ONE TAHOE

A transportation funding initiative

Draft Final Project Report

Prepared for the Tahoe Transportation District

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Glossary and Acronyms

AV	Automated Vehicles
GHG	Greenhouse Gas
JPA	Joint Powers Authority
LPR	License Plate Reader
LTCCP	Lake Tahoe Corridor Connection Plan
NTD	National Transit Database
PDT	Project Delivery Team
RTIP	Regional Transportation Improvement Project
RTP	Regional Transportation Plan
SAV	Shared Autonomous Vehicle
TMDL	Total Maximum Daily Load
TMPO	Tahoe Metropolitan Planning Organization
TNC	Transportation Networking Companies
TRPA	Tahoe Regional Planning Agency
TSM	Transportation System Management
TTD	Tahoe Transportation District
VMT	Vehicle Miles Traveled

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Executive Summary

ONE TAHOE: A Transportation Funding Initiative

There is only ONE TAHOE.

Lake Tahoe is a unique place. Forest clad mountains surrounding crystalline blue waters of amazing clarity create a stunning destination where one can experience contemplation, relaxation, rejuvenation, and recreation. The Lake's natural environment provides opportunities for hiking, camping, skiing, biking, swimming, boating, and fishing. The experience of cultural attractions including theatre, music, dining, gaming, arts, museums, and historic sites, is enhanced by this stunning setting.

The "Tahoe Experience" is enjoyed by the Basin's 55,000 residents, and also shared year-round by more than 25 million visitors!

The "Tahoe Experience", enjoyed by the Basin's 55,000 permanent residents daily, is also shared with more than 25 million annual visitors. It is this experience, and the visitors who are attracted to share it, that is the primary driver of the Basin's economy. Of the visitors, an estimated 42% come into the Basin for a part of one day while the remainder stay longer, averaging 4-5 nights.

The Tahoe we love is threatened.

The quality of the "Tahoe Experience" is threatened by the almost exclusive use of the automobile for travel by both visitors and residents. In fact:

- More than 50 million vehicle trips are made into, out of, and within the Basin annually.
- About 75 % of these trips are made by visitors and 25% by residents.
- It is estimated that there will be a 25% increase in visitation between 2014 and 2035.

Our almost exclusive reliance on the automobile threatens the quality of the "Tahoe Experience" and our economic prosperity.

Unfortunately, visitation is not uniform throughout the year. During peak times of the year, peak times of day, weekends, and special events, Tahoe's transportation system is simply overwhelmed by the number of vehicles. As a result, extreme traffic congestion resulting in hours long delays is not uncommon in the winter or summer peaks. Congestion also increases accidents between vehicles, and between vehicles and pedestrians or cyclists. Lack of parking at popular destinations requires people to park in less safe locations, and the lack of sidewalks and paths often force pedestrians to walk on road shoulders dangerously close to moving traffic. Additionally, congestion also results in greater auto emissions that negatively impact air quality, increases greenhouse gases, and contributes to algal blooms in the Lake. Particulate matter from roadways and parking lots accounts for 70% of the particulates entering Tahoe which are a significant factor in declining Lake clarity. The memory of a wonderful day at Tahoe can be wiped out by the hassles of getting to, from, and around the Lake, and may make one think twice about coming again.

Concern over the potential for a catastrophic wildfire in the Tahoe Basin is heightened by our travel patterns and current limited transportation infrastructure. It is more likely that a fire would occur during the summer months when visitation is at its peak. Moving emergency equipment and personnel into the Basin while simultaneously trying to evacuate large numbers of people traveling by vehicle out of the Basin will be extremely challenging. This is further exacerbated by the limited capacity of the Basin's broadband and wireless communications network which largely fails during peak demand periods. Inability to communicate with Emergency Medical Service personnel and travelers during a major wildfire could make a dangerous situation far worse.

Significantly addressing the Basin's traffic congestion by building additional roadway capacity is simply not an option. The Tahoe Regional Planning Compact bars the construction of additional road capacity by policy. In addition, the extreme environmental sensitivity of the Basin, the high cost of land and construction, and the lack of alternative routes for traffic during construction virtually eliminate adding roadway capacity as a practical matter.

The community vision for solving our transportation problems is a complete system offering realistic alternatives to the automobile for many trips.

Solutions are available.

The solutions to Tahoe's transportation problems have been known for decades. The community has developed a vision for a complete, integrated, multimodal transportation system serving the entire Basin. This vision, articulated in successive regional transportation plans (RTPs) over the past 4-plus decades envisions significant new investments in transportation projects and services that can provide realistic alternatives to the automobile, not for every trip, but where and when it works. The current 2017-2040 RTP calls for an over 800% increase in transit service including expanded routes, longer hours, and increased frequency of trips with most of the service being "fare free".

The transit system would also include a cross-lake high speed ferry and local water taxis. Significant investments would be made to more than double bicycle and pedestrian facilities, providing integrated first/last mile access to the transit system, including completion of a bicycle/pedestrian path completely circumnavigating the Lake. New inter-regional transit and rail services will link Tahoe to the major urban centers in Northern California and Nevada. Mobility hubs would provide safe parking for autos with access to the alternative transportation services. While the roadway system would not have increases in capacity, bottlenecks would be improved, and the roadways maintained to a good or better condition saving travelers money and reducing emissions and other pollutants. To support these improvements, investments would also be made in the digital network making it capable of robust traveler and EMS communications. Funding would also encourage low-cost housing construction in transit corridors to meet the needs of workers in the Basin.

In 2014, it was estimated that transit carried about 1.4% of all person-trips within the Basin. These RTP investments, if fully funded and implemented, are projected to increase the transit share of all-person-trips from the current 1.4% to about 20% after the first 12 years of full investment. Even in the face of increased visitation commensurate with projected population growth in the major Tahoe markets in California and Nevada, these investments are expected to actually decrease the number of internal Basin person-trips made by automobiles below 2014 levels by 2033.

Lack of funding keeps the community's transportation vision from becoming reality.

Although the solutions to Tahoe's transportation problems have been known for decades, progress towards implementing the planned transportation system has been slow because existing transportation funding sources have never provided enough money to make the community's vision a reality. After several revenue studies, two attempts were made in the 1980's to gain public approval for a sales tax dedicated to transportation. Under the legislative authority in-place at that time, two-thirds of voters in each of the portions of the five counties having transportation facilities in the Basin were required for approval. This proved an insurmountable bar and both attempts failed.

Tahoe visitation and traffic have continued to increase and create ever worsening conditions and negative impacts to the "Tahoe Experience". In 2018, the TTD engaged Morse Associates Consulting, LLC to reexamine the transportation funding shortfall and make recommendations regarding the most appropriate revenue mechanisms for addressing the Basin's ongoing shortfall in transportation funding. This initiative has been tagged as the "ONE TAHOE transportation funding initiative". The major items of work in the ONE TAHOE process were:

- Review and refine the magnitude of the transportation funding shortfall.
- Conduct a robust communication process with the public, stakeholders, public agencies, and elected decision makers on the funding shortfall and solicit ideas on funding mechanisms to address it.
- Develop a screening process and evaluation criteria for assessing proposed funding mechanisms.
- Evaluate the proposed funding mechanisms and make a recommendation to the TTD Board on the most appropriate mechanisms.
- Identify next steps for pursuing the proposed mechanisms.

Transportation needs, revenues, and shortfalls.

In defining the transportation funding shortfall, the consultant team relied on the 2017-2040 Lake Tahoe Regional Transportation Plan, supplemented by subsequent studies and plans publicly available including new projects identified by the Bi-state Consultation on Transportation. The consultant reviewed the order of magnitude of expenses and existing revenues included in these plans at a very high planning level for reasonableness. All adjustments and changes to expenses and costs were reviewed by a Project Delivery Team (PDT) composed of representatives from the local governments within the Basin before being submitted to the TTD Board for approval. To maintain consistency and facilitate comparisons and analysis, all expenses and revenues were translated in constant 2017 dollars (2017$) which was the first year of the RTP.
The results of this process are summarized in Table ES-1 on the next page.

Table ES-1: Tahoe transportation needs, revenue, and shortfalls

Current 2017-2040 RTP with adjustments	**(2017$)**
Needs including capital and O&M	Total all years
Roads/Bikes/Peds	$ 1,302,000,000
Transit	$ 1,541,000,000
Total Maximum Daily Load (TMDL)	$ 157,000,000
Technology	$ 105,000,000
Total needs	$ 3,105,000,000
Projected revenue from existing sources	$ 1,579,000,000
Projected shortfall	$ (1,530,000,000)
Projected average annual shortfall	**$ (66,500,000)**

Key Takeaways:

- The $67 million average annual shortfall in funding is about 1% of the annual Basin economic activity in 2015 as reported by the Tahoe Prosperity Center.
- The $1.53 billion shortfall is about half of the total $3.11 billion in needed funding.
- About 62% of the total $3.11 billion in needs is for operations and maintenance. This is meaningful because the significant majority of existing funding sources are limited to capital expenses.
- Transit needs account for approximately $1.04 billion of the $1.53 billion shortfall.
- Although the analysis uses data through 2040, continued commitment of inflation adjusted revenues from all existing and new funding sources beyond that time will be necessary to support a sustainable transportation system.

Ideas to address our transportation funding shortfall.

Through a process that included seven public listening sessions in the Basin, numerous one-on-one and small group meetings, social media, a project webpage, and print media interviews, the need for additional transportation funding was explained and ideas were solicited for proposed funding mechanisms. Ultimately, the twenty-eight suggestions relating to funding displayed in Table ES-2 were made by the public, elected officials, local agencies, stakeholders and professionals on the consultant team.

Twenty-eight ideas relating to funding mechanisms were contributed by the public, elected officials, stakeholders, and transportation professionals.

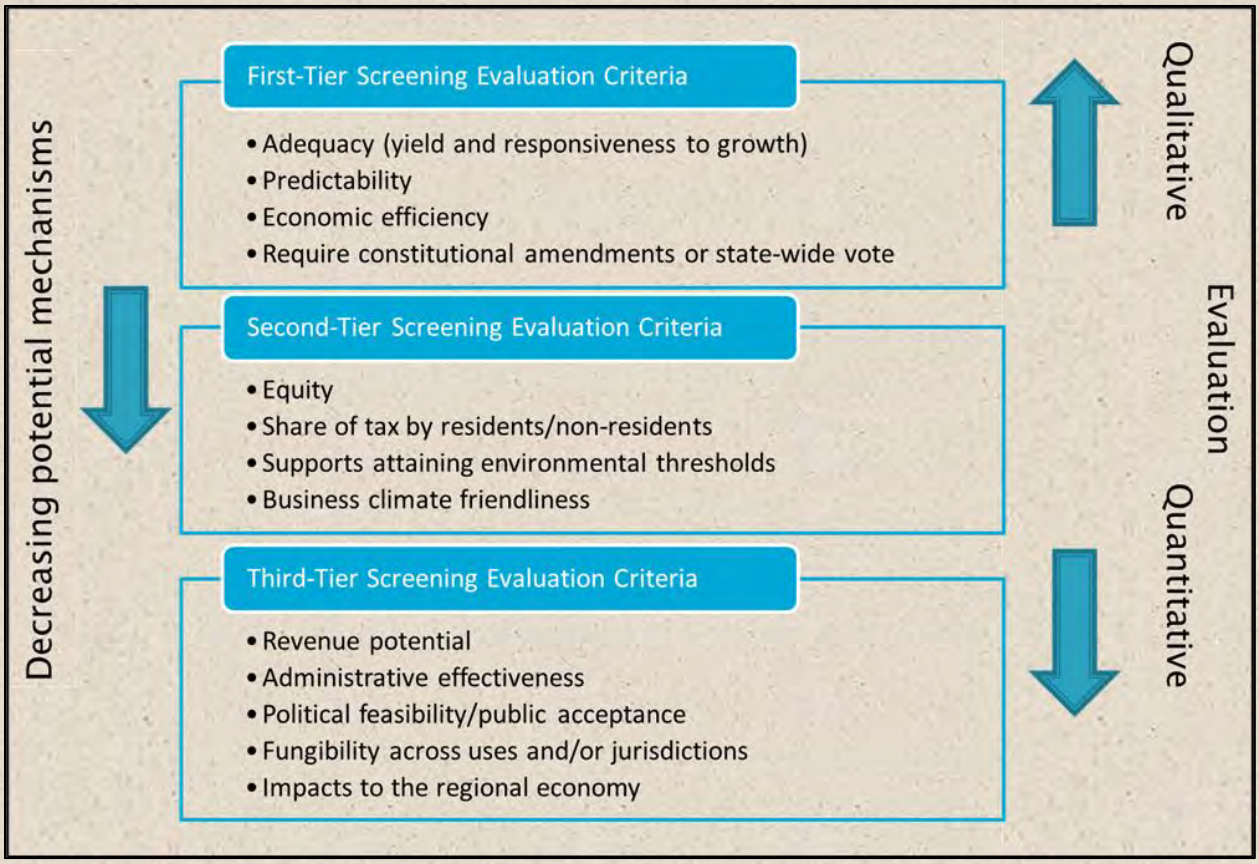
Table ES-2: Ideas for Funding Mechanisms

Ideas for Funding Mechanisms:

- Sales Tax
- Income Tax
- Property Tax
- Fuel Taxes
- Gross Receipts Tax
- Employee Tax
- New sustained federal funding
- New sustained State of Nevada funding
- New sustained State of California funding
- New sustained funding from each county general fund
- Cordon pricing
- VMT fee for travel in Basin
- Special district e.g. Transportation GID
- Joint Powers Authority (JPA)
- Zoned "Basin Transportation Fee"
- Transportation Fee collected with vehicle reg. fees
- Covert all parking in Basin to paid parking
- Developer impact fees
- Hourly transportation user fee for time spent within the Basin
- Congestion pricing
- Increased transit fares
- Basin entry fee
- Vacancy Tax
- Transit Occupancy Tax (TOT)
- Rental car fees
- Road utility
- Fee/tax on ski passes
- Tolling

The ONE TAHOE process for assessing proposed funding mechanisms used three tiers of successive screening and thirteen evaluation criteria. The process and the criteria, shown graphically in Figure ES-1, was approved by the TTD Board following review and comment by the PDT. The process was designed to take many ideas and distill them to the most appropriate few for consideration in making final recommendations. At each tier of screening, the results were brought to the PDT for review and comment, then to the TTD Board for discussion and direction.

Figure ES -1: ONE TAHOE screening and evaluation process for proposed funding mechanisms



Tier 1 screening reduced the number of potential funding mechanisms from 28 to nine. Tier 2 screening eliminated five of the nine ideas, and two potential mechanisms made it through the Tier 3 screening.

Key takeaways:

- Neither the federal government nor the States of California and Nevada are in a position to commit long-term new transportation funding to the Tahoe Basin in the order of magnitude needed
- The Tahoe Basin's 55,000 residents cannot pay for the transportation impacts of 50+ million annual vehicle trips when 75% of them are by visitors. Non-resident contributions to transportation funding in the Basin account for only about 5% of the funding from current sources with 95% allocable to residents. Collecting more from non-residents will be a key for future success. Collection from non-residents needs to be able to effectively capture a reasonable share from the 42% of visitors who are "day trippers".
- Much of the current transportation funding stream is limited to where it can be spent geographically (e.g., state, county, city boundaries), what modes it can be spent on (e.g., roads versus transit), and what

activities (e.g., capital versus operations). In order to effectively fund a transportation system servicing the entire Basin, new funding must be able to transcend these limitations.

- Revenue sources that exist today and are expected to be there in the future, may not be. Likewise, new demands impacting the need and pace of transportation investments can be expected. New funding mechanisms must be responsive to these types of changes to ensure the transportation system can be reliably and sustainably supported.

Recommendations to the TTD Board.

On 31 January 2020, recommendations were made to the TTD Board on what were considered the most appropriate funding mechanisms given the unique circumstances of the basin. The first recommendation was that the TTD pursue implementing Basin-wide transportation user fees as opposed to taxes. Somewhat analogous to the fees that many of us pay for such things as electricity, water, sewer, or gas, transportation user fees would be used for providing the projects and services identified in the community's Regional Transportation Plan and no other purpose. Fee rates would be set at levels no higher than what is needed to fill the gap between transportation funding from existing revenue sources and the additional amounts needed to fully fund the RTP. Transportation user fees would be implemented and adjusted through transparent administrative processes to provide the Basin with a sustainable transportation system that meets the challenges of an ever-changing world.

To address the fundamental differences between non-resident and resident users, as well as ensure that non-resident day users are paying a fair share, two specific types of user fees were recommended. First would be a transportation user fee levied on non-resident groups (one or more persons) entering the Basin by motor vehicle. Billing information for each group would be captured from the non-resident vehicles entering/leaving the Basin using a combination of license plate readers, transponders, and other proven technologies so that there is no delay or interruption to the group's travel.

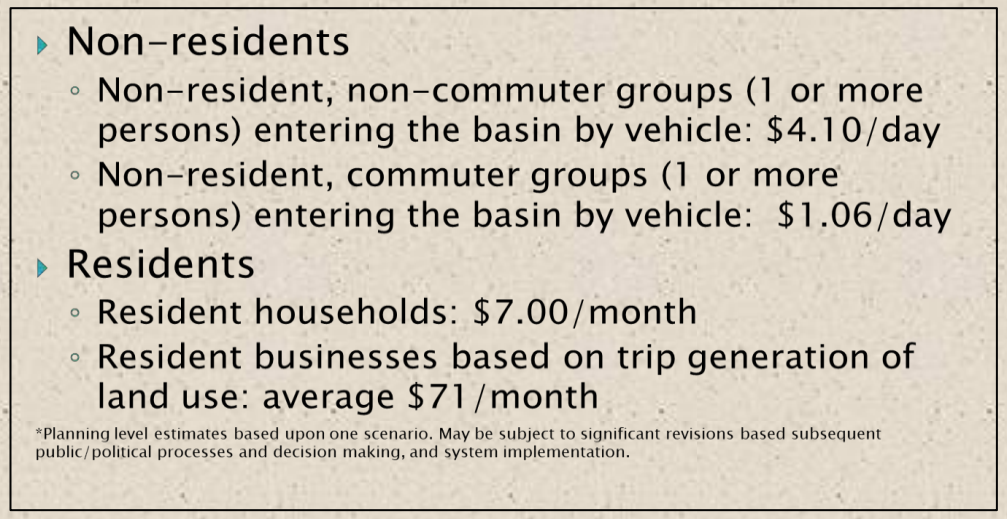
The first recommendation was that the TTD pursue implementing Basin-wide transportation user fees as opposed to taxes.

The second user fee would be levied on households and businesses within the Basin. Collection of these fees would be piggybacked, wherever possible, on collection processes already in place such as utility billing, property taxes, etc. There would be a flat fee rate for households, and business user fee rates would vary with trip generation.

Daily user fees would be collected from non-resident groups visiting the Basin while Basin households and businesses would pay monthly user fees.

Figure ES-2 shows illustrative rates for these transportation fees that are projected to generate sufficient net revenue to meet the $67 million annual shortfall with about 95% of the new revenue coming from non-residents and 5% from residents. These rates are illustrative only and were developed to provide a rough sense of the level that fees would need to be to generate sufficient net revenue to fill the funding gap. Should decision makers decide to pursue transportation user fees, there is a very significant amount of work that will need to be done to refine the fee rates and structure to address such things that the community might desire such as offering special rates to senior citizens, low-income households, etc.

Figure ES-2: Illustrative transportation user fee rates



Public and stakeholder sentiment.

ONE TAHOE undertook extensive outreach to the public, businesses, stakeholders, state and local government agencies, and political decision makers. This took the form of seven public listening sessions in the basin, hundreds of hours of meetings with various individuals and groups, social media posts, a project webpage, and news media interviews. These efforts focused on communicating information regarding the transportation funding shortfall, soliciting funding ideas, developing the screening and evaluation process and presenting results as they became available, and sharing the recommendations being made to the TTD Board. In addition, the consultant's work was informed by the results of several proprietary polls conducted statewide of voters in California and Nevada, as well as with Basin voters.

ONE TAHOE undertook extensive outreach to the public, businesses, stakeholders, state and local government agencies, and political decision makers.

Key takeaways:

Statewide in California and Nevada the majority of registered voters agreed that:

- Tahoe has a serious transportation problem.
- . The transportation problem in Tahoe is getting worse over time and it is hurting the economy.
- It is urgent that the transportation problems at Tahoe get fixed.
- . Visitors need to pay their fair share of the cost of Tahoe's transportation system.
- A daily fee for visitor groups entering the Basin of $4.30 per day was reasonable.

Most voters in California and Nevada considered a user fee of about $4.10/day for non-resident visitor groups reasonable.

Within the Basin, a majority of the registered voters agreed that:

- A daily fee for visitor groups entering the Basin of $4.10 was reasonable.
- A transportation fee of $7.00 per month per household was unreasonable.
- Despite the fact that most people are opposed to paying more fees and taxes, it is necessary to have transportation fees for all travelers in the Tahoe Basin.

