019-2035.



1.4 Tourist Accommodation Units (TAU)

No TAUs have been allocated to projects and constructed since adoption of the 2012 Regional Plan², and only 58 TAUs have been allocated since the adoption of the 1987 Regional Plan. The 2017 RTP forecasted full build-out of all TAUs by 2035. The forecast projected that 180 TAUs would be constructed

² Recently constructed tourist accommodation projects at Zalanta and Edgewood Lodge used banked and/or transferred units, and therefore did not receive allocations from TRPA or local jurisdictions.

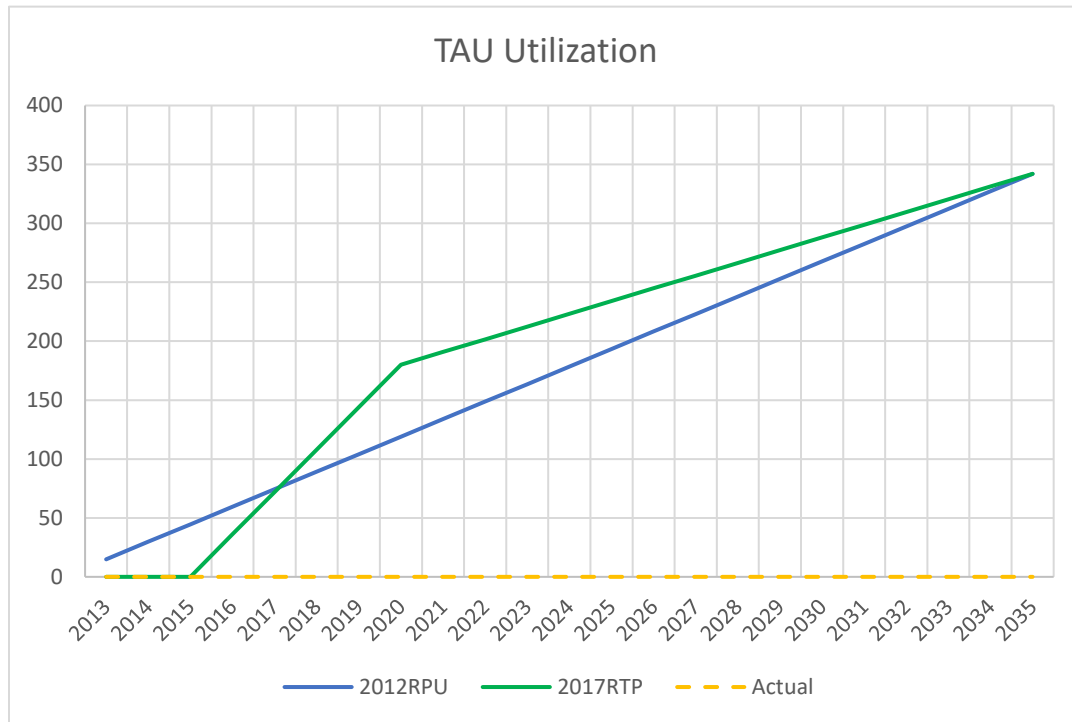
by 2020, and the remaining 162 TAUs would be allocated through the bonus program and constructed by 2035.

Several projects have been approved for TAU allocations, but not yet constructed: Boulder Bay was approved for 50 Tourist Bonus Units allocated from TRPA (in addition to transferred and converted TAUs) and Homewood Mountain Resort was approved for 50 Tourist Bonus Units allocated by TRPA (in addition to transferred TAUs). Table 6 shows the historical rate of utilization for TAUs as well as the rates necessary to achieve full use of TAUs by 2035 and 2045 respectively.

Table 6: Historical tourist accommodation unit utilization between 1987-2018, 2012-2018, and required future rates to utilize all remaining TAUs by 2035 and 2045 respectively.

	Observed Rates		Utilization Rates Needed to Reach Full Build-Out	
	1987-2018 Rate	2012-2018 Rate	Rate to Utilize All Units by 2035	Rate to Utilize All Units by 2045
Tourist Accommodation Units	2 / year	0 / year	20 / year	13 / year

Figure 16: TAU utilization since the adoption of the 2012 Regional Plan, relative to the forecasted rate of utilization in the 2017 Regional Transportation Plan. The ‘actual’ line uses the development rate observed between 2013-2018 to forecast the rate between 2019-2035.



Development Right Conversions and Transfers

Since the last RTP, TRPA adopted significant changes to the development rights program to add flexibility and promote conversions and transfers. Determining whether and how these changes are incorporated into the development forecasts will be key to the future scenarios for land use.

2.1 Transfers

The Regional Plan allows for the transfer of existing development rights and residential allocations provided from one parcel to another. (TRPA Code of Ordinances Section 51.5) The plan also provides incentives to encourage environmentally beneficial transfers that: 1) remove development in environmentally sensitive areas and transfers to less sensitive areas; and 2) relocate development from remote areas into town centers which have more suitable access to infrastructure, services, and transit.