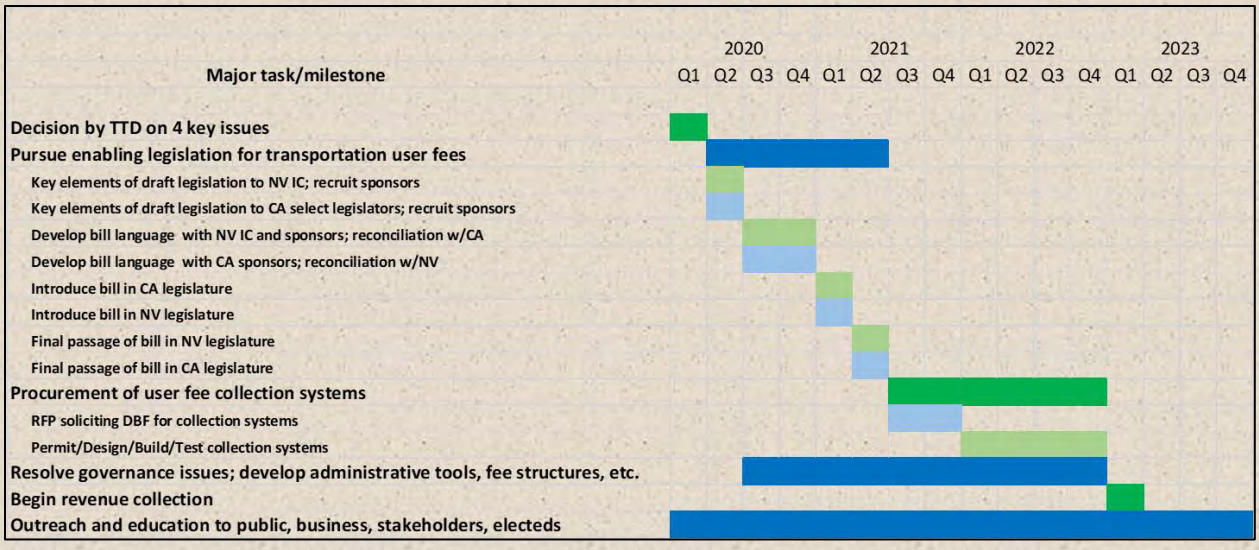
Next steps.

Article IX on the Bistate Compact, which is the only Article that can be amended by agreement between California and Nevada without federal approval, created the Tahoe Transportation District with the:

- *Mission* to implement projects and services "…in accordance with its adopted transportation plan" (RTP).
- *Geography* of operations coterminous with TRPA but may go outside of the Basin for connectivity.
- *Revenue authority* to pursue transportation taxes.

It is apparent that TTD has the right mission and geography, unfortunately the revenue authority has proven to be unworkable. Although multiple options to obtain the legislative authority to levy Basin-wide transportation user fees are available, amending Article IX of the Bistate Compact to enable TTD to institute such fees was recommended by the consultant team as the best and most expeditious path forward. As indicated in Figure ES-3, legislation to amend Article IX could be pursued in the upcoming session of the California and Nevada legislatures. Figure ES-3 also shows that there is much work that needs to be done in parallel to legislative activities to establish the tools to implement and administer a user fee program so that the earliest time at which actual fee collections could begin would be the first quarter of 2023. Since the Nevada legislature meets biannually, missing the current cycle would push the earliest date for fee collection out to 2025.

Figure ES-3: Timeline for implementing transportation user fees



Is now the moment?

Despite the economic impacts of the COVID-19 pandemic to the national economy, anecdotal reports indicate that visitation to Tahoe remains robust. When economic recovery begins, visitation to Tahoe could increase still further given the value for money and the close proximity of the Lake to major California and Nevada markets. Implementing the ONE TAHOE recommendations will be key to sustaining the quality of the "Tahoe Experience" for residents and visitors alike, our economic prosperity, and the Lake's fragile environment. Transportation investments made possible with the implementation of ONE TAHOE could also be a key element in the economic recovery of the Basin.

Implementing the ONE TAHOE recommendations will be key to sustaining the quality of the "Tahoe Experience" for residents and visitors alike, our economic prosperity, and the Lake's fragile environment.

Among the public and stakeholders there is a strong agreement:

- Tahoe has a serious transportation problem and it is getting worse.
- It is urgent to fix this problem.
- Both visitors and residents need to bear a reasonable share of the financial burden.

"If user fees are not the answer, then what? If now is not the time, then when?"
--- Carl Hasty, District Manager, Tahoe Transportation District

Section 1: Introduction

ONE TAHOE: A Transportation Funding Initiative

Section 1: Introduction

Lake Tahoe is a unique place. Environmentally, the Lake has waters of startling clarity surrounded by majestic snow-capped peaks and old growth evergreen forests, with a breathtaking variety of wildlife. Spiritually, it is a place of solitude, rejuvenation, and connection with the natural world. For those seeking action, Lake Tahoe offers world class ski resorts, hiking, fishing, boating, cycling, and camping. When one is inclined to less vigorous pursuits, the Basin affords, gaming, sightseeing, outstanding restaurants, and cultural attractions.

Lake Tahoe is the economic engine of the region drawing millions of visitors each year to enjoy the myriad of attractions. Based on comprehensive anonymized cell phone studies conducted in 2014, the Basin has more than 25 million annual visitors with distinctive summer and winter peak seasons. While Tahoe is renown worldwide, attracting visitors from around the country and the globe, the majority of Tahoe's visitors, about 83%, come from California and Nevada (TTD, 2017a).

The "Tahoe Experience" is enjoyed by the Basin's 55,000 residents, and also shared year-round by more than 25 million visitors!

According to economic studies by the Tahoe Prosperity Center, the Basin had over $ 5.1 billion in economic output in 2015. Visitor services were the overwhelmingly dominant sector of the economy accounting for $3.2 billion of this activity (63%) followed by $1.1 billion (22%) in the Environmental Innovation sector, and $0.6 billion (12%) in the Health and Wellness sector (TPC, 2015).

Tahoe competes with other tourist destinations many of which are making investments in sustaining and improving what they offer visitors. The current and future economic health of Lake Tahoe is directly connected to its ability to offer visitors a consistently high quality of experience that allows it to maintain and expand market share.

The Problem

One of the main threats to the quality of experience that the Tahoe Basin offers to both residents and visitors is the way that we travel. Ninety-eight percent of all trips in and out of the Basin were made by automobile according to surveys conducted in 2010. For trips internal to the Basin to and from recreation areas, the automobile continued its overwhelming dominance accounting for 86% of trips. In 2014, more than 50 million vehicle trips were made in to, out of, and within the Basin with visitors accounting for about 75% of these trips and residents about 25%. By 2035, this number is could grow to more than 60 million vehicle trips if Tahoe continues to maintain its attractiveness to the residents of its main markets in California and Nevada (TTD, 2017a).

Ninety-eight percent of all trips in and out of the Basin were made by automobile. This is one of the main threats to the quality of the "Tahoe experience".

The negative impacts of motor vehicles are amplified by several factors. First, most of the roadway circumnavigating the Lake is two lanes, which, while adequate for the typical day-to-day travel by the resident population of about 55,000, quickly becomes congested when the additional vehicles driven by visitors coming for recreational activities are added to the mix. Second, visitor traffic is not evenly

distributed on the exiting network by location, time of day, time of week nor time of year. This means that tremendous congestion can occur at popular destinations, during peak times of the day, and peak seasons. Finally, a lack of safe, adequate parking near many of the popular destinations results in vehicles being parked on roadway shoulders or any available spot drivers can find. The near proximity of many of these parked vehicles to the edge of the traveled way, plus these vehicles entering and exiting the traveled way plus passengers entering and leaving these vehicles causes a noticeable decline in traffic throughput and safety.

The harmful effects of the dependence on the automobile for travel in the Tahoe region are manifest. Severe traffic congestion, lack of parking, unsafe conditions for drivers and pedestrians, increased runoff from roadways carrying particulate matter and nutrients into the Lake damaging water quality and clarity, wasted fuel increasing emissions and greenhouse gases, lost time and lost money. All of these are negatively impacting the "Tahoe experience", the environment, and the economy, and it appears that things are getting worse. Annual polls of in-Basin voters conducted by the Tahoe Regional Planning Agency (TRPA) consistently show that residents think traffic is getting worse year-to-year. Statewide polls conducted in early 2019 revealed that 61% of registered voters in California and 65% of registered voters in Nevada feel the transportation and traffic situation in and around the Lake Tahoe Basin is impeding the economy and the growth of the visitor and tourism industry. Anecdotal evidence suggests that many long time, frequent visitors to Tahoe are now going elsewhere due to the traffic congestion they experience during their visits.

Increases in transit system services include a cross-lake high speed ferry, local water taxis, expansion of bicycle and pedestrian facilities, and better parking options.

The solutions to the transportation problems in the Tahoe Basin have been known for decades. Due to the extreme environmental sensitivity of the region, and the enormous cost of construction and land acquisition, significantly increasing road capacity is simply not a practical solution. Since the 1980's, the Basin's successive Regional Transportation Plans (RTPs) have articulated a vision calling for significant investments in alternatives to the automobile. The current 2017-2040 RTP calls for an over 800% increase in transit service including expanded routes, longer hours, and increased frequency of trips with

most of the service being "fare free". The transit system would also include a cross-lake high speed ferry and local water taxis. Significant investments would be made to more than double bicycle and pedestrian facilities, providing integrated first/last mile access to the transit system, including completion of a bicycle/pedestrian path completely circumnavigating the Lake. Mobility hubs would provide safe parking for autos with access to the alternative transportation services (TRPA, 2017). While the road way system would not have increases in capacity, bottlenecks would be improved, and the road ways maintained to a good or better condition saving travelers money, and reducing emissions and other pollutants. In 2014, it was estimated that transit carried about 1.4% of all person-trips within the Basin. These transportation investments, if fully funded and implemented, are projected to increase the transit share of all-person-trips to about 20% after the first 12 years of full investment (TTD, 2017b). Even in the face of increased visitation commensurate with projected population growth in the major Tahoe markets in California and Nevada, these investments are expected to actually decrease the number of internal Basin person-trips made by automobiles below 2014 levels by 2033.

Unfortunately, while the community has had a consistent vision for solving the Basin's transportation problems, the vision has remained substantially unrealized due to a significant shortfall in the funding needed to build, operate, maintain, and renew the complete transportation system the community desires.

ONE TAHOE Scope

In October 2018, Morse Associates Consulting (MAC) was retained by the Tahoe Transportation District (TTD) to assist the agency in taking further steps to solve the transportation funding shortfall in the Tahoe Region. This project was dubbed the "ONE TAHOE transportation funding initiative" for consistency and ease of communications.

The principal elements of ONE TAHOE included:

- Define/refine the magnitude of the transportation needs, revenues, and funding shortfalls.
- Develop a screening process and evaluation criteria for assessing new funding mechanisms.
- Engage the public, key stakeholders, the business community, political leadership, and agency staff in the Tahoe Region as well as at the state level to solicit funding mechanism ideas, and provide input and feedback on the work through the life of the project.
- Identify additional potential funding mechanisms based upon the consultant team expertise.
- Evaluate proposed funding mechanisms.
- Make recommendations on the most appropriate funding mechanisms to the TTD Board.
- Develop an action plan for pursuing the recommended funding mechanisms.

In addition to these principal work elements, the contract scope included work on several collateral issues including a comparison of the TTD transit system to peer systems, and evaluations of transportation networking companies (TNCs) and automated vehicles (AVs) and their potential role in Tahoe transportation.

As with any project of this type, the scope details evolved over time as new issues, concerns, and partners, are identified and as new events impact the social, political, environmental and economic context.

Section 2: Transportation Needs, Revenues and Shortfalls

ONE TAHOE: A Transportation Funding Initiative

Section 2: Transportation Needs, Revenues and Shortfalls

In defining the transportation funding shortfall, the consultant team relied on the 2017-2040 Lake Tahoe Regional Transportation Plan, supplemented by subsequent publicly available studies and plans. The scope of work did not include making revisions, updates, or additions to the projects and services in existing transportation planning documents. The consultant reviewed the order of magnitude of expenses and existing revenues included in these plans at a very high level for reasonableness. All adjustments and changes to expenses and costs were reviewed by the relevant agencies as well as a Project Delivery Team (PDT) composed of representatives from the state and local governments have transportation responsibilities in the Basin before being submitted to the TTD Board for approval. To maintain consistency and facilitate comparisons and analysis, all expenses and revenues were translated in constant 2017 dollars (2017$) which was the first year of the RTP. The results of this analysis are summarized below in tables 1-4 and discussed in greater detail in the technical memorandum at Appendix A. There may be some slight differences in totals between tables due to rounding.

Per federal requirements, the existing RTP has a "fiscally constrained" cost component containing projects and services for which funding is expected to be reasonably available from existing sources. In addition, the RTP identifies projects and services for which there is currently no identified funding. These projects and services are commonly referred to as the "fiscally unconstrained" portion of the RTP. While funding for these projects and services has not been identified, they are nonetheless considered vital to providing the complete transportation system envisioned by the community. Table 1 summarizes the constrained and unconstrained costs, and forecast revenues from the current RTP in constant 2017 dollars.

Table 1: 2017-2040 RTP Costs (Constrained Plus Unconstrained) and Revenues in 2017$

Category	2017-2040 RTP Costs (2017$)
Corridor Revitalization	$ 227,000,000
Transit	$ 1,452,000,000
Active Transportation	$ 284,000,000
Technology & Transport System Management (TSM)	$ 26,000,000
Total Maximum Daily Load (TMDL)	$ 127,000,000
Operations and Maintenance	$ 2,008,000,000
TOTAL COSTS	**$ 4,124,000,000**
TOTAL REVENUES	**$ 1,684,000,000**
SHORTFALL	**$ (2,440,000,000)**

Source: TMPO, KrauseConsult; Morse Associates Consulting

As previously noted, the consultant team reviewed the existing RTP for overall reasonableness as well as additional documents and data produced after the RTP was published. Based upon this, a number of adjustments to the baseline RTP document costs and revenues were recommended. Table 2 summarizes these recommendations. Table 3 summarizes the impacts of these adjustments once they were applied to the baseline RTP.

Table 2: 2017-2040 RTP Costs and Revenues with Recommended Adjustments in 2017$

Adjustments to RTP Costs and Revenues	2017-2040 Costs/Revenues (2017$)
Change in Costs	
1. Add Net Transit adjustments (Fares & Admin.)	$ 5,000,000
2. Reduce Roadway Operations/Maintenance costs	$ (1,229,000,000)
3. Add Telecom Network cost	$ 80,000,000
4. Add Transportation System Management (TSM) cost	$ 4,000,000
5. Add Total Maximum Daily Load (TMDL) cost	$ 29,000,000
6. Add Ferry Capital and Operating cost	$ 76,000,000
7. Add Transit Oriented Development (30% of $59.1 mil)	$ 18,000,000
Change in Revenues	
1. Reduce Discretionary/Competitive Revenue 25%	$ 106,000,000
Total Net Adjustments to RTP shortfall	**$ (911,000,000)**

Source: TMPO, KrauseConsult; Morse Associates Consulting

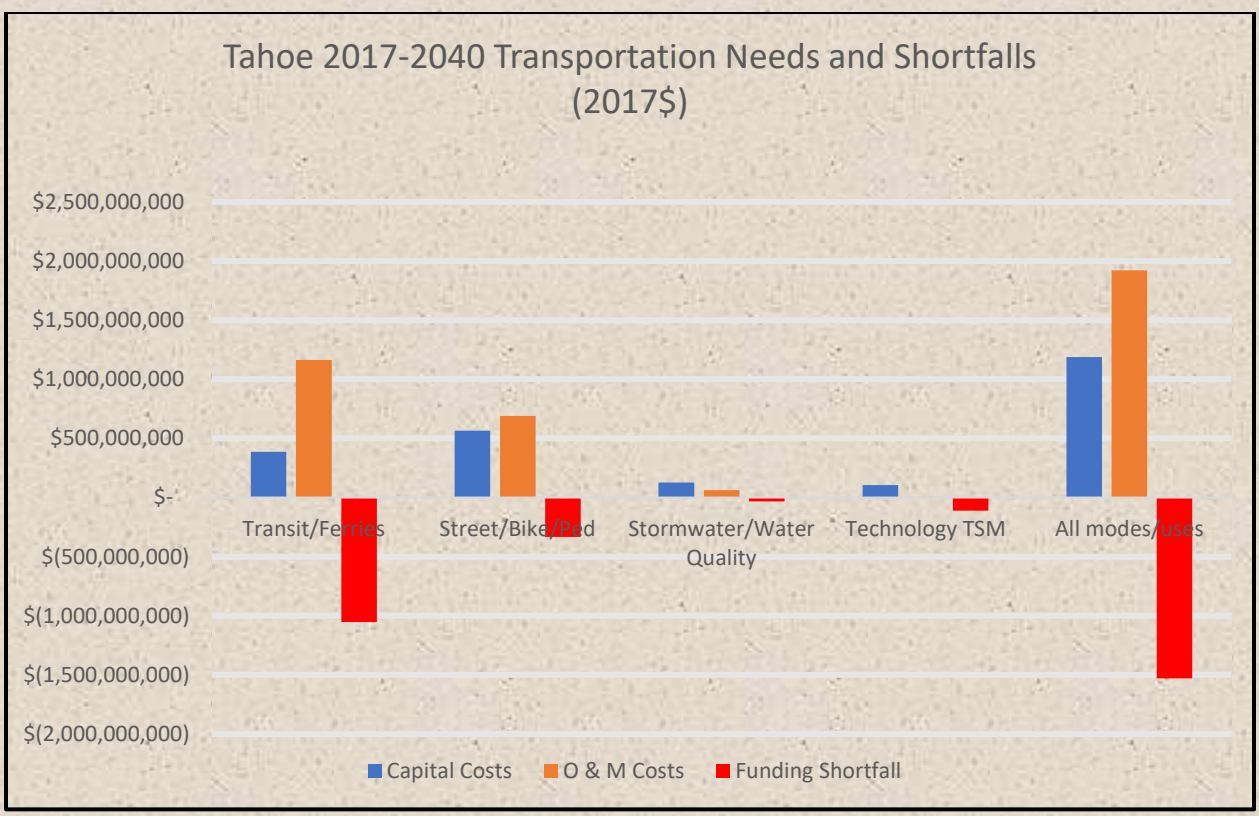
Table 3: 2017-2040 RTP Costs and Revenues by Mode/Use, with Adjustments (2017$)

Mode/Use Category	RTP Costs + Adjustments	RTP Revenues + Adjustments	Shortfall by Mode/Use
Transit Capital + Operations + Admin	$ 1,344,000,000	$ 350,000,000	- $ 994,000,000
Street/Bike/Ped Capital + Operations	$ 1,257,000,000	$ 924,000,000	- $ 333,000,000
Stormwater TMDL W Q Cap + Ops	$ 188,900,000	$ 156,000,000	- $ 32,900,000
Technology TSM Capital + Operations	$ 109,700,000	$ 0	- $ 109,700,000
Ferry and Water Taxi Capital Ops	$ 194,600,000	$ 148,000,000	- $ 46,600,000
Transit Oriented Development (30% of $59.1 million)*	$ 18,000,000	$ 0	- $ 18,000,000
Totals	**$ 3,112,200,000**	**$ 1,578,000,000**	**$ (1,534,200,000)**

*Note: Private sector funding will cover remaining $41 million needed to complete TOD project, assumed 200 units total.
Source: TMPO, KrauseConsult; Morse Associates Consulting.

Table 3 shows costs, revenues, and shortfalls by broad modal category. As a further step to provide additional data for evaluating the suitability of proposed funding mechanisms, these numbers were further broken down to look at costs for both capital and O&M (operations and maintenance) for each of the modal categories. Figure 1 displays this information graphically.

Figure 1: Needs and Shortfall of Capital and O&M Funding by Modal Categories



Source: TMPO, KrauseConsult; Morse Associates Consulting

Several points are worth noting regarding the costs, revenue, and shortfall numbers display in Tables 1-3 and Figure 1:

- Current projections indicate that approximately half ($1.58 billion) of the $3.11 billion in expenses will be covered by existing transportation revenues.
- The average annual shortfall for the 2017-2040 period is about $67 million.
- 62% of the forecast $3.11 billion in needs is for operations and maintenance and about 38% is capital.
- The combined transit/ferry/TOD shortfall of $1.05 billion is about 70% of the total $1.53 billion shortfall.
- While estimated available funding is $1.58 billion, use restrictions on this anticipated funding make it highly likely that not all of this money can be spent on the projects and services identified in the planning documents. It appears that within the constrained portion of the RTP, there is about a $335 million in revenue slated for transit investments that will not be available due to use restrictions.

An approximate jurisdictional allocation by modal category of the total $3.11 billion in needed transportation investment, the portion of that investment that is projected to be funded by existing revenues (constrained), and the unfunded investment (unconstrained) is displayed in Table 4. These numbers are approximate as many projects and services run across the boundaries of two or more jurisdictions. Table 5 displays the total needs, anticipated revenue, and revenue shortfalls in increments for the 23 years spanned by the current RTP (2017-2040). This table also shows the cumulative average

annual shortfall through each of the time increments with a total cumulative annual average annual shortfall of about $67 million. The variation of cumulative annual shortfalls between each of the time increments is a function of the "lumpiness" of investments during each increment.

Table 4: Existing RTP with Adjustments Allocated by Expense Location (2017$)

Constrained Expenses	**El Dorado excl CSLT**	**CSLT**	**Placer incl RT and TT**	**Washoe**	**Carson**	**Douglas**	**Total all years**
Roads/Bike/Peds	$147,126,000	$256,336,000	$133,270,000	$100,258,000	$14,778,000	$ 28,818,000	$ 680,586,000
Transit	$152,314,000	$171,542,000	$299,535,000	$ 18,436,000	$35,448,000	$102,956,000	$ 780,231,000
TMDL	$ 31,773,000	$ 31,773,000	$ 31,773,000	$ 5,641,000	$ 5,641,000	$ 5,641,000	$ 112,242,000
Technology	$ 942,000	$ 1,179,000	$ 942,000	$ 675,000	$ 675,000	$ 1,162,000	$ 5,575,000
Subtotal	$332,155,000	$460,830,000	$465,520,000	$125,010,000	$56,542,000	$138,577,000	$1,578,634,000
Unconstrained Expenses							
Roads/Bikes/Peds	$198,892,000	$167,618,000	$ 53,514,000	$ 81,590,000	$37,700,000	$ 87,562,000	$ 626,876,000
Transit	$173,017,000	$264,943,000	$137,236,000	$133,302,000	$ 2,300,000	$ 45,298,000	$ 756,096,000
TMDL	$ 8,985,000		$ 8,985,000	$ 8,895,000	$ 8,895,000	$ 8,985,000	$ 44,925,000
Technology	$ 14,615,000	$ 17,167,000	$ 19,115,000	$ 16,115,000	$16,115,000	$ 16,115,000	$ 99,242,000
Subtotal	$395,509,000	$449,728,000	$218,850,000	$239,992,000	$65,100,000	$157,960,000	$1,527,139,000
Total all	$727,664,000	$910,558,000	$684,370,000	$365,002,000	$121,642,000	$296,537,000	$3,105,773,000

Source: TMPO, KrauseConsult; Morse Associates Consulting

Table 5: Existing RTP with Adjustments (2017$)

Expenses	Years 1-5	Years 6-10	Years 11-15	Years 16-23	Total all years
Roads/Bikes/Peds	$ 562,850,000	$ 211,600,000	$ 186,944,000	$ 341,068,000	$ 1,302,462,000
Transit	$ 176,571,000	$ 323,657,000	$ 308,149,000	$ 732,950,000	$ 1,541,327,000
TMDL	$ 123,692,000	$ 12,475,000	$ 7,500,000	$ 13,500,000	$ 157,167,000
Technology	$ 23,314,000	$ 43,710,000	$ 35,835,000	$ 1,957,000	$ 104,816,000
Total Expenses	$ 886,427,000	$ 591,442,000	$ 538,428,000	$ 1,089,475,000	$ 3,105,772,000
Revenue	$ 572,100,000	$ 297,227,000	$ 271,644,000	$ 437,662,000	$ 1,578,633,000
Shortfall	$(314,327,000)	$ (294,215,000)	$(266,784,000)	$ (651,813,000)	$ (1,527,139,000)
FY cumulative Avg annual shortfall	$ (69,850,000)	$ (64,057,000)	$ (60,367,000)	$ (66,397,000)	$ (66,397,000)

Source: TMPO, KrauseConsult; Morse Associates Consulting

Bi-State Consultation Process

In 2018, Nevada and California embarked upon a Bi-state consultation process on transportation in the Tahoe Basin. The results of that process added about another $50 million in unfunded transportation needs to the $1.529 billion shortfall identified in Table 3 above bringing the total shortfall to about $1.579 billion and the total needs to about $3.154 billion. This addition increases the average annual shortfall to about $68.5 million. To prevent confusion with material presented to the public and agencies, the tables and figures in this report do not contain the additional Bi-state consultation costs.

Section 3: Screening Process and Evaluation Criteria

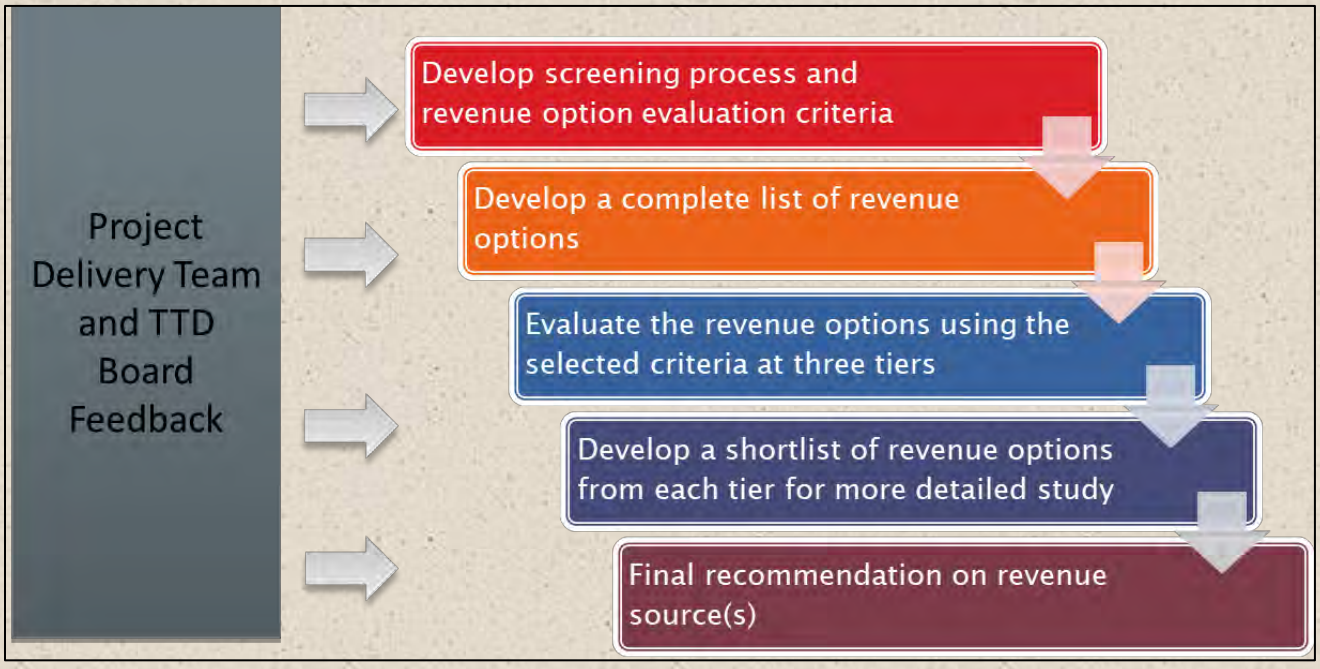
ONE TAHOE: A Transportation Funding Initiative

Section 3: Screening Process and Revenue Criteria

Working in conjunction with the PDT, a screening process, evaluation criteria, and criteria weighting factors were developed for assessing proposed funding mechanisms. These were subsequently presented and approved by the TTD Board in December 2018. Additional detail regarding the screening process, evaluation and screening process can be found at Appendix B.

As conceptually summarized in Figure 2, the screening process consisted of three tiers. At each tier, proposed funding mechanisms would be screened by subject matter experts utilizing a subset of the evaluation criteria and recommended to be retained for further evaluation with the next tier of the process or dropped from further consideration. The process was specifically constructed to cost effectively winnow a large number of initial ideas down to the most viable few. The funding mechanisms making it through all three tiers of the screening process would be the basis for final recommendations to the TTD Board on a package of the most appropriate funding mechanism(s) to address the regional transportation funding shortfall.

Figure 2: Project Delivery Team and TTD Board Feedback



The evaluation criteria summarized below were identified to screen the proposed funding mechanisms on their most critical properties. The weighting factors assigned to each of the evaluation criteria are shown in Table 6.

Constitutional Amendments/Statewide Vote – If a proposed funding mechanism would require an amendment to the CA or NV constitutions, or a statewide vote of the people in either state, this is considered a fatal flaw. The ability to accomplish either of these is considered beyond the reasonable capability of the TTD and its partners.

Revenue Adequacy – Strategies are given a "high" rating if they are capable of producing large amounts of revenue assuming reasonable fee/tax rates. In particular, fuel taxes have been the mainstay of transportation revenues for decades, receiving generally a "high" rating related to yield. Sources or strategies are given a "low" rating if the strategies are inherently short-term or low-yield. For example, a

revenue source like transportation impact fees used to recover the costs incurred for the expansion of the transportation network necessary to serve demands generated by new development would rank "low" in adequacy, given its narrow tax base, the limited new growth, and the fact that it is a onetime charge.

Revenue Predictability – A funding strategy with a "high" rating produces revenues that are predictably sustained over time, whereas a "low" rating refers to funding sources whose revenue generation potential over time is more uncertain. For example, motor fuel taxes may not be reliable over time because, if not indexed, the revenue degrades with both inflation and lower consumption as vehicles become more fuel efficient. If they are indexed, the inflation impact is removed, and revenues are only impacted by lower demand.

Economic Efficiency – This criterion refers to the extent that a strategy provides clear pricing signals that encourage users and providers to minimize unproductive travel and maximize economic growth. Therefore, strategies with "high" economic efficiency are those that help to make the marginal prices of goods and services reflect their true costs. Strategies with "low" economic efficiency are those that distort the market by collecting fees that are unrelated to the services they help fund. For example, hotel/lodging taxes would be considered "low" in economic efficiency, as these are not directly related to transportation and would not send direct signals of efficient use of the transportation network. A robust measure of economic efficiency includes the full network effects that are gained from completing a single segment of roadway.

Equity – This criterion refers to the extent that each strategy places inequitable burdens on different groups of people financially, or unfairly restricts access to basic transportation services. Excise and sales taxes and user fees are all regressive, since they require those with lower incomes to expend a disproportionately higher share of their incomes to pay the tax or fee. The only funding strategies that are likely to receive a "high" rating are those that levy different fees based on income levels, including income or payroll taxes, property taxes, and vehicle personal property. However, if fee or tax rates are relatively low, equity may not be a large concern.

Share of Tax Paid by Out-of-Basin versus In-Basin Residents and Businesses – The Lake Tahoe Region is an area of regional and statewide significance serving both interstate and intrastate travel. Tahoe experiences a high percentage of visitor use from adjacent urban centers in California and Nevada, in part, as a result of Lake Tahoe's central location in the Northern California Megapolitan, a basin of growing metropolitan areas that extends from San Francisco Bay area to Reno, Nevada. More than 14 million people live in the Northern California Megapolitan and many of them drive to Lake Tahoe to enjoy its world-class recreation opportunities. Overnight and day use visitors can exceed the Basin's capacity with the peak visitation in summer and winter, putting significant pressures on the transportation system, which consists primarily of six two-lane roadways leading into Tahoe and a bi-state two-lane highway that loops around the Lake, thus contributing to some of the region's largest water quality, air quality, and emergency management challenges. This criterion considers the potential to share the tax burden with Out-of-Basin residents/businesses, or if the tax burden is carried by Tahoe residents and businesses. Tolling would be rated "high" because out-of-Basin travelers would pay their share for using the roadways, whereas property taxes would be rated "low" because the tax is paid by residents and businesses where the additional property tax is imposed to pay for the project.

Supports Attaining Environmental Thresholds – The Tahoe Regional Planning Agency (TRPA) operates at a regional level under the authority of the Bi-State Compact (Public Law 96-551) between the states of California and Nevada. The Bi-State Compact states that the TRPA's Regional Plan shall promotes walking, biking, public transit use, and environmental innovation technologies can help preserve a healthy environment. Specifically, the plan shall (a) reduce private vehicles dependency by making more effective use of existing transportation modes and public transit to move people and goods within the Region and (b) to the extent possible, reduce the air pollution that is caused by motor vehicles. The Bi-State Compact requires TRPA establishes environmental threshold that measure the Region's performance in the areas of air quality, water quality, soil conservation, vegetation, noise, recreation, scenic resources, fisheries, and wildlife. This criterion measures the degree to which a given revenue mechanism can help achieve TRPA established thresholds. Some revenue mechanisms discourage behavior that causes harmful side effects such as congestion or air pollution. A congestion charge, for example, discourages travel at times and places where congestion may occur and as a result, may contribute to improve air quality. In contrast, other revenue mechanisms simply generate revenue, for example, an income tax.

Business Climate Friendliness – Business climate friendliness is the way the business community will perceive a given mechanism. As with the Political Feasibility/Public Acceptability criterion, very few (if any) taxes are popular with businesses since they reduce profits. Given this general opposition to taxes, this criterion focuses on the degree of difficulty that might be encountered in gaining acceptance among Tahoe business community to initially implement the revenue mechanism, compared to other revenue options. The business community in particular disfavors taxes that are burdensome or complicated to comply with or that substantially increase the costs of doing business (especially if they target one business more than its competitors). Of course, there will be variability among the views of specific industrial sectors. For example, the automotive industry is likely to oppose burdensome taxes on auto purchases, while the retail industry is likely to oppose sales taxes. This criterion will consider the business community as a whole.

Revenue Potential – This criterion measures the ability of the funding mechanisms to generate the needed revenue during the life of the Regional Transportation Plan. The new funding mechanism(s) will need to generate $1.53 billion so that the fully envisioned TRPA's Regional Plan addressing all needs in the region can be implemented over the 23-year forecast period. For revenue mechanisms making it to Tier 3 of the screening process, planning level estimates of the gross funding that could be generated. will be made. Revenue mechanisms will be categorized as low, medium or high if they have the potential to generate low, medium or high gross revenues, over the life of the RTP.

Administrative Effectiveness – This criterion refers to the cost and ease of administering each fee or tax system. This criterion would consider the relative cost and complexity of collection systems, administration, and enforcement. In addition, the degree to which users would be delayed in their activities by the collection system would also be a consideration. Mechanisms using proven, familiar technology and processes, and/or with the ability to be "piggy-backed" on existing processes, would tend to be rated as "high". The more burdensome the revenue collection process is to the user and the administering agency, the less attractive it becomes and the lower the rating for this criterion.

Political Feasibility/Public Acceptance – Because all of the funding sources require the public to pay more, it is likely that they will all have some public/political opposition. Funding sources that are somewhat removed from the transportation project or service they are supporting tend to be particularly unpopular, such as property and income taxes and general revenue. This criterion measures

the degree of difficulty that might be encountered in gaining public/political acceptance to initially implement the revenue mechanism, compared to other revenue options. Public/political acceptance of revenue mechanisms may improve over time as the improvements to the transportation system become manifest and individuals become more accustomed to the means of collection and how the mechanism impacts their finances, travel patterns, or other activities. Therefore, the acceptability of a new mechanism is measured comparatively, recognizing that some methods will initially be more acceptable than others. This measure will be largely informed through stakeholder input.

Fungibility- Funding shortfalls are identified for all of the major travel modes as well as for both capital and O&M within these modes. The shortfalls are also spread across all the political jurisdictions in the Tahoe Basin. In addition, the existing transportation revenue sources are subject to modal, activity, and jurisdictional restrictions. To effectively fund the integrated regional transportation system articulated in the RTP, the new funding mechanism(s) would ideally have the flexibility to be used (i.e. fungible) across all modes of travel, activities such as capital and O&M, and jurisdictions, regardless of the point of collection.

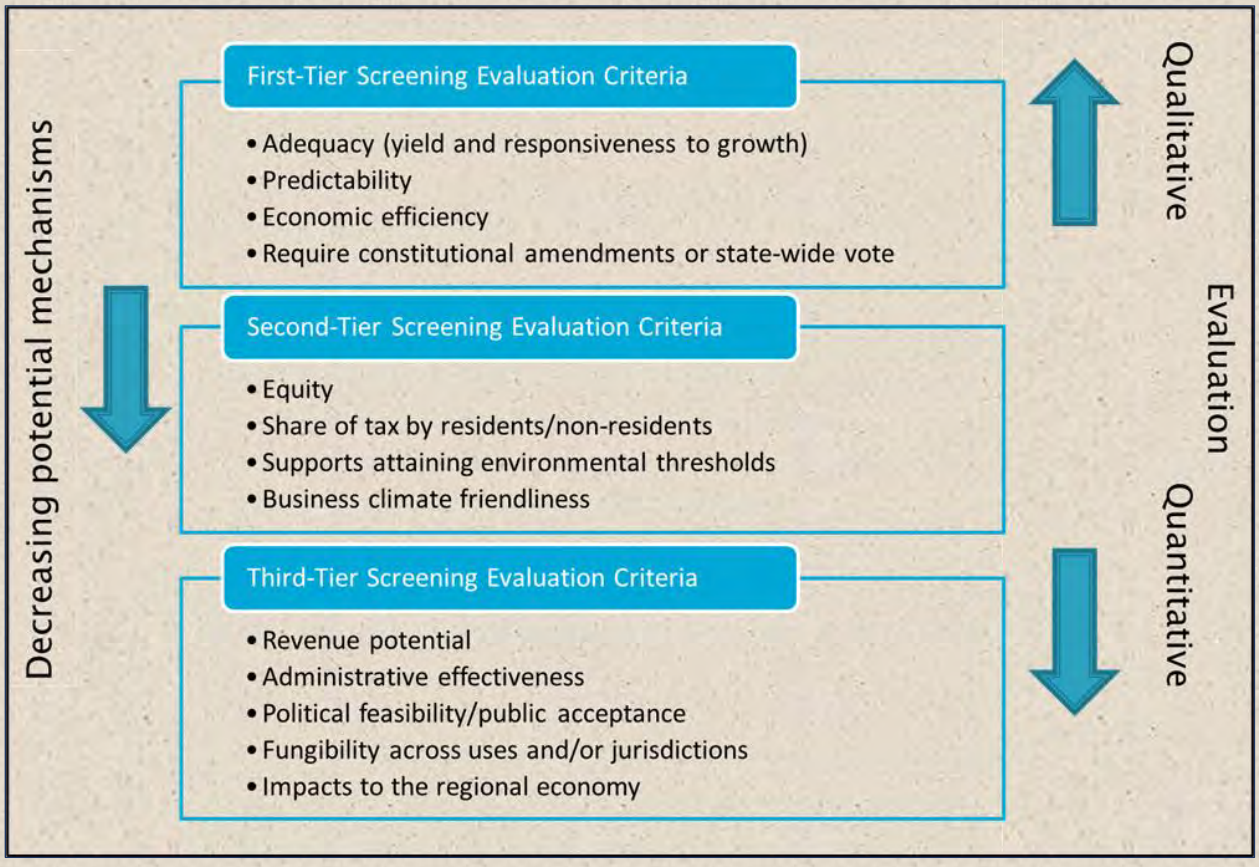
Impacts to the Regional Economy – Money collected through a revenue mechanism is no longer available to the tax/fee payer for other purposes such as investment, saving, or spending. This could be a deterrent to tax/fee payers to visit Lake Tahoe. These impacts could, however, be offset by increased spending on transportation projects and services which can stimulate the regional economy. Perhaps even more importantly, improvements to the transportation system may also improve the quality-of-experience for visitors and quality-of-life for residents, thus stimulating additional spending in the region.

Table 6: Evaluation Criteria Weighting Factors

- Adequacy: 2
- Predictability: 2
- Economic efficiency: 1
- Equity: 2
- Administrative effectiveness: 1
- Share paid by In-Basin versus Out-of-Basin residents and businesses: 2
- Political feasibility/public acceptance: 2
- Business climate friendliness: 2
- Supports attaining Tahoe Basin environmental thresholds: 3
- Revenue potential: 3
- Impacts to regional economy: 2
- Fungibility across uses and/or jurisdictions: 3
- Requires CA or NV constitutional amendment, or statewide vote of the people: Fatal flaw

Figure 3 portrays the three-tier screening process and shows the evaluation criteria that were used at each tier. As indicated in the figure, the evaluation of the proposed mechanism was largely qualitative at Tier 1 and became progressively more quantitative as mechanisms were eliminated through successive tiers.