The 2017 RTP included assumptions for the rate of transfers and the location of sending and receiving parcels for each development type. These assumptions were based on utilization of the transfer incentive programs to entice to relocation of development from SEZs, Sensitive Lands, and remote area areas into Centers. No transfers were modeled to reflect transfers to areas outside of town centers. However, observed transfers over the past several years have facilitated the removal of development rights from sensitive lands, but have not centralized development into town centers.

1 Residential

The 2017 RTP forecasted that 143 existing residential units (49 by 2020) and 1,109 residential development rights (367 by 2020) would be transferred into town centers through 2035 and would be awarded residential bonus units (196 and 785 units respectively) as transfer incentives. The forecast assumed that 34 existing residential units would be removed from SEZs, 22 from other sensitive areas and 87 from high-capability lands.

Observed transfers of residential development rights have moved development off SEZ and sensitive lands but have not concentrated development into town centers. Residential transfers between 2013-2018 facilitated the removal of 61 units from Stream Environment Zones. 58 of those units were relocated to non-sensitive lands, and the remaining three units were transferred to other sensitive lands. While the transfers have removed residential units from sensitive areas, they have not centralized development. Residential transfers in the past five years resulted in the net removal of 25 residential units from town centers, transferring 16 to neutral areas (areas within one-quarter mile of town centers) and 9 to remote areas located more than one-quarter mile from town centers.

2.1.2 Commercial Floor Area

The 2017 RTP forecasted that all CFA transfers would leverage the incentives of the Regional Plan and utilize the full TRPA bonus pool of CFA. The RTP forecast also assumed the transfer of more than 120,000 square feet of CFA from SEZ into town centers. The RTP forecast included an overall increase of CFA in town centers of 360,000 square feet by 2035 and no additional CFA was projected to be built outside of town centers.

Observed transfers of CFA have concentrated more CFA in town centers, but have not altered the distribution of CFA between sensitive and non-sensitive lands. Since 2012, nearly 16,000 square feet of CFA have been transferred, and three-quarters of that CFA has been added to town centers, the other quarter was added to remote areas. No CFA has been transferred from SEZ or other sensitive areas to non-sensitive lands.

2.1.3 Tourist Accommodation Units (TAU)

The 2017 RTP forecasted that 54 TAUs would be transferred from SEZs into town centers, adding 162 TAU (with transfer bonus incentives) to town centers. Observed transfers of TAUs have decentralized the distribution of TAUs in the Region. As a result of transfers, 101 TAU have been removed from town centers, five have been removed from neutral areas and 106 added to remote areas³. Transfers have facilitated the removal of 97 TAU from SEZ and relocated to non-sensitive lands. Since the 2017 RTP, additional changes to the transfer of development rights program that should streamline TRPA processes, and facilitate additional transfer activity include (1) removing multi-jurisdictional permitting processes to facilitate transfers between jurisdictions (2) allowing transfers prior to a building project approval.

2.2 Conversions

Conversions provide property owners with flexibility while maintaining the overall cap on development potential in the Tahoe Basin. By allowing conversions between the different types of development rights using environmentally neutral exchange rates, TRPA hopes to encourage more redevelopment. The current conversion ratio is 600 CFA to 2 TAUs to 2 residential to 3 multi-family residential units. Conversions of development rights were not considered in the 2012 Regional Plan forecasts or for the 2017 RTP/SCS forecasts.

The ability to convert between different types of development rights is relatively new. However, a clear trend that has emerged from the conversions to date: a shift from TAUs and CFA to residential development. As a result of the conversions to date, 62 residential units have been added throughout the region, while the number of TAUs has been reduced by 52 and CFA reduced by 4,102 square feet

The total remaining development potential of each kind (with no conversions) is summarized in Table 8. TRPA allocations and bonus units cannot be converted, so they are not included in the conversion potential. Based on the existing conversation ratios, the table shows the maximum amount of development that could result if all development rights were converted to a single type. Based on this analysis, full build out of remaining development would be between 183,654 and 1,265,996 square feet

³ The distribution of tourist accommodation units was lower in town centers and higher in remote areas because of the Edgewood Lodge redevelopment project which constructed 154 tourist accommodation units—including 144 transferred from dated motels previously located in town centers—near the South Stateline resort area but just outside the town center boundary.

of CFA regionally, between 212 and 3,153 TAUs, and 1,609 and 5,904 residential units. Conversions influence the proportion of development of each type, such that the maximum amount of each type listed table 8 cannot be realized for all types simultaneously. Both zoning and land capability influence the potential to construct development on the ground.

Table 7: Remaining development rights inclusive of conversion potential.

	Remaining Allocations in Local Jurisdiction CP/AP Pools	TRPA Allocations / Bonus Units ¹	Conversion Potential ²	Total Remaining - no conversions	Total remaining - max conversions
CFA	373,142	183,654	709,200	556,796	1,265,996
TAU	130	212	2,811	342	3,153
Residential	2,234	1,609	2,601	3,843	5,904

¹The TRPA Allocation and Bonus Unit pools are not eligible for conversion.

²Conversion potential captures the additional amount of the development right if all other development rights were converted to it. Maximum residential build-out requires all CFA and TAU to be converted to multi-family. If all were converted to single family the total number of new residential units would be 1,374.

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