Figure 3: Three-Tier Screening Process and Evaluation Criteria



Section 4: Identification of Potential Revenue Mechanisms and Screening

ONE TAHOE: A Transportation Funding Initiative

Section 4: Identification of Potential Revenue Mechanisms and Screening

Ideas for potential revenue mechanisms were solicited from multiple sources. Ideas from the public were gathered through seven public listening sessions held within the Tahoe Basin, the ONE TAHOE webpage, social media comments and posts, multiple presentations to citizens advisory boards, and one-on-one conversations. Ideas were also gathered from meetings and communications with various stakeholders' groups including those representing business, tourism, environmental and transportation interests. Local agency staff participated robustly through the Project Delivery Team process, as well as numerous one-on-one and small group meetings. State executive branch staff in California and Nevada provided ideas through multiple meetings and briefings. Numerous meetings were also conducted with elected officials at both the local and state level including the key committee members in both the California and Nevada legislatures. Finally, the consultant team provided ideas based upon their extensive work with other clients across the country facing similar funding problems. The direction to the MAC team was that funding mechanisms did not have to be authorized by current statute but that new enabling legislation could be sought. Given the jurisdictional complexity of the Basin (e.g., two states, portions of 5 counties, one incorporated city, 30+ special districts, etc.), limiting consideration to only mechanisms currently authorized would not have been productive. Further, the team was directed to assume that potential funding mechanisms would be applied uniformly across the Basin geography.

Twenty-eight ideas relating to funding mechanisms were contributed by the public, elected officials, stakeholders, and transportation professionals.

A total of twenty-eight potential funding mechanisms were identified which are listed in Table 7. The listing is verbatim and does not indicate any sense of viability or priority.

Table 7: Ideas for Funding Mechanisms

- Sales Tax
- Income Tax
- Property Tax
- Fuel Taxes
- Gross Receipts Tax
- Employee Tax
- New sustained federal funding
- New sustained State of Nevada funding
- New sustained State of California funding
- New sustained funding from each county general fund
- Cordon pricing
- VMT fee for travel in Basin
- Special district e.g., Transportation GID
- Joint Powers Authority (JPA)
- Zoned "Basin Transportation Fee"
- Transportation Fee collected with vehicle reg. fees
- Covert all parking in Basin to paid parking
- Developer impact fees
- Hourly transportation user fee for time spent within the Basin
- Congestion pricing
- Increased transit fares
- Basin entry fee
- Vacancy Tax
- Transit Occupancy Tax (TOT)
- Rental car fees
- Road utility
- Fee/tax on ski passes
- Tolling

Tier 1 Screening

The first step in the screening process was to take the 28 suggested ideas and combine those that were similar. With this step, ideas 8 and 9 (new state funding from NV and CA), 11 and 23 (cordon pricing and Basin entry fee), and 16 and 20 (zoned transportation fee and hourly transportation fee) were combined. Next was to identify those ideas that that were not actually funding mechanisms, but concepts that could be applied to governance or to fee structures. Item 15, (Joint Powers Authority) and 21 (congestion pricing) fell into this category. Finally, since several of the ideas could have a great number of possible scenarios, the consultant team defined a reasonable scenario that would be used for the screening process. These scenarios are described in the details of the Tier 1 screening at Appendix C.

As noted in Figure 3, the Tier 1 evaluation criteria were:

- Constitutional amendment/statewide vote
- Adequacy
- Predictability
- Economic efficiency

Each of the proposed revenue mechanisms was evaluated by a group of subject matter experts based upon these four criteria. The summary results of this screening are provided in Appendix C. The results are portrayed graphically in Table 7. The color of the circles indicated the rating for the criterion with red being "low", yellow being "medium" and green being "high". The size of the circles is proportionate to the criterion weighting factor given in parenthesis in the top line. An overall summary rating is provided, as well. Of the 28 suggested ideas, nine received a summary rating of medium or high, and were recommended for further screening at Tier 2. This analysis and recommendations were presented to the PDT on 24 Jun 2019 and to the TTD Board on 12 Jul 2019. The TTD Board accepted the recommendations on 24 Jul 2019.

While a number of the suggested funding mechanisms received a low summary rating, this does not mean that there is anything deficient with the mechanism, merely that it is not a good fit for a regional transportation funding source. For example, sales taxes dedicated to transportation have been quite effective in other locales. However, the amount of taxable sales in the Tahoe Basin is so small that extremely large increase in the tax rate would be needed to generate even a modest fraction of the annual additional regional transportation funding needed.

Of particular note in the Tier 1 screening was the elimination of major new infusions of federal or state funding as appropriate funding sources for filling the shortfall in the Basin's transportation funding. Given the enormous demand for a wide variety of public needs at the federal and state levels, the potential to obtain long-term sustained commitments of significant new transportation funding is extremely unlikely. In fact, maintaining even historic levels of funding from these sources will continue to be a struggle. In addition, federal and state budgetary processes preclude long-term, irrevocable commitments of this type.

Tier 1: There were 28 funding ideas reviewed and considered. Nine passed on to Tier 2.

Table 8: Summary of Tier 1 Screening of Funding Mechanism Ideas

Item	Description	Constitutional Prohibition	Adequacy (2)	Predictability (2)	Economic Efficiency (1)	Summary rating	Go/ No go
1	Sales tax	Pass					No-go*
2	Income tax	Fail	FATAL FLAW				No-go
3	Property tax	Pass					No-go
4	Local fuel taxes	Pass					No-go
5	Gross receipts tax	Pass					Go
6	Employee tax	Pass					Go
7	New federal funding	Pass					No-go
8/9	New NV/CA state funding	Pass					No-go
10	New city/county general funds	Pass					No-go*
11/23	Cordon pricing/basin entry fee	Pass					Go
12	Vehicle Miles Traveled (VMT) fee in basin	Pass					Go
13/27	Transportation Utility (Special District)	Pass					Go
14	Tolling	Pass					Go
15	Joint Powers Authority	Pass	Governance structure: may be considered for final recommended package if advantageous				No-go
16/20	Zoned transporation user fee	Pass					Go
17	Transportation fee collected with vehicle registration	Pass					No go
18	Paid parking	Pass					No go*
19	Developer impact fees	Pass					No go*
21	Congestion pricing	Pass	Applicable to structure of multiple mechanisms may be considered for final recommended package				No-go
22	Increased transit fares	Pass					No go
24	Vacancy tax	Pass					Go
25	Transient occupancy tax	Pass					Go
26	Rental car fees	Pass					No-go
28	Tax on ski lift tickets	Pass					No-go

Rating for the criterion is as follows: red = low; yellow = medium; green = high; Dot size is proportionate to weighting criterion.

Tier 2 Screening

As reported above, nine funding mechanisms were passed out of the Tier 1 screening for further evaluation at Tier 2 in the process. The criteria utilized in the Tier 2 process were:

- Equity
- Share of Tax Paid by Out-of-Basin versus In-Basin Residents and Businesses
- Supports attaining environmental thresholds
- Business climate friendliness

The evaluation is summarized in Appendix C and the results are shown graphically in Table 9.

Table 9: Summary of Tier 2 Screening of Funding Mechanism Ideas

Item	Description	Tier 1 summary rating	Equity (2)	Share paid by out-of-basin v. in-basin residents (2)	Supports attaining environmental thresholds (3)	Business climate friendliness (2)	Tier 2 summary rating	Go/ No go
5	Gross receipts tax							No go*
6	Employee payroll tax							No go*
11	Cordon pricing/basin entry fee							Go
12	Vehcile miles traveled (VMT) fee							Go
13	Transportation utility special district							No go*
14	Tolling							Go
16	Zoned transportation user fee							Go
24	Vacancy tax							Go
25	Increased transient occupancy tax							No-go

*Mechanism may be considered for inclusion in a final recommended package if it is useful to address resident versus non-resident equity or other factors.

Rating for the criterion is as follows: red = low; yellow = medium; green = high; Dot size is proportionate to weighting criterion.

While only two of the nine mechanism in the Tier 2 screening received a medium rating for equity and seven were rated low, steps could be taken to improve equity. For instance, for the cordon pricing/Basin entry fee, discounted rates could be offered to low-income persons or households. Creating special classes of users with differing fee rates will require additional administrative effort and cost. If the regular fee rates are relatively low, the discount for special groups may be so small as to make the cost of administering the program uneconomical.

Tier 2: There were nine funding mechanisms screened, and five were taken forward to Tier 3.

As noted above, an estimated 75% of all the vehicular trips are made by visitors. Further, 42% of all visitor trips are day trips (TTD, 2017a). Given these characteristics, potential revenue mechanisms that are not highly effective in collecting a reasonable share of revenues for non-residents such as an employee payroll tax on in-Basin workers were not highly ranked. Likewise, mechanisms that were not effective at collecting from day visitors such as the transient occupancy tax were not highly ranked.

The results of the Tier 2 screening were presented to the PDT on 1 Aug 2019 and to the TTD Board on 13 Sep 2019. The recommendation to move the five potential funding mechanisms that received a summary Tier 2 rating of medium or high to Tier 3 screening was accepted by the TTD Board. It was noted that mechanisms that did not move forward to Tier 3 might still be included in a final recommended package to achieve balance.

Tier 3 Screening

Five potential funding mechanisms moved out of Tier 2 screening and into Tier 3. With Tier 3 screening, five additional evaluation criteria were addressed:

- Revenue potential
- Administrative effectiveness
- Political feasibility/public acceptance
- Fungibility
- Impacts to the regional economy

Tier 3: Five ideas were evaluated; and two emerged that formed the final recommendations.

The evaluation is summarized in Appendix C and the results are shown graphically in Table 10.

Table 10: Summary of Tier 3 Screening of Funding Mechanism Ideas

Item	Description	Tier 1 summary rating	Tier 2 summary rating	Revenue potential (3)	Administrative effectiveness (1)	Politcal feasibility/public acceptance(2)	Fungibility across modes/uses/ jurisdictions(3)	Impacts to regional economy (2)	Tier 3 summary rating
11/23	Cordon pricing/basin entry fee								
12	Vehicle miles traveled (VMT) fee								
14	Tolling								
16	Zoned transportation user fee								
24	Vacancy tax								

Rating for the criterion is as follows: red = low; yellow = medium; green = high; Dot size is proportionate to weighting criterion.

The RTP vision is an integrated, multimodal transportation system serving the geography of the basin with connections to the transportation network outside the Basin. Unfortunately, this geography is situated in two states, contains portions of five counties with transportation facilities, has one incorporated city, and has over 35 special districts with responsibilities for one or more types of infrastructure. In addition, the federal government has large land holdings. “Fungibility”, which is the ability to use funds flexibly, is an extremely important issue for transportation funding in the Lake Tahoe Basin. Fungibility has several dimensions: geographic, modal, and activity. Historically, most revenues collected in a jurisdiction can only be spent within that jurisdiction. For example, proceeds from a county sales tax could only be spent within the county where they were collected. In addition to

geographic restrictions, many transportation funds are modally restricted, e.g., the funds can be used for roads, but not for transit, or for roads and not for trails, etc. In conjunction with these modal restrictions, existing transportation funding often has significant activity restrictions which may allow them to be used for capital expenditures but not for operations or maintenance. The extensive geographic, modal, and activity restrictions on the existing transportation funding in Tahoe already present extreme challenges to funding the integrated transportation system needed for the entire Basin. It is critical, therefore, that any new revenue sources are fungible across the entire geography of the Basin, across all modes, and across all activities so that, collectively, funding is available where it is needed for system investment.

The issue of fungibility negatively impacted tolling and the Vehicle Miles Traveled (VMT) fee at the Tier 3 screening. Article 9, Section 5 of the Nevada Constitution (NVCON, 2018) has been interpreted to mean that revenues from tolling and VMT fees could only be spent on public roads; there is no similar constitutional restriction in California. Assuming what was felt to be the most optimistic fungibility scenario, (i.e., tolls or VMT fees collected in Nevada could be spent on roads in both California and Nevada, and that revenue collected in California could be spent on all transportation modes anywhere in the Basin), the revenue models estimated that there would still be a $9 million annual shortfall in revenue for non-auto modes.

Tolling presented another fungibility issue due to the fact that US-50 traverses the Basin and tolling this segment of road would require federal approvals. If such approval could be obtained, federal regulations would require the revenues to be spent first on keeping the roadway up to standard. Excess revenues could then be spent on other roads and transit but, it appears, only on transit capital (USDOT FHWA, 2018a).

The vacancy tax also has significant fungibility problems as court rulings in California strongly suggest that using this revenue for transportation purposes would not be permitted since the connection or nexus between a tax on vacant property and the use of the tax proceeds on transportation is arguably weak.

In addition to the fungibility issues noted above, a stand-alone VMT system for the Basin would require that every motor vehicle traveling within the Basin to have on-vehicle equipment to report the miles driven. This would require a very significant expense to install the equipment and to reinstall equipment each time a new vehicle was added to the resident fleet, as well as visitor vehicles. Equipment installation, particularly for visitor vehicles, was considered to be unacceptably intrusive and problematic.

Section 5: Recommendations on Funding Mechanisms

ONE TAHOE: A Transportation Funding Initiative

Section 5: Recommendations on Funding Mechanisms

In arriving at the recommendation on what were considered the most appropriate funding mechanisms for the Tahoe circumstances, the consultant team considered the results of the evaluation and screening process as well as three other significant factors:

- **Fundamentally different circumstance for residents vs. non-residents.** While non-residents generate the significant majority of the trips within the Tahoe Basin, the duration of the typical non-resident time in the Basin is only a few days each year. Conversely, although Basin residents account for an estimated 25 % of all trips in the Basin, residents are typically in the Basin 365 days of the year and many may only exit and enter the Basin infrequently. While a single revenue mechanism could be applied to both residents and non-residents, this large disparity in the duration of time spent within the Basin between residents and non-residents visitors makes it advisable to use revenue mechanisms more finely tailored to the circumstances and travel behaviors of each group.

- **Allocation of existing transportation revenues.** As noted previously, the total estimated transportation funding needed over 23 years is $3.11 billion with slightly more than half that amount, $1.58 billion, anticipated to be available from existing sources, resulting in a shortfall of about $1.53 billion. An examination of the existing funding sources indicates that only about 5% of this revenue is attributable directly or indirectly from non-residents and about 95% from residents. This analysis is discussed in more detail in Appendix D. This disparity also suggests that it may be more appropriate and efficient to use somewhat different mechanisms to collect new transportation revenues from residents and non-resident users.

- **Fees versus taxes.** We live in a world of constant change and this is no less true for our transportation systems. Existing transportation revenues for the Tahoe Basin come from a multitude of federal, state, and local sources. Many of these revenues come from competitive grant programs that we hope will remain in-place next year and the year after that but which may not. The amounts of revenue coming from non-grant programs are largely dependent upon economic conditions and the year-by-year decisions of legislative bodies holding the purse strings on how revenues will be allocated. Tahoe is in a constant competition at the federal, state, and local level against hundreds of other regions for the transportation funding that is available. While it is possible that Tahoe will receive more money from these various sources in the future, the overall historic performance in real dollar per capita terms indicates that future levels will probably be flat or declining.

  On the expense side, change is also given for the transportation system. Market forces and technological innovation can make the cost of providing transportation projects and services go up or down. More stringent environmental regulations necessary to combat global warming and pollution have dramatically increased the costs of building and operating the transportation system particularly in the past decade, and this can be expected to increase still more significantly in the future. In addition to this, every community around the country is becoming more attuned to the tremendous impacts that transportation has on its citizens' quality-of-life. As a consequence, the expectations for the transportation system in terms of performance, choice, convenience, costs, and accessibility have expanded which in turn have increased costs.

Dramatic changes in both the revenue outlook for transportation and the cost of providing the projects and services desired by the community can occur in a fairly short period of time. Revenue mechanisms that can respond nimbly to these upward or downward pressures are generally viewed as being more desirable than those that cannot.

Daily user fees are recommended to be collected from non-resident groups visiting the Tahoe, while Basin households and businesses would pay monthly user fees.

Taxes typically are difficult to implement and to adjust in the face of a changing world. Local option taxes typically require voter approvals for imposition and for amendment. In some instances, this is made even more difficult if approvals require "super-majorities". While some taxes may have explicit or implicit provisions to adjust tax rates to offset the loss in purchasing power of the revenues due to inflation, others may not. Transportation taxes generally lack transparency as there is no direct connection between tax rates and the provision of a specific level of service to be provided.

In contrast to taxes, user fees offer many advantages. Generally speaking, with true user fees, there is a defined level of service or benefit typically defined in a plan that establish the projects and services that will be provided to users. The costs for providing these services are calculated and fee rates set appropriately to raise the revenue necessary to deliver the services. With true fees, there is direct and documented connection between the projects and services being provided and the amount of revenue being raised. Fee revenues can only be used for the purpose of providing the agreed upon services and no other. Fee rates are set at a level to cover the cost of these services, plus in the case of regulated private companies a reasonable return on investment, and no higher. If market forces, technological innovation, or other factors increase or decrease the cost of providing the services, fee rates will be adjusted upward or downward accordingly but again, no more than necessary to cover the cost of providing the services. With true fees (e.g. sewer, water, waste removal, electricity, etc.) imposition is typically an administrative process as are adjustments. Publicly regulated fees require full transparency so that users can understand in detail, what they are getting for their money.

Recommended funding mechanisms:

Based upon the unique needs and circumstances of the Lake Tahoe Basin, the consultant team made the following recommendations to the TTD Board:

1. The new mechanisms should be user fees paid by all users of any portion of the integrated multimodal transportation system because they provide:
   - Full transparency in how fee rates are set through a direct connection to a specific plan of project and services (i.e., RTP).
   - Equity and efficient collection of revenues given the differing travel patterns and characteristics of the multiple user groups.

One of the first recommendations to the Board was to implement Basin-wide transportation user fees rather than taxes.

- Flexibility and responsiveness to address changes (up or down) in revenue from other sources, new environmental regulations on climate change or other environmental issues that impact the transportation system, new technologies, inflation in the cost of providing transportation projects and services, and evolving community standards and desires.
- Fungibility across all jurisdictions, modes, and activities.

2. Fees for non-resident users of the transportation system and illustrative fee rates:
   - Non-resident, non-commuter groups (1 or more persons) entering the basin by vehicle: $4.10 per day or portion of a day.
   - Non-resident, commuter groups (1 or more persons) entering the basin by vehicle: $1.06 per day or portion of a day.
3. Fees for resident users of the transportation system and illustrative fee rates*:
   - Resident households: $7.00/month.
   - Resident businesses based on trip generation of land use: average $71/month.

The above illustrative fee rates are planning level estimates based upon one scenario. These were developed to give a sense of the order of magnitude of such fees. It is estimated that these fee rates would collect about 95% of the new revenue from non-resident users and about 5% from resident users while generating sufficient net revenue (gross revenue less system collection costs) to cover the annual $67 million gap in transportation funding. The rates may be subject to significant revisions based subsequent public/political processes and decision making, and system implementation.

The current operational concept is for non-resident fees to be collected from each non-resident group entering the Basin for the use of the Basins' multimodal transportation system. Billing information for the group would be captured using a mix of one or more appropriate technologies such license plate readers (LPR), transponders, etc. These technologies have proven themselves through wide-spread deployment in the US and around the world over the last several decades.

For resident fees, the current operational concept is to collect these fees from each household and business, where possible, by piggybacking on existing collection processes such as sewer, water, property tax or other utility billings. Where such existing mechanisms are not available, direct billing processes would be utilized. Businesses would be charged based upon the trip generation of the land use with fees being larger for businesses with high utilization rates and lower for those land uses with lesser demand on the transport system.

Several options for obtaining the legal/legislative authority to implement transportation user fees framework were examined by the consultant team. The recommendation of the consultant team was that Article 9 of the existing Bi-state compact be amended to provide such authority. This course offers several advantages since this article (CAGOV, 2019):

1. Establishes TTD as a special district with the purpose of implementing transportation services included in the Lake Tahoe RTP.
2. Defines the boundaries of the TTD area of operations but also provides express authority to go outside these boundaries to provide connectivity.
3. Authorizes taxes for obtaining transportation service by the district.

4. Can be amended by the states of Nevada and California without approval of the federal government.

Article 9 gives the TTD the right mission, the right geography, and a funding mechanism. Unfortunately, the funding authority granted to TTD has proved unworkable in any practical sense as is evidenced by repeated failures gain approval for sales taxes dedicated to transportation. Amending the Article 9 language to provide authority to levy transportation to impose user fees is seen as the most efficient way of addressing the transportation funding shortfall for Lake Tahoe.

Article 9 of the Bi-State compact can be amended by the states of Nevada and California without the approval of the federal government.

Section 6: Governance/Administration of the ONE TAHOE Revenue Collection Mechanism

ONE TAHOE: A Transportation Funding Initiative

Section 6: Governance/Administration of the ONE TAHOE Revenue Collection Mechanism

Keen interest was expressed by the TTD Board, agency personnel, the public, and other stakeholders on how, if implemented, the ONE TAHOE revenue mechanism would be governed and administered. The consultant team was asked to make recommendations on key governance issues. As an initial step, the consultant recommended that the TTD Board adopt a living set of governance principles. This framework would be expanded and amended as necessary to sustain consensus among the TTD Board members that ONE TAHOE was being conducted in a fashion acceptable to all members. As initial governance principles, the following were recommended:

1. Commitment to support and pursue enabling legislation to implement the ONE TAHOE transportation user fees.
2. Agreement that enabling legislation will be pursued in parallel with resolving additional governance and administrative issues.
3. Agreement that ONE TAHOE governance will be founded on a commitment to delivering the transportation programs, projects, and services in the RTP to the public in a cost effective, efficient manner.
4. A pledge that the needs of all member organizations will be treated in an equitable and respectful manner and that all parties will work diligently, cooperatively, and in good faith to resolve outstanding governance and administrative issues.
5. Subscription to the governance concepts for planning, programming, and budgeting recommended to the Board.
6. Assurance that ONE TAHOE revenue collection will not be implemented until there is unanimous "agreement" by Board on outstanding governance issues ("Agreement" does not necessarily mean final resolution but that satisfactory progress is being made towards resolution.)

At the request of the TTD, the consultant was asked to make specific recommendations on several key governance issues that were of immediate interest to the Board.

Planning, programming, and budgeting for the ONE TAHOE revenues.

The consultant recommended that the use of ONE TAHOE revenues be determined by a formal process of planning, programming, and budgeting. The Tahoe Metropolitan Planning Organization (TMPO) already has a robust transportation planning process in-place that fulfills the federal requirements for a Regional Transportation Plan (RTP) and is consistent with requirements of the State of California and Nevada. Federal regulations require RTPs to look out a minimum of 20 years into the future and articulate the community's transportation vision including specific goals and objects that the transportation system will help accomplish (USDOT FHWA, 2018b). The plan then identifies the specific projects, programs, and services necessary to make this vision a reality, as well as the costs of these investments and the revenue that is expected to be available. The plan then identifies which of the planned investments are funded (i.e., fiscally constrained) and those for which funding from existing or reasonably anticipated sources will not be available (i.e., fiscally unconstrained). RTPs have extensive public, stakeholder, and agency involvement and collaboration. Initial RTPs and the comprehensive updates required at least every four years typically take 12-24 months to complete. The recommendation is that the existing RTP process be the "plan" for ONE TAHOE revenues. Slight modifications to the current RTP process might be necessary to ensure that all transportation programs, projects, and service are captured in the plan, not just those have federal funding. This plan will

document the community's transportation needs (i.e., costs), the revenues expected from other sources, and the net amount that will need to be covered by ONE TAHOE revenues. This amount will be used as the foundation for subsequently establishing ONE TAHOE fee rates.

A process also exists for transportation programming in the Tahoe Basin. Federal mandates require the creation of a Regional Transportation Improvement Program (RTIP) which identifies a subset of the projects, programs, and services from the RTP that are programmed to be undertaken in the immediate four-year period (USDOT, 2018b). The TMPO is responsible for conducting the RTIP and the current process may require slight modification to ensure that all transportation programs, projects, and service are captured in the plan, not just those have federal funding.

The Tahoe Transportation District is already required to create and adopt annual budgets for the agency. As part of this overall budgeting process, it has been recommended that the TTD adopt a budget for the use of the ONE TAHOE revenues on projects, programs, and services in the budget year.

The consultant further recommended that the ONE TAHOE budgeting process be based upon the following:

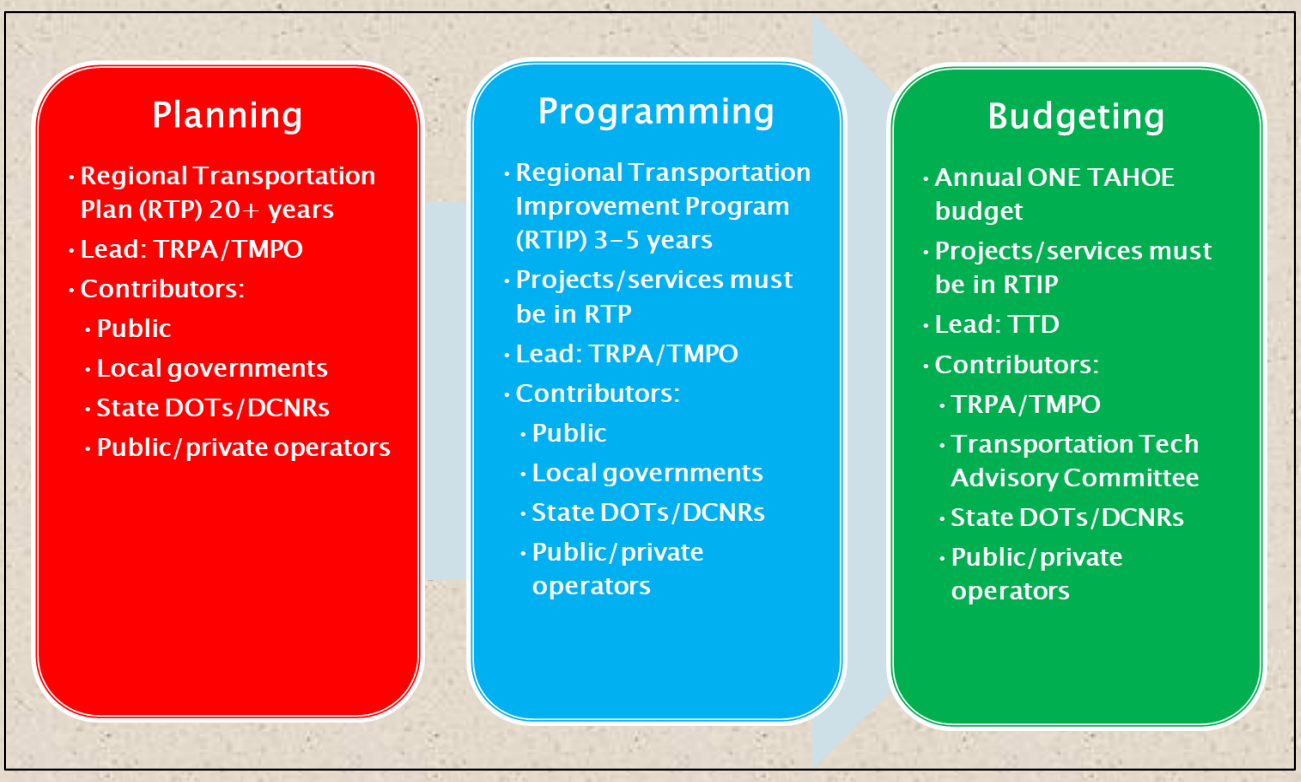
1. A draft of the annual budget for the use of the ONE TAHOE proceeds for projects and services in the upcoming fiscal year would be developed by a technical committee appointed by the TTD Board. Each Board member would designate a representative to the technical committee.
2. Projects and services may be budgeted in phases and/or logical activities.
3. The draft budget submitted by the technical committee shall prioritize funding based upon the following hierarchy:
    - Routine O&M
    - System preservation
    - System renewal
    - New projects and/or services

    The technical committee may deviate from this hierarchy in the draft budget if it determines that unusual or exigent circumstances make it prudent to do so. Such deviations and the grounds therefore shall be documented for the TTD Board. The TTD Board may accept, reject, or modify such deviations proposed by the technical committee and
4. The draft budget would be presented to the TTD Board which could approve, reject, or modify and then approve the budget. If the Board makes rejects all or part of the draft budget, or makes modifications to the draft budget, the Board shall document the reasons for rejections and modifications in the record of the Board's proceedings. Each TTD Board member would have one vote and adoption of the ONE TAHOE budget would require the unanimous consent of all voting members of the TTD Board. Amendments to an adopted budget must be unanimously approved by the TTD Board.
5. The budgeting and disbursement of ONE TAHOE revenues would be subject to the following:
    - No ONE TAHOE revenues may be budgeted for a transportation project or service unless the project or service is included in the Regional Transportation Plan and in the Regional Transportation Improvement Program.
    - No ONE TAHOE revenues may be spent for projects and/or services unless they are in a budget approved by the TTD Board.
    - Where a project or service is conjunctively funded (i.e., funding comes from the ONE TAHOE revenue and from federal, state, local, or private sources), appropriate

agreements must be in place between the TTD and the other funding party prior to the release of funding.

- Where ONE TAHOE funding is provided to another public or private sector entity for execution of a project or service, appropriate agreements between the TTD and that entity must be in place prior to the release of funding.

Figure 4: Summarization of the Planning / Programming / Budgeting Process



Additional improvements in the Resort Triangle outside of the Basin and Town of Truckee.

The compact allows the TTD to provide services connecting the basin to transportation terminals outside the Tahoe Basin (CAGOV, 2019). The 2017-2040 RTP contains a number of such programs, projects, and services for connecting the Basin to Reno, Carson City, Minden-Gardnerville, the Town of Truckee and points beyond with a total estimated cost exceeding $140 million (2017$). While the status quo arrangement would continue to provide benefits to geographies outside the basin, because of the close economic, social, and cultural ties with the Resort Triangle (RT) outside the Tahoe Basin and the Town of Truckee (TT), interest has been expressed in possibly collecting fees from revenue transportation users in these areas outside of the Basin. To accomplish this from a legal/legislative perspective, several options were identified:

1. Maintain the status quo by amending the bi-state compact to create enabling language for transportation user fees and continue the current practice of implementing “connectivity” projects outside the Basin.
2. Amend the bi-state compact to expand the TTD’s special district boundaries to include RT/TT along with necessary enabling language for transportation user fees.
3. Create a new special district encompassing basin and RT/TT empowered to enact transportation fees and taxes, implement transportation projects, run transit, etc.

4. Amend the bi-state compact to enable TTD to impose transportation user fees and concurrently seeking legislation in California to create a new special district RT and TT. Once this special district is created, enter into appropriate agreements for joint fee collection, revenue sharing, cooperative implementation, etc.
5. Amend the bi-state compact to enable TTD to impose transportation user fees and subsequently seek legislation in California to create a new special district RT and TT. Once this special district is created, enter into appropriate agreements for joint fee collection, revenue sharing, cooperative implementation, etc.

Given the desire of the TTD Board to move beyond the status quo and allow for the wider regional needs of the Resort Triangle outside the Basin and the Town of Truckee to be met, the consultant recommended that options 1 and 5 be pursued. The change required to the TTD's boundaries called for in option 2 would require the consent of the US Congress, the likelihood of which is considered extremely small and something that would require several additional years of effort. Option 3 has similar problems since it calls for a new bi-state compact to establish the new district and was thus not recommended. Option 4 would likely require Placer County and/or the Town of Truckee to seek legislation in California to create one or more special districts enabled to collect user fees. Since this could take these governmental entities significant time and effort to develop consensus on forming such a district, pursuing this concurrent with the ONE TAHOE effort would likely delay ONE TAHOE implementation for several years. Pursuing options 1 and 5 appears to combine the best of all worlds. With option 1, implementing ONE TAHOE revenue mechanisms for the current TTD geography would allow robust funding for connectivity projects as is being done today along the shortest timeline. If one or more special districts covering the Resort Triangle outside the Basin and the Town of Truckee are eventually created, the TTD could then collaborate with these new districts on joint revenue collection, revenue sharing, and expanded implementation of programs, projects, and services that are mutually beneficial.

Equity Concerns.

- Socio-economic equity. As noted in section 3, socio-economic equity was an evaluation criterion used in Tier 2 of the screening and evaluation process. Ensuring that any new funding mechanisms do not have unacceptable financial impacts or unfairly restrict access to low-income persons is important. Technologically, it would be possible to adjust user fee rates for persons with lower income although this process would add to the cost of fee administration. Further analysis will be necessary to determine whether the additional cost would be economically reasonable given what are projected to be relatively modest fee rates as well as the legal implications of reduced fees based upon income. Such analysis should also take into account offsetting benefits such as fare-free transit, improved interregional transportation services, etc.
- Interjurisdictional equity. Concerns were also voiced regarding the "equity" of the investments of the ONE TAHOE revenues, that is, would the governmental entities within the Basin see a reasonable level of investment in transportation within their geographies. This concern was sometimes couched in terms of desiring that revenues were "returned to source". This discussion should be considered in the context of realizing an integrated multimodal transportation system serving the entire Basin as articulated in the Regional Transportation Plan. Since revenues collected from resident households and businesses would only comprise about 5% of the total ONE TAHOE revenues, demonstrating that all of these revenues were

spent at the source will probably not be an issue. However, the physical points at which data on entries for non-resident groups into the Basin would be captured are situated along the six major entry corridors. Trying to implement a "return to source" approach based upon where the billing information for non-resident groups is captured, would clearly be problematic. For instance, the City of South Lake Tahoe, the largest population center in the Basin, will probably not have a data collection point within its boundaries. Similarly, using a rigid formulaic approach to where revenue would be invested would almost certainly lead to problems in making sure that investments are made where needed to provide the transportation system necessary to serve the entire Basin and may also engender legal issues undermining the legitimacy of the user fees. If the Regional Transportation Plan is based upon the needs of the system regardless of jurisdiction, the investments over the long-term will mirror where investments need to be made to accommodate both resident trips and the transportation demands of non-resident visitation. On method of insuring equity is to look how transportation investments align with transportation demand. While transportation investments can be "lumpy" over the short-term (5 years or less), over the longer-term 10 years+, they should even out to reflect the patterns of travel. The consultant has recommended developing a system of one or more metrics to reflect the alignment of investments with demand. These metrics could include such things as looking at the location of VMT, passenger trips, visitation at trailheads or other destinations, transit ridership, total visitors, etc. If the metrics indicate that long-term investments are substantially not lining up with system use, it would be legitimate for the community to take corrective action in the planning, programming, and budgeting process to correct this imbalance. Based upon the currently available data, it appears that approximately 37% of the $3.154 in total transportation investment benefits the "north shore" of the lake and 63% the "south shore". These proportions of investment seem to line up fairly well with the 38% percent of total annual visitors to the "north shore" and 62% of total visitors to the "south shore" derived for the Stantec Corridor Connection Plan (TTD, 2017a). While this is not to suggest that only this metric should be used, it does perhaps provide some indication that the currently identified investments are, in fact, aligned with needs.

Another dimension of the interjurisdiction equity concern is that a majority of the Board members making decisions on what is included in the annual ONE TAHOE budgets might consistently vote for budgets that fund projects in their jurisdictions while neglecting to include investment in the jurisdictions of the minority. The consultant recommendation that annual draft budgets be prepared by technical experts focused on using data to create an effective, efficient system can help ameliorate this concern. The further recommendation that TTD adopt a process that requires unanimous approval of the annual budgets for the expenditure of ONE TAHOE funds on transportation programs, projects, and services will also help address this concern. Requiring unanimous approval means that, unless everyone reaches consensus, nothing gets done. This creates a strong incentive for all parties to act reasonably and not in narrow self-interest, funding those projects and services that are best able to optimize the transportation system delivered to the entire community. Organizations that follow similar models have been very effective in achieving high levels of cooperation and harmony. Budgeting in an environment where, over the long-term, there is full funding for the community's transportation needs even further supports collaboration and cooperation in achieving consensus on the year-by-year funding decisions.

- Resident versus non-resident equity. Equity between the burden borne by residents versus non-residents is also a legitimate concern. Initial fee structures and fee rates for the ONE TAHOE user fees need to consider overall transportation funding and establish fee structures and rates that create a reasonable overall equity in what these groups are paying. This type of equity will not be static but will change over time necessitating periodic adjustments to ensure that everyone continues to pay a reasonable share. The consultant has recommended the development and adoption of processes and procedures that monitor this dimension of equity and periodically make recommendations to fee structure and rates to correct imbalances.

Development of administrative policies, procedures, processes and tools.

Time is of the essence in improving the Basin's transportation system as delay in achieving this only hastens the continued degradation of the environment, and the Tahoe Experience for residents and visitors alike, resulting in negative impacts to the economy. The detailed policies, procedure, processes, and tools that will be needed to create a fully functioning user fee system will take a significant amount of time and resources to develop. This will require additional data collection, analysis, legal review, negotiation, and procurement. In order to minimize the delay in commencing the collection of user fees and the transportation investments that will be made with these revenues, the consultant made a recommendation that the resolution of the governance and administrative issues commence in parallel with pursuit of the enabling legislation authorizing the implementation of the fees. The following specific administrative areas are among those that will need to be addressed:

- Planning, programming, and budgeting
- Priority setting
- Establishing and documenting revenue targets
- Fee structure
- Establishing fee rates
- Credits/offsets for resident fees
- Monitoring and adjustments of fee rates
    - Annual inflationary
    - Annual target revenue variance
    - Periodic with RTP updates
- Fee collection
    - Billing
    - Payments
    - Enforcement and collection of delinquent payments
    - Appeals
- Cost/revenue sharing with external entities
- Pass-through funding and conjunctively funded projects
- Funding of administrative costs
- Regional minimal standards for eligible projects, investment, transit, and road LOS

- Tracking, monitoring, and reporting of:
    - Intergovernmental equity
    - Resident versus non-resident equity
    - Needs versus investments
- Collection systems and equipment design, procurement, construction/installation, operations, and maintenance

Section 7: Outreach and Communication

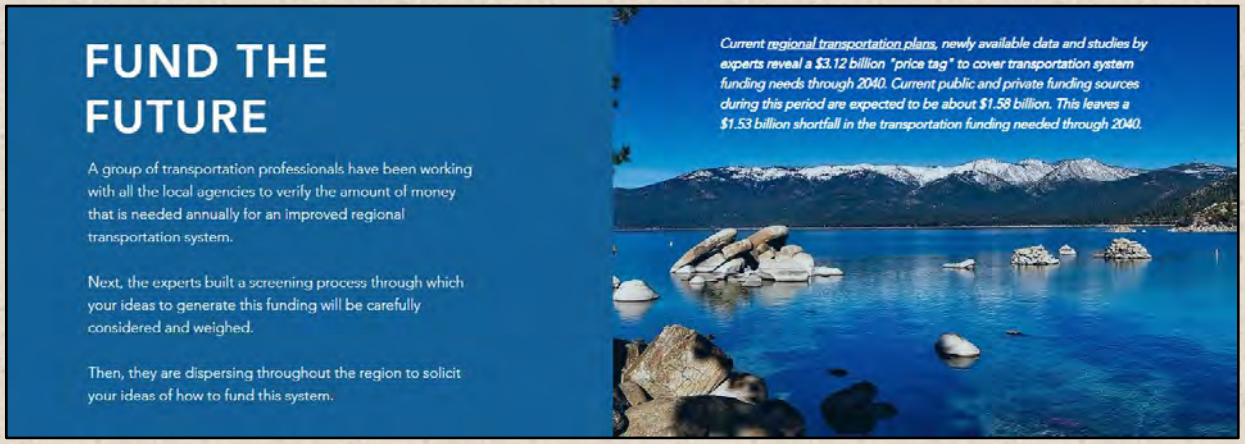
ONE TAHOE: A Transportation Funding Initiative

Section 7: Outreach and Communication

During the course of developing the ONE TAHOE recommendations, numerous outreach and communication efforts were undertaken. The purpose of this work was to educate the public about the transportation funding problem for Lake Tahoe, solicit ideas for solving the funding shortfall, provide two-way communication as proposed funding mechanisms were evaluated, and to gather feedback as final recommendations on the most appropriate mechanisms were developed. These communication efforts were not undertaken to advocate for a specific set of funding measures nor to persuade a specific course of action by the public or elected officials.

With the general public, these efforts included creation of a ONE TAHOE webpage that described the nature of the transportation challenges in the Tahoe Basin and the environmental and economic impacts using print materials, graphics, and an engaging ONE TAHOE video. In addition, the web page provided summary information and links to the solutions articulated in the Tahoe Regional Transportation Plan. The public was invited to ask questions, provide feedback, and suggest ideas for solving the funding shortfall. Over the course of the project, the webpage was expanded to include links to reports, analysis, presentations, and other information, as it was developed. The webpage also provided the public with information on the evaluation of suggested mechanisms through all three tiers of the process, as well as the recommendations made to the TTD by the consultant team.

Screen shot from ONE TAHOE Webpage; full webpage can be viewed at www.OneTahoe.org



Public outreach was also facilitated by seven listening sessions conducted by the consultant team, TTD, and TRPA staff at various locations throughout the project. A first wave of listening sessions was conducted with meetings in Incline Village, Stateline, and Tahoe City. The first wave introduced the public to the ONE TAHOE transportation funding initiative project and solicited their continued participation through the life of the project. A second wave of listening sessions was held in September 2019, with meetings conducted in Tahoe City and Stateline. This second wave recapped the information from the first wave of meetings, introduced the public to the 28 funding mechanisms that had been proposed, and presented the results of the Tier 1 and Tier 2 screening.

Three rounds of public listening sessions were conducted throughout the Lake Tahoe Basin to generate and gather valuable public feedback.

A final wave of listening sessions was conducted in November and December 2019 with meetings held in Tahoe City and Stateline. These meetings restated the information from the first and second wave listening sessions, and then presented the results of the Tier 3 screening process. Images of the display materials used during the listening sessions are included in Appendix E.

To supplement public outreach to the general public, the consultant team used social media, e-blasts, press releases, and media interviews. This included:

- Social Media: Listening sessions were promoted on TTD's Facebook and Twitter pages and a following of hundreds was generated; Facebook events were made; information was distributed to agency partners for use on social media sites, e-newsletters (i.e., TRPA e-newsletter), etc., which prompted re-tweets of listening session posts by Caltrans and a tweet from Moonshine Ink promoting the November/December listening sessions. People and agencies shared Facebook posts.
- E-Blasts: Custom e-mail announcements specific to each and every public listening session were distributed to lists of residents, property owners and businesses in and around Lake Tahoe. Reminder e-mails also were sent for each session. These blasts were based on updated contact lists for the Lodging Association and various Tahoe Basin projects. Number of recipients for each e-blast ranged from over 400 to over 1,000.
- Media Outreach and Coverage: News releases were written and distributed to all area and regional media to promote each public listening session. Specific reporters and writers were invited to each event and in-person interviews were conducted. Additionally, posts were made to community online calendars as indicated below. Several press hits were generated from the extensive media outreach, including, but not limited to articles appearing in the Sierra Sun, Tahoe Daily Tribune, South Lake Tahoe Now, Newsbreak, and KKOH radio station. Collectively, these articles reached tens of thousands of readers and viewers throughout the Tahoe Basin and surrounding areas. Additionally, posts were made to select online calendars including Moonshine Ink, North Tahoe Business, and Visit Tahoe City (visittahoecity.org).

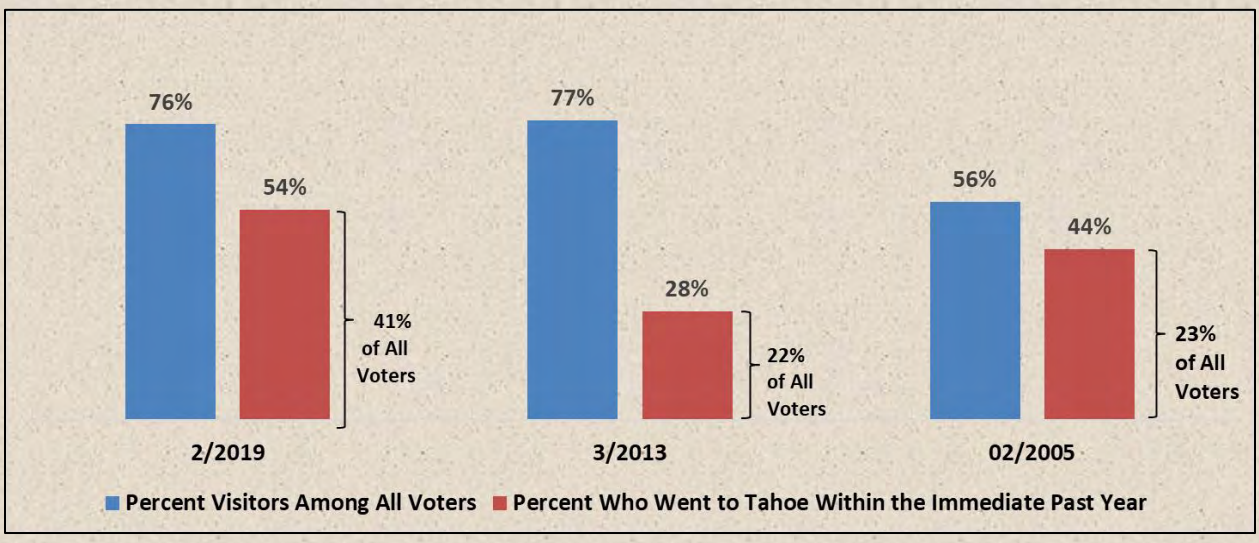
Numerous meetings were also held with citizen advisory groups, private sector stakeholders, and business groups. Initial meetings were to inform these interested parties about the transportation problems and funding issues in the Basin, to inform them of the ONE TAHOE initiative, and to solicit ideas on funding mechanism. In addition to these topics, later meetings provide information of the ideas received for proposed funding mechanisms, the evaluation process and results, and draft recommendations being made to the TTD Board. Representative samples of the briefing materials used with these groups is displayed in Appendix F.

In parallel to the public listening sessions, the consultant team conducted a series of internal, proprietary polls in California and Nevada on Tahoe transportation issues. All of these polls were "cold", that is, they were all conducted without any sort of prior educational campaign regarding Tahoe transportation issues. Where appropriate, data from relevant polls conducted by others was also reviewed.

The initial set of statewide polls with registered voters in California and Nevada were conducted in January/February 2019. These polls primarily focused on the familiarity of voters with Tahoe, and attitude and awareness of voters regarding transportation issues in the Tahoe region. These polls asked questions substantively identical to polls conducted by others in prior years allowing a longitudinal perspective on a number of issues

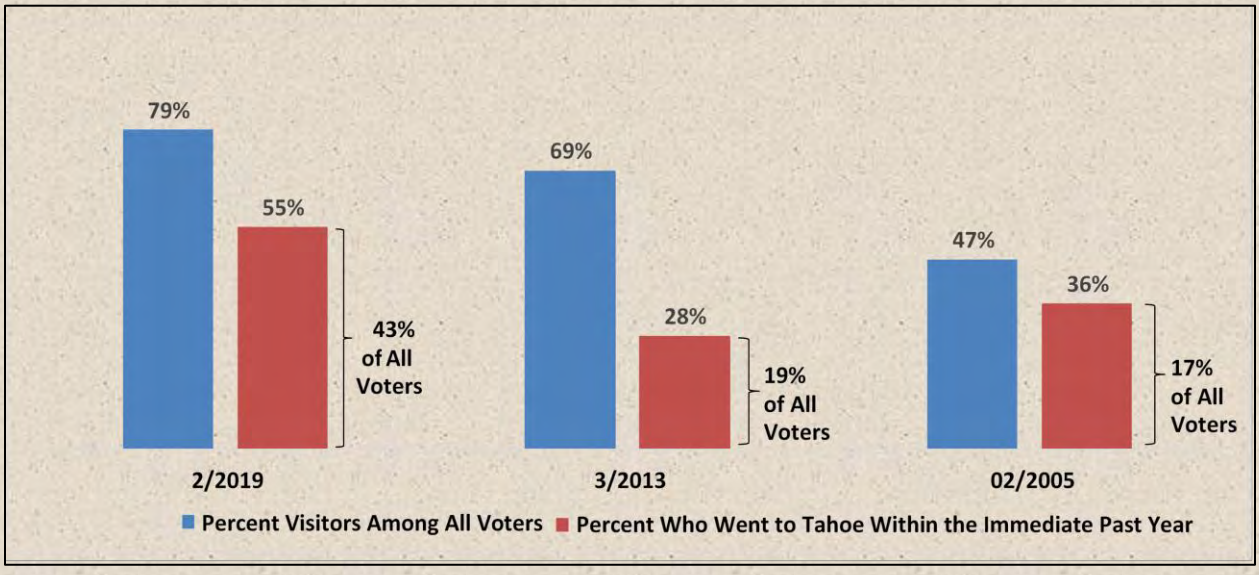
Highlights of this initial set of California and Nevada Statewide polls by ESI and The Cromer Group are shown in figures 5 through 10 below. Additional details are included in Appendix G. Figure 11 is based on a series of polls conducted by the Cromer Group by TRPA.

Figure 5: In 2019, a majority of Nevada voters have been to Lake Tahoe and more than half of these voters have visited in the last year.



Source: The Cromer Group; ESI

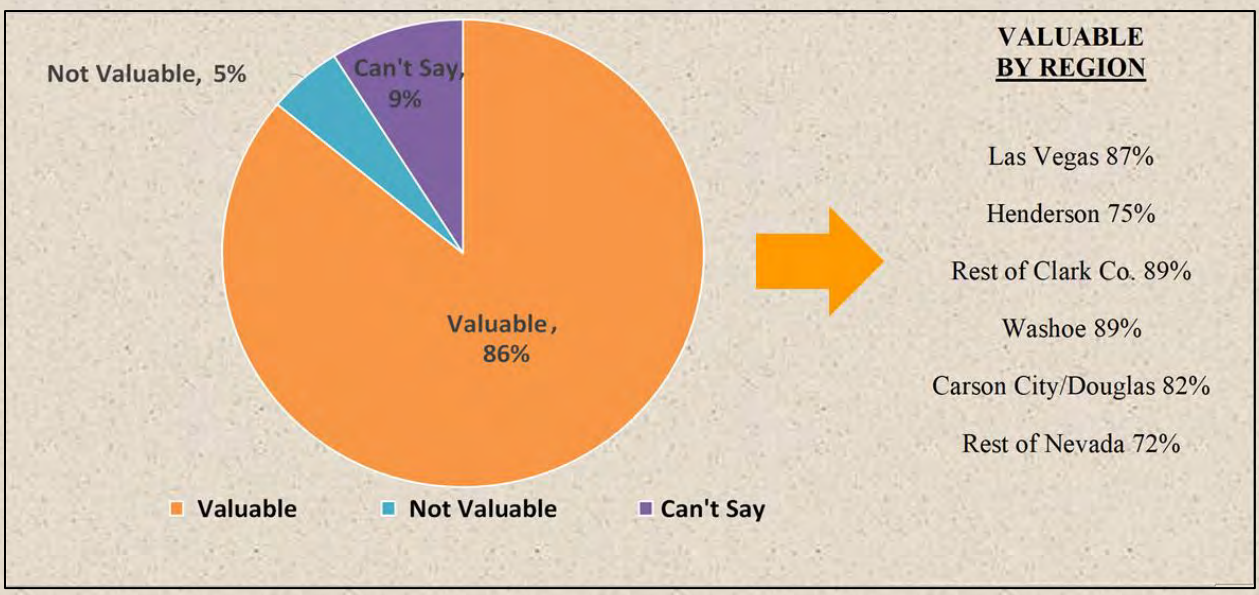
Figure 6: In 2019, a majority of California voters have been to Lake Tahoe and more than half of these voters have visited in the last year.



Source: The Cromer Group; ESI

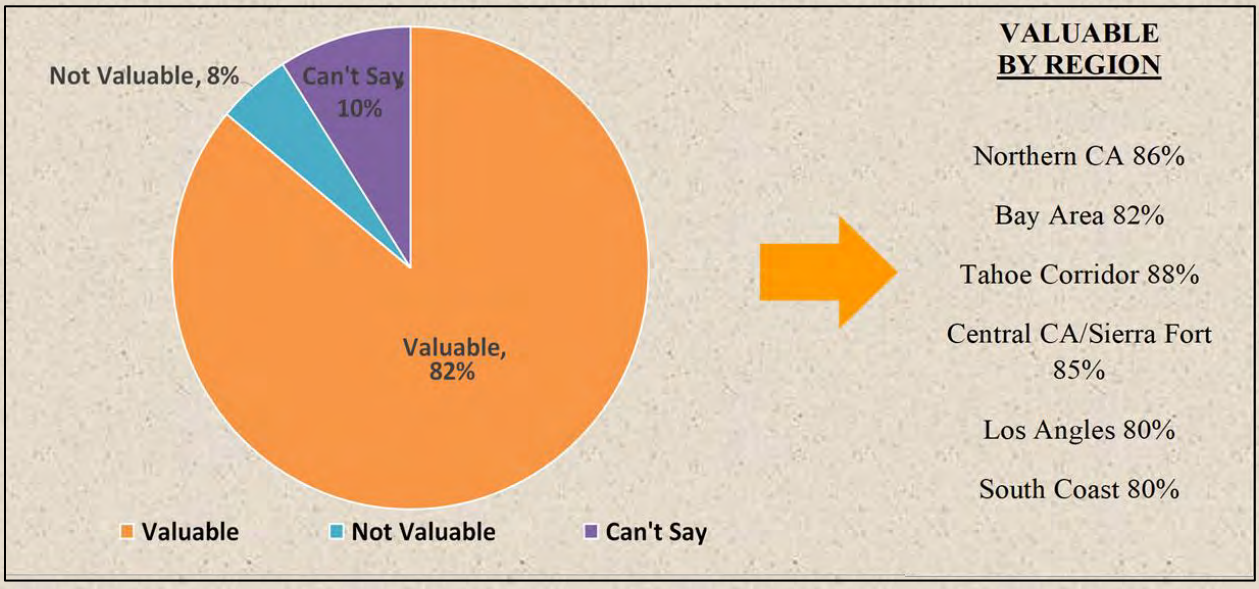
In 2019, a majority of Nevada and California voters said they have been to Tahoe, and most of them have visited in the past year.

Figure 7: Do Nevada voters understand the importance of Lake Tahoe to the economy of Northern NV?



Source: The Cromer Group; ESI

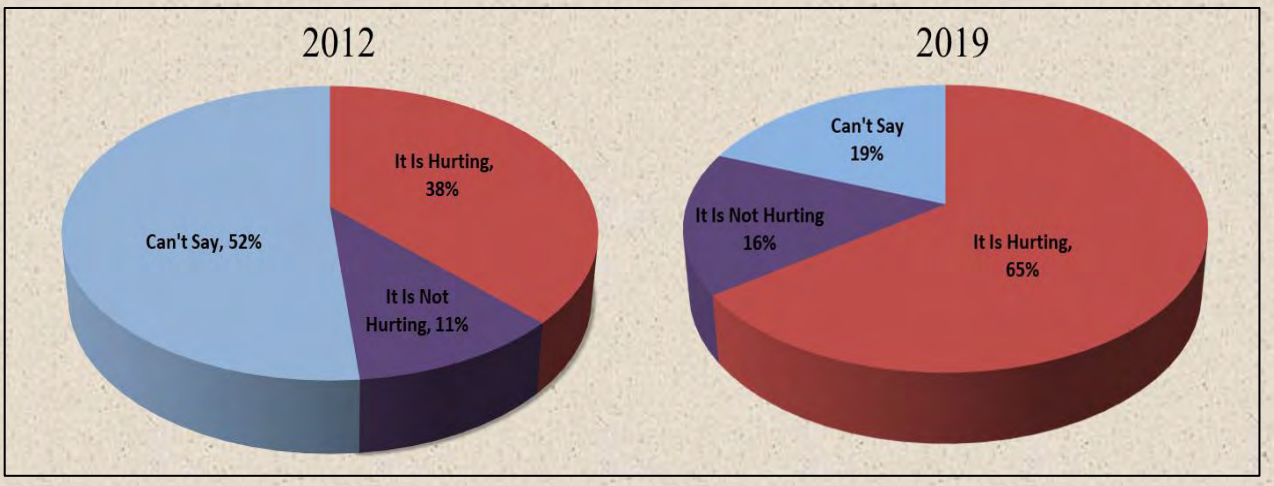
Figure 8: Do California's voters understand the importance of Lake Tahoe to the economy of the Lake region?



Source: The Cromer Group; ESI

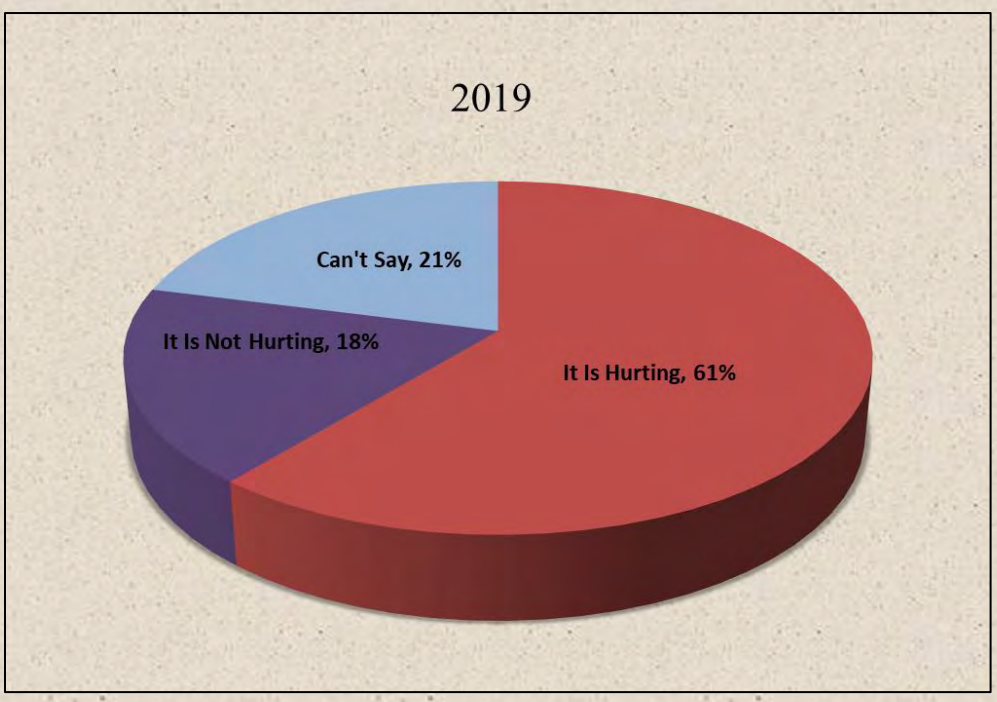
Nevada and California voters overwhelmingly understand the importance of Lake Tahoe to the regional economy.

Figure 9: Do Nevada voters feel that Tahoe's traffic is hurting the economy of the Lake Tahoe region? Absolutely, and there is a dramatic increase of 71 percent in the past six years.



Source: The Cromer Group; ESI

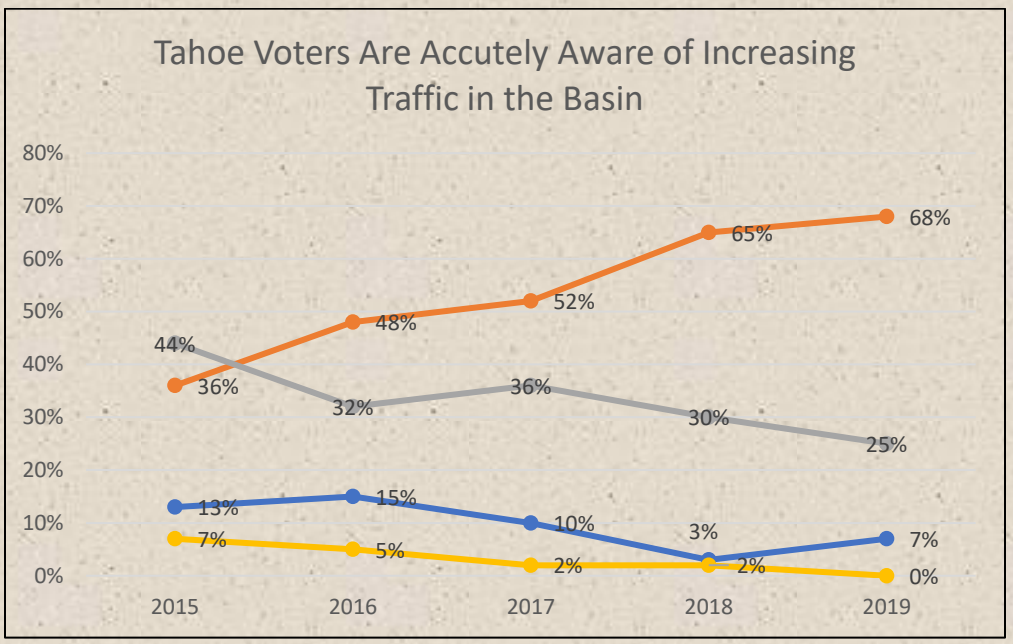
Figure 10: Do California voters feel that Tahoe's traffic is hurting the economy of the Lake region? Yes, definitely.



Source: The Cromer Group; ESI

Most Nevada and California voters feel that Tahoe traffic is hurting the economy of the Lake region.

Figure 11: Tahoe Voters are Aware of Increasing Traffic.



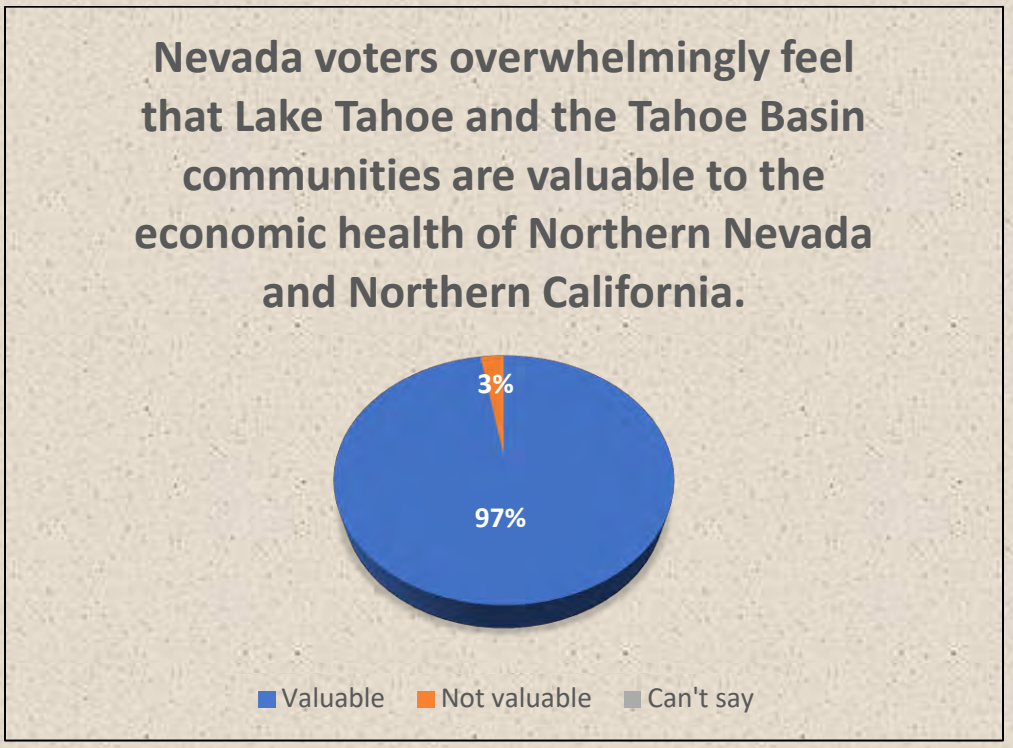
Source: The Cromer Group; TRPA; ESI

Key insights from this first set of polls:

- The majority of Nevada and California voters have been to Tahoe.
- Voters in both states overwhelmingly understand the importance of Lake Tahoe to the regional economy.
- A significant majority of voters in both states feel that Tahoe's traffic is hurting the economy of the region.
- An increasing number of Lake Tahoe residents feel that traffic in the Basin is getting worse.

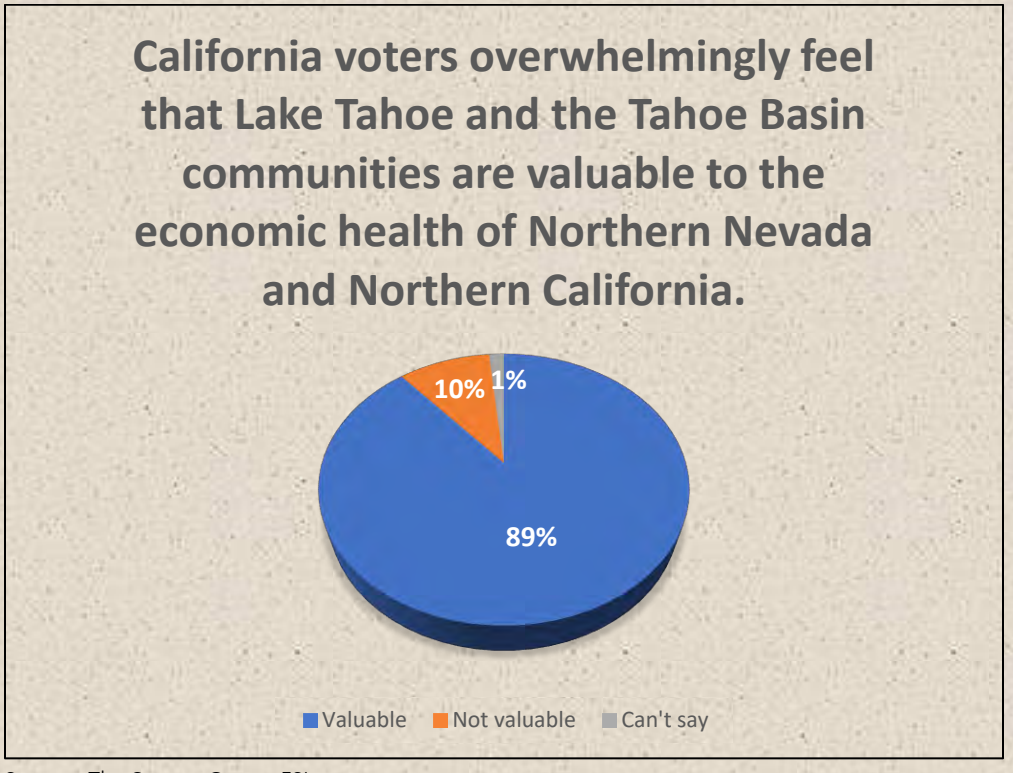
A second set of statewide polls of registered voters in California and Nevada was conducted in December of 2019. This set of polls gathered additional information on the familiarity of voters with Lake Tahoe and its importance to the regional economy. In addition, the polls included questions regarding the idea of collecting transportation user fees in the Tahoe Basin to address the funding shortfall. Highlights of these polls, also conducted by ESI and The Cromer Group are shown in Figures 12 through 2. Additional detail is provided in Appendix G.

Figure 12: Do Nevada voters feel that Lake Tahoe communities are valuable to the economic health of surrounding areas?



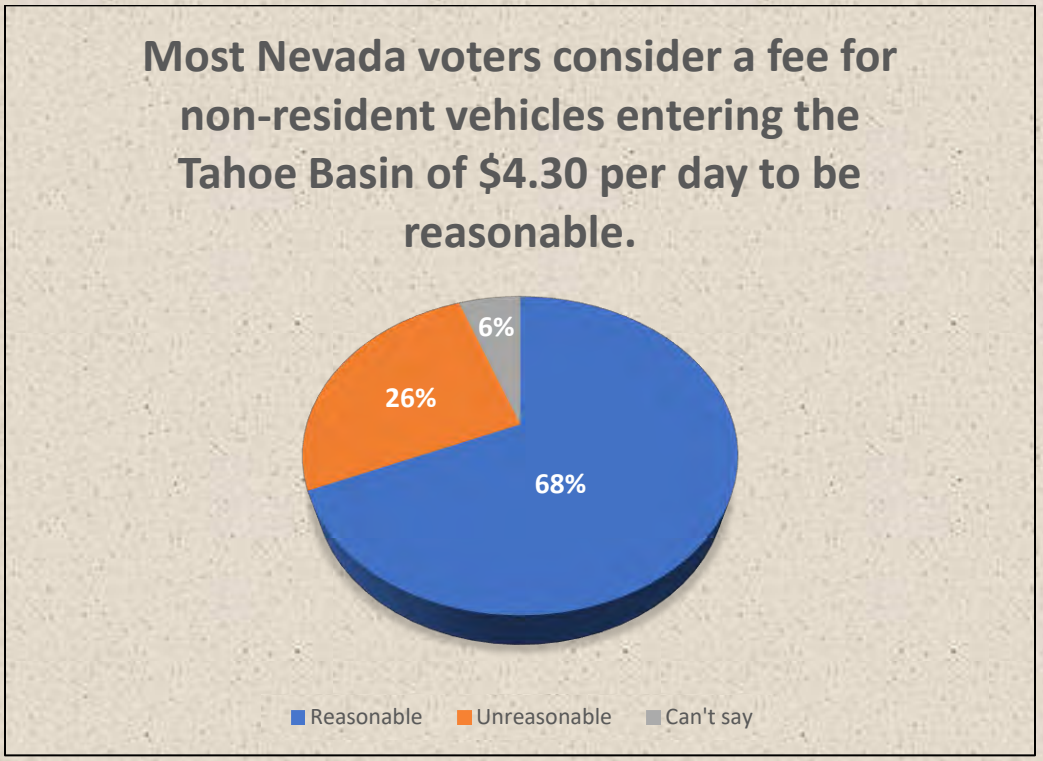
Source: The Cromer Group; ESI

Figure 13: Do California voters feel that Lake Tahoe communities are valuable to the economic health of the surrounding areas?



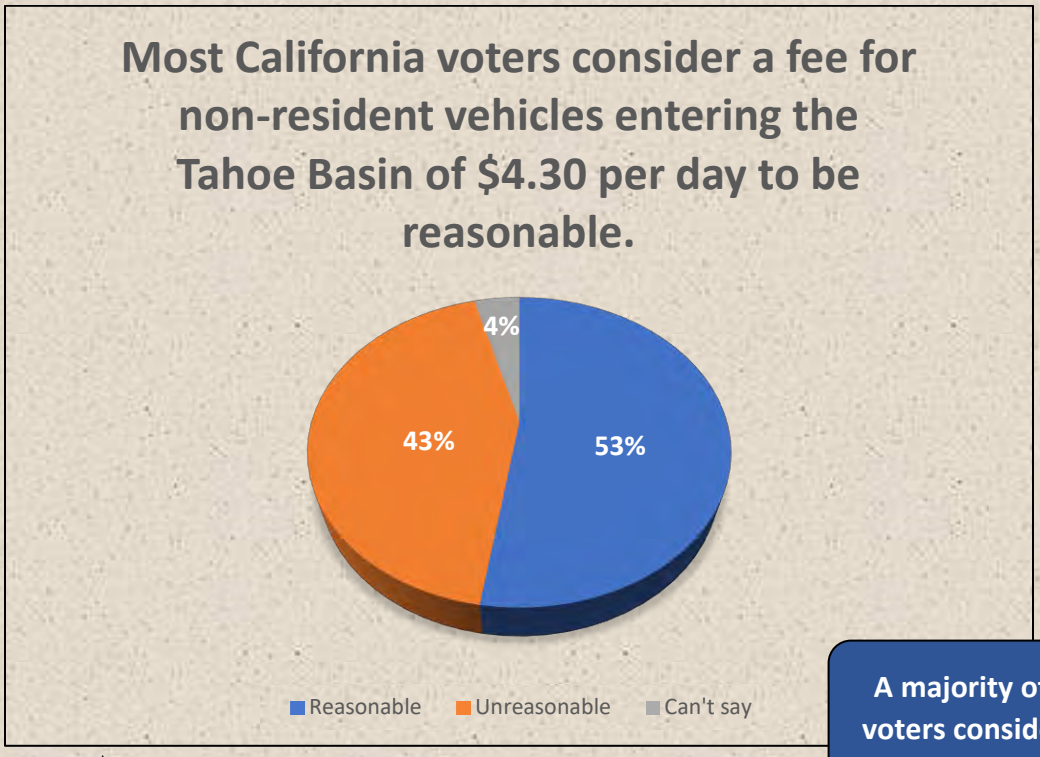
Source: The Cromer Group; ESI

Figure 14: How do Nevada voters feel about a non-resident vehicle fee?



Source: The Cromer Group; ESI

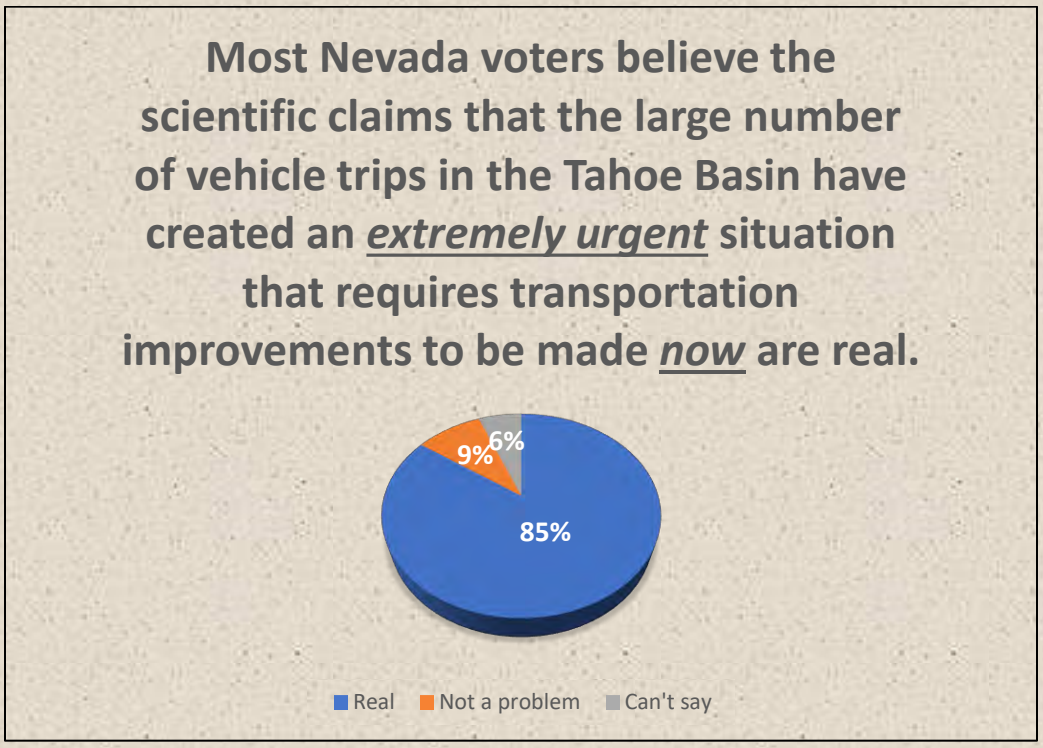
Figure 15: How do California voters feel about a non-resident vehicle fee?



Source: The Cromer Group; ESI

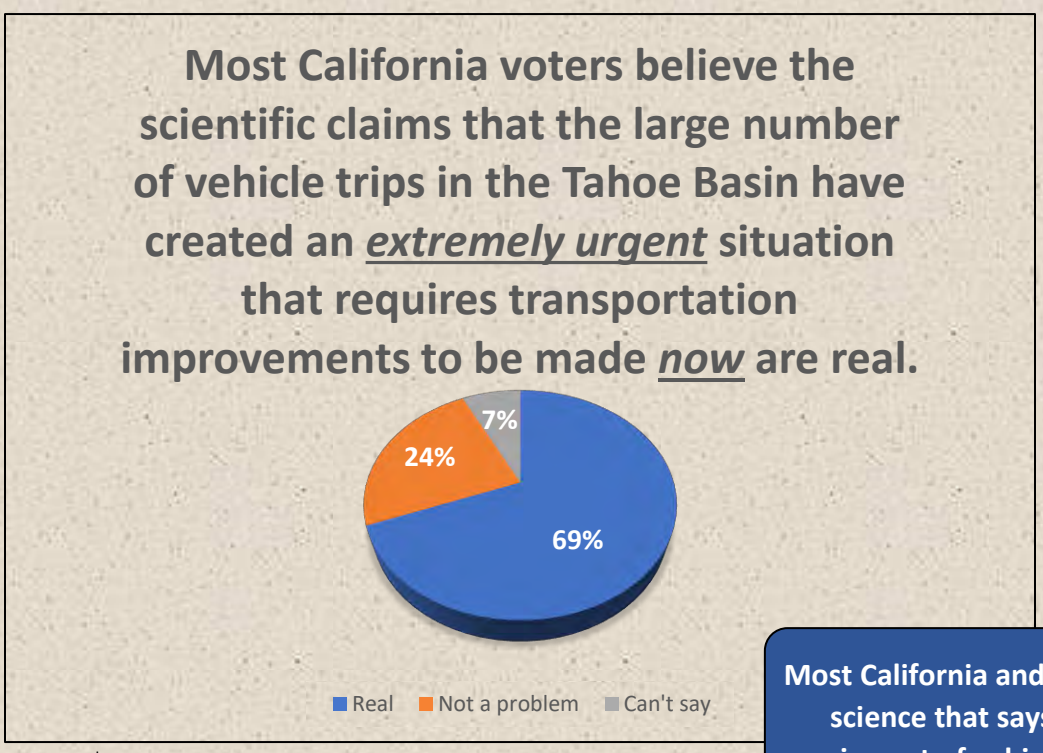
A majority of Nevada and California voters consider a fee of $4.30 per day for non-resident vehicles reasonable.

Figure 16: Do Nevada voters believe in the science of large number of vehicle trips creating an urgent situation that requires immediate improvements?



Source: The Cromer Group; ESI

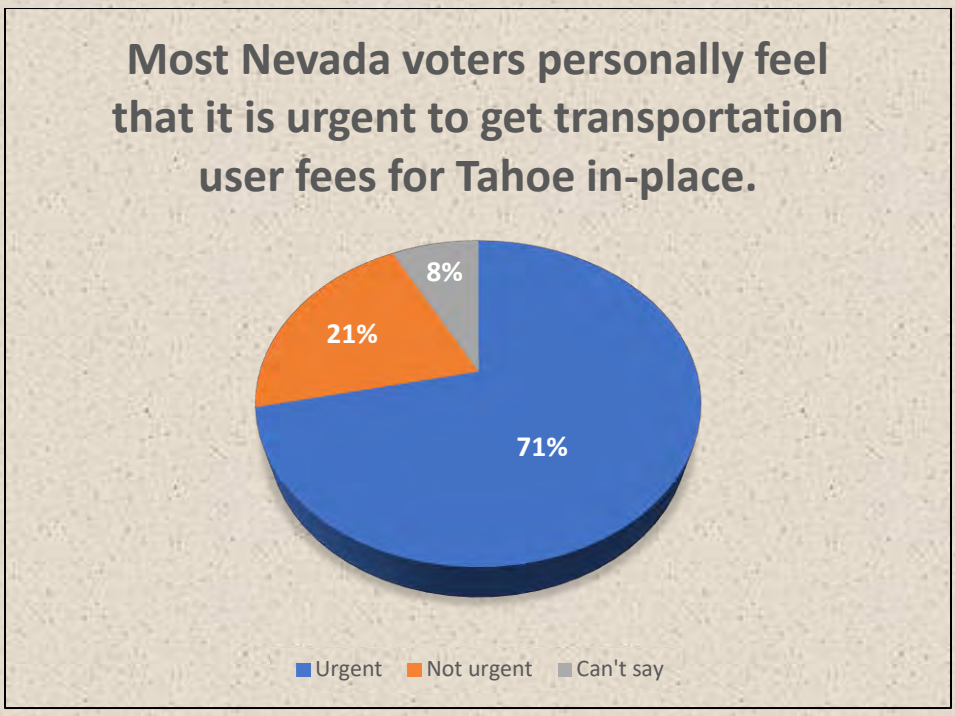
Figure 17: Do California voters believe scientific claims that the large number of vehicle trips in the Tahoe Basin have created an urgent need for immediate improvements?



Source: The Cromer Group; ESI

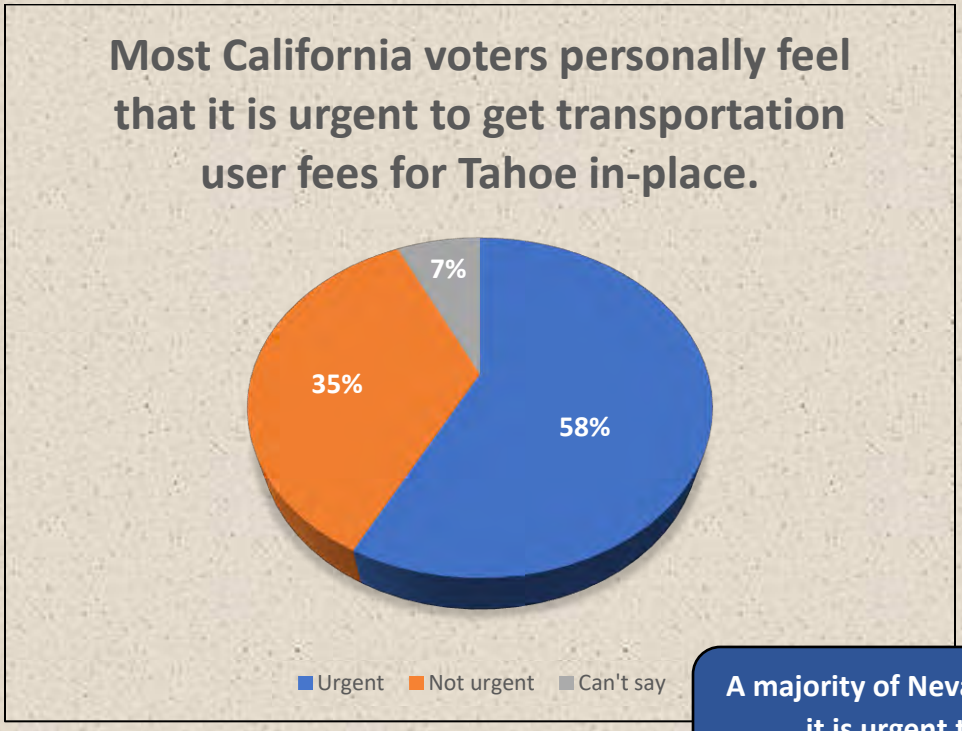
Most California and Nevada voters believe the science that says actions to address the impact of vehicle trips is needed now.

Figure 18: Do Nevada voters feel it is urgent to get fees into place as soon as possible?



Source: The Cromer Group; ESI

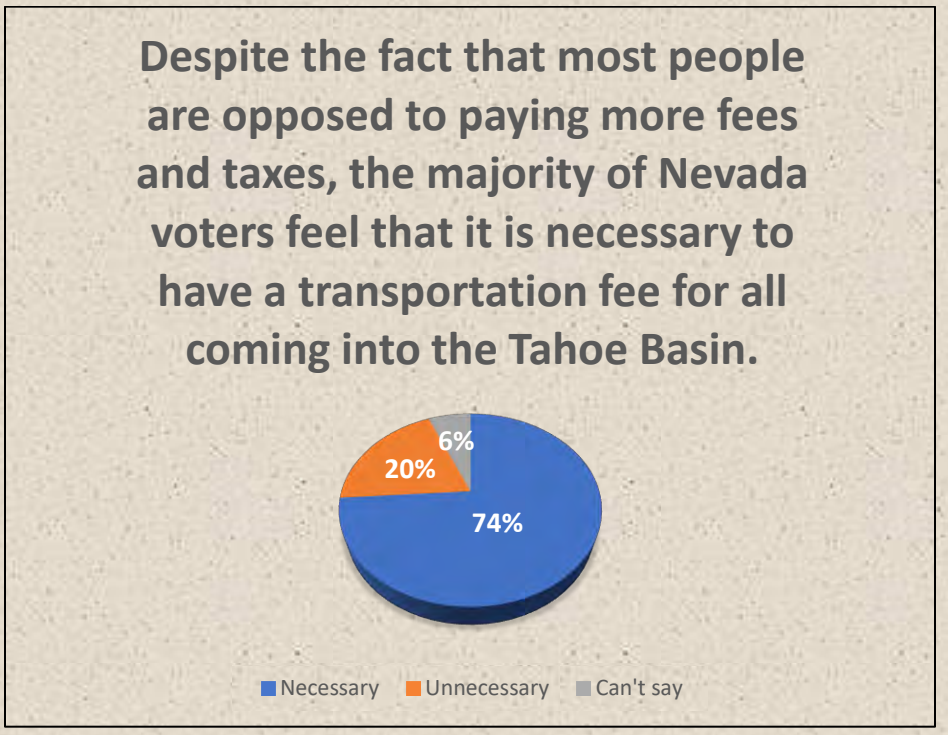
Figure 19: Do California voters feel the need to get transportation user fees into place immediately?



Source: The Cromer Group; ESI

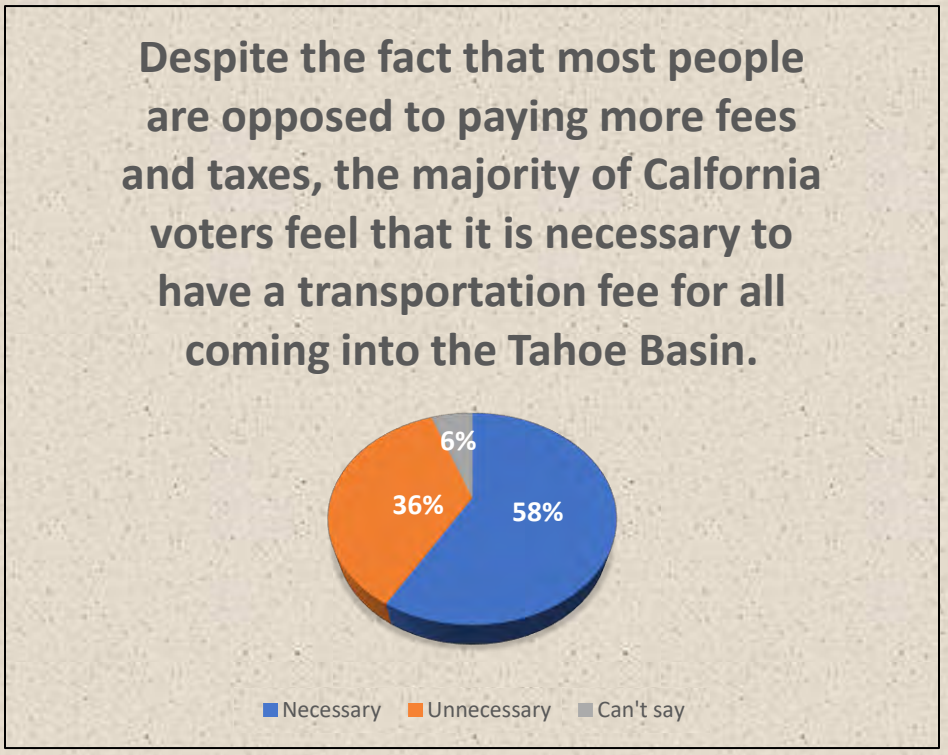
A majority of Nevada and California voters feel it is urgent to get user fees in place as soon as possible.

Figure 20: Do Nevada voters feel it is necessary to have a transportation fee for all vehicles coming into the Tahoe Basin?



Source: The Cromer Group; ESI

Figure 21: Do California voters feel it is necessary to have a transportation fee for all vehicles coming into the Tahoe Basin?



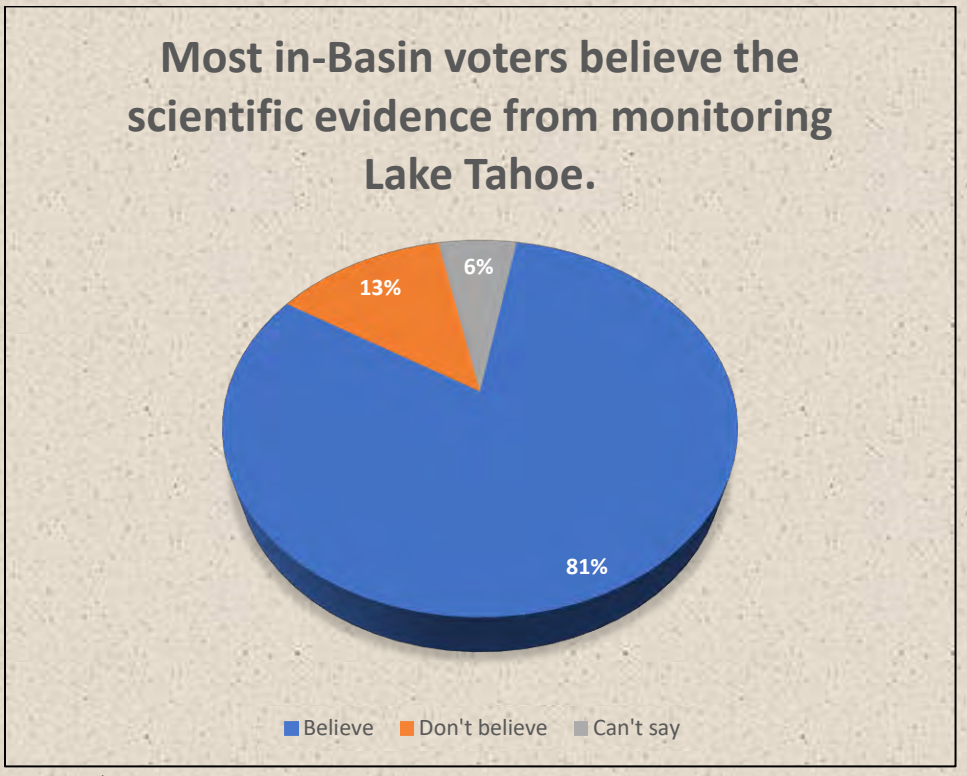
Source: The Cromer Group; ESI

Key insights from this second set of polls:

- Once again, voters in both states overwhelmingly recognize the importance of Tahoe to the economy of northern Nevada and northern California.
- A majority of voters in both states considered a fee for non-resident vehicles entering into the Tahoe basin of $4.30 per day to be reasonable.
- A majority of voters in both states believe the science that says the heavy reliance on vehicles in the Tahoe Basin has created an extremely urgent situation that requires transportation improvements to be made now.
- Most voters in both states personally feel that it is urgent to get transportation user fees for Tahoe in-place.
- Despite the fact that most people are opposed to paying more fees and taxes, a majority of voters in both states felt that it is necessary to have a transportation fee for all coming into the Tahoe Basin.

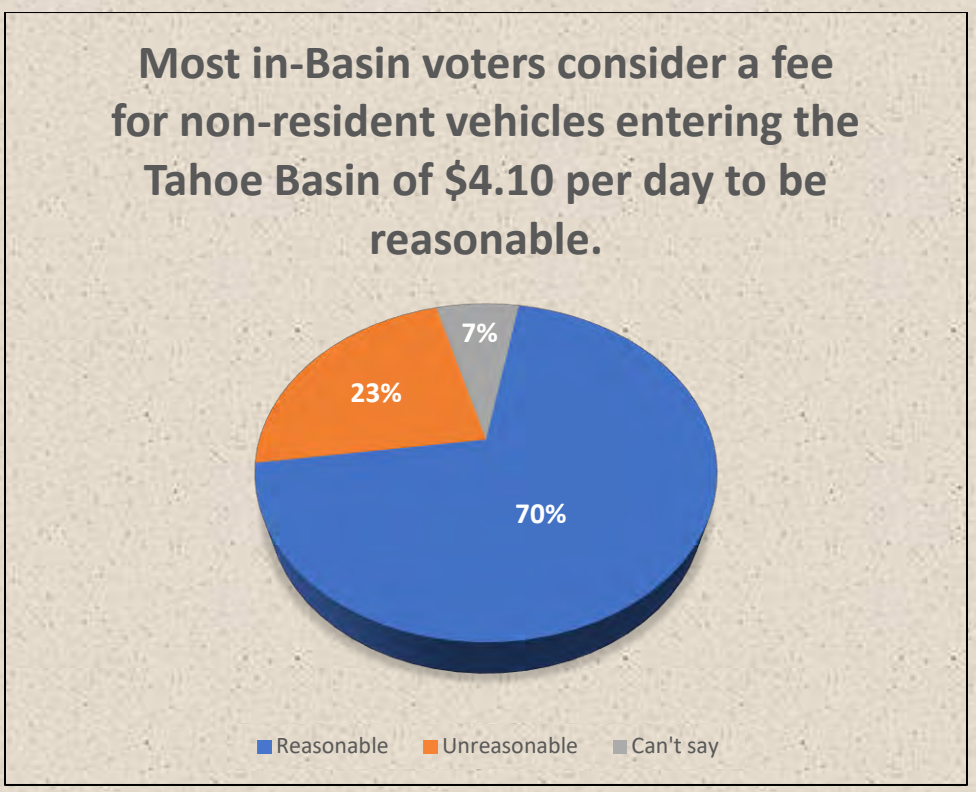
In addition to the statewide polls of California and Nevada voters discussed above, a poll was conducted of voters residing in the Tahoe Basin in February 2020. This poll repeated a number of questions contained in the December 2019 statewide polls to provide more detailed insight into the attitudes of Basin residents. The highlights of this poll, conducted by ESI and The Cromer Group are shown in Figures 22 through 26.

Figure 22: Do voters from within the Basin believe the science?



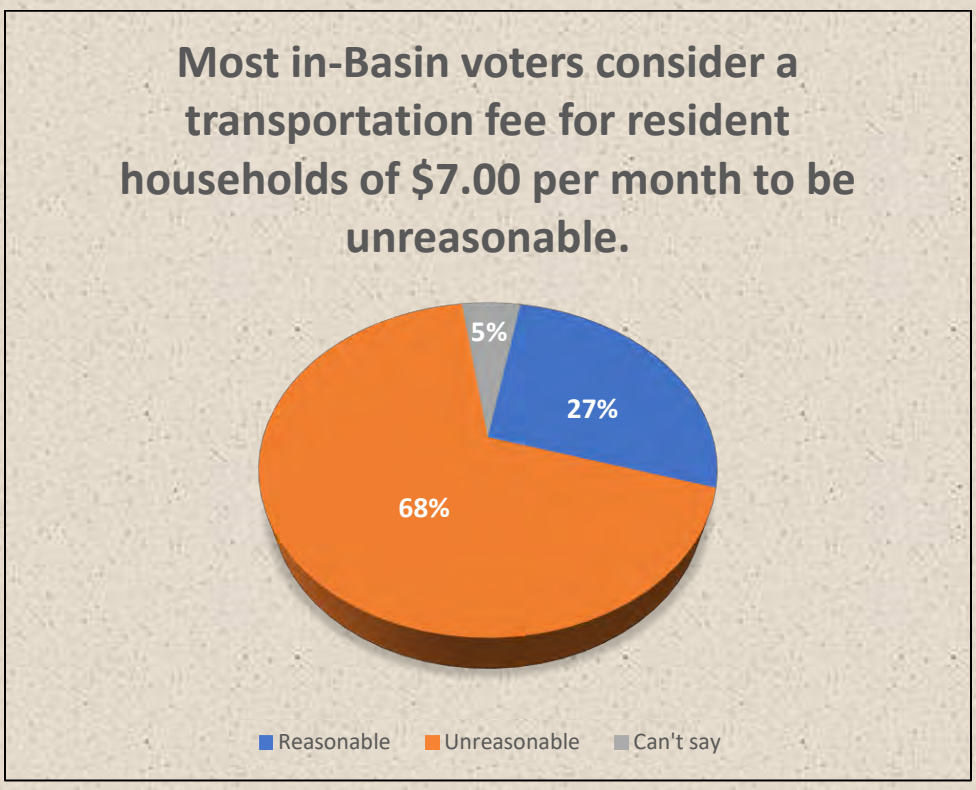
Source: The Cromer Group; ESI

Figure 23: How do in-Basin voters feel about a non-resident vehicle fee?



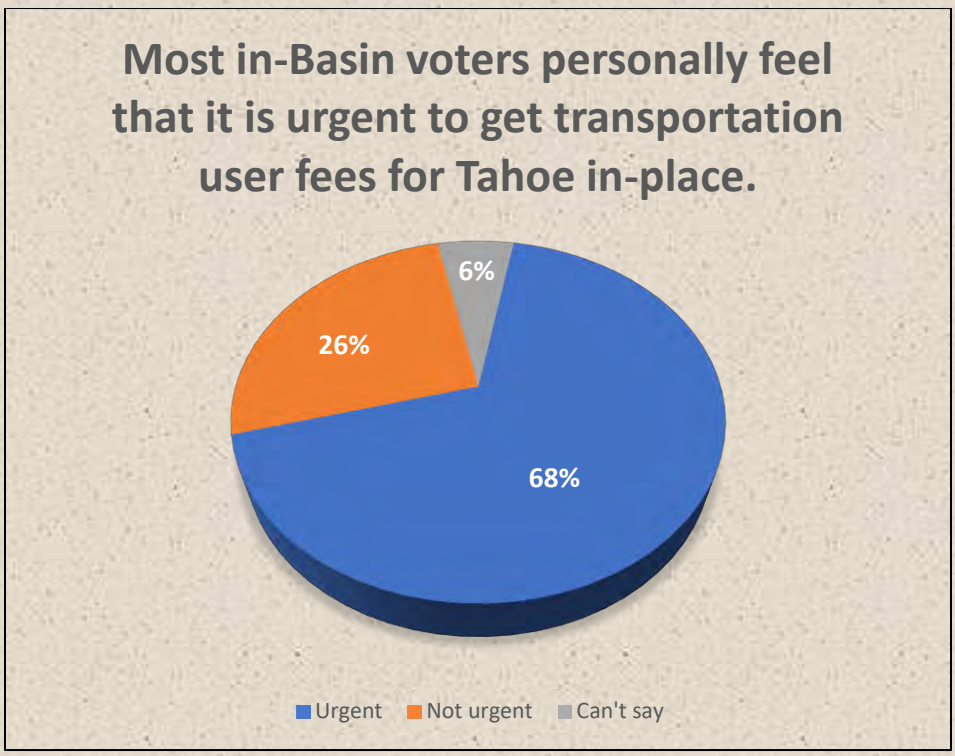
Source: The Cromer Group; ESI

Figure 24: How do Tahoe residents feel about an in-Basin household transportation fee?



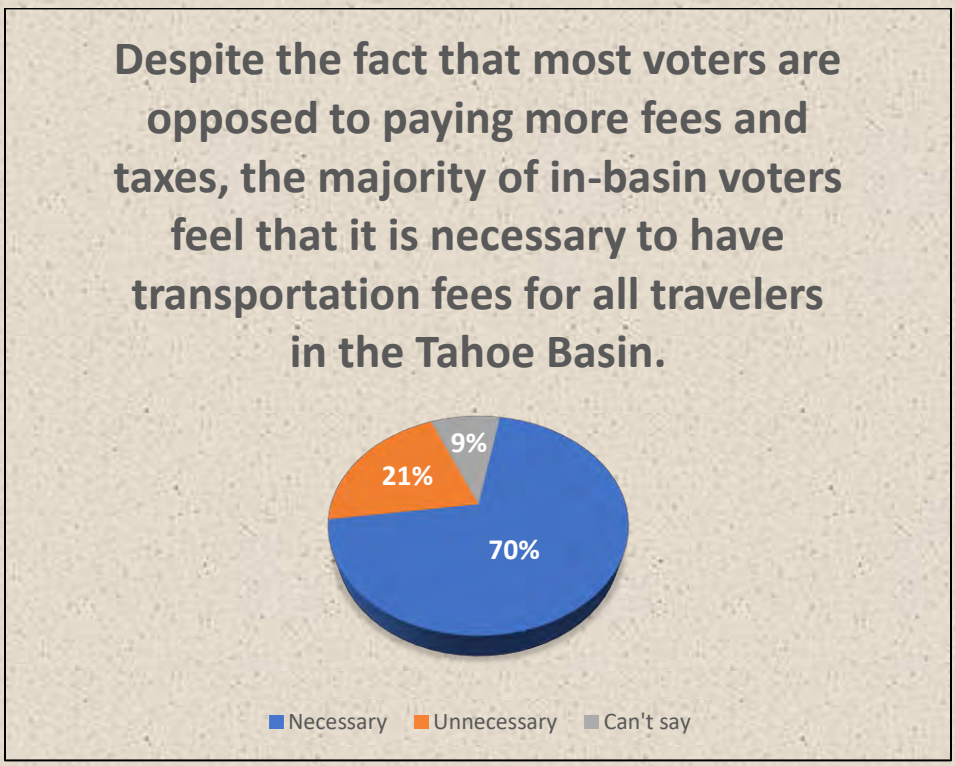
Source: The Cromer Group; ESI

Figure 25: Is it urgent to get fees into place as soon as possible?



Source: The Cromer Group; ESI

Figure 26: Are voters opposed to paying more taxes? Yes, however, they feel fees for all travelers into the Basin are a necessity.



Source: The Cromer Group; ESI

Key insights from the poll of In-Basin voters:

- A majority of In-Basin voters believe the science that says the heavy reliance on vehicles in the Tahoe Basin has created an extremely urgent situation that requires transportation improvements to be made now.
- A majority of In-Basin voters considered a fee for non-resident vehicles entering into the Tahoe Basin of $4.10 per day to be reasonable.
- Most In-Basin voters considered a transportation fee for resident households of $7.00 per month to be unreasonable.
- In-Basin voters overwhelmingly feel that it is urgent to get transportation user fees for Tahoe in-place.
- Despite the fact that most people are opposed to paying more fees and taxes, In-Basin voters overwhelmingly feel that is necessary to have transportation fees for all travelers in the Tahoe Basin.

Endorsements and support.

Various organizations have expressed support for the ONE TAHOE process including the Lake Tahoe Chamber of Commerce (the largest Chamber of Commerce in the Basin), the Nevada Chapter of the Associated General Contractors, the North Tahoe and Meeks Bay Fire Protection Districts, the Federal Highway Administration Nevada State Office. Copies of these endorsements are shown in Appendix H.

Section 8: Collateral Issues

ONE TAHOE: A Transportation Funding Initiative

Section 8: Collateral Issues

Comparison of TTD transit services to peer systems.

A review and comparison of the TTD transit service to peer systems was performed using the National Transit Database (NTD). The Federal Transit Administration requires that all systems receiving federal funds report data on a defined set of performance parameters annually. The uniformity of reporting requirements enables analysis and comparisons to be made among similar or "peer" systems. The technical memorandum on this work is at Appendix I. The principal conclusions and recommendations resulting from this work were:

- The TTD transit system performance indicator values are comparable to the ten peer systems reviewed. Those include revenue vehicle hours and miles provided, passengers transported, fare revenue collected and peak vehicles operated. Overall, TTD operates and administers an efficient and productive system.
- Indicators relative to operational expenses per unit of service provided are generally in the upper third of those reviewed and are attributable primarily to the commuter service segment and to the maintenance costs of an aging fleet. According to the 2017-2021 TTD Short Range Transit Plan, "TTD's fleet needs substantial and urgent attention. Over half of the current bus fleet is either approaching or is already beyond the Federal Transit Authority's (FTA) designated useful life." In addition, operating from leased facilities limits access to federal and state funding for capital improvements for those facilities that may translate into operating cost savings. Therefore, funding should be obtained for converting facilities from leased to owned.
- The level of local funding provided to the TTD for supporting transit is among the lowest of those systems reviewed. Local funding as a percent of total operating expenses for the TTD is 1.8% compared to a median value of 44.4% for the peer group.
- A predictable and meaningful stream of local funding to the TTD would leverage federal and state funding for needed capital facilities and other foundational projects. Converting leased facilities to owned facilities with a controlling interest is necessary for the use of federal and state capital funding.

Evaluation of transit automation and shared mobility opportunities for TTD transit services.

A review of opportunities for transit automatization and "shared mobility" within the context of TTD's current transit service was also undertaken. Shared mobility refers to technologies that provide real time information needed to link together various modes of transportation for an individual to complete a trip.

Technical memorandum for this work is at Appendix J. The principal conclusions and recommendations of this review are:

- Virtually all of the technological advances reviewed in this paper will require that individuals with smart devices, vehicles with GPS capabilities and traffic management/control devices in the Tahoe Basin have access to effective and robust hardline fiber and wireless communications network. This would include the I-80 and Highway 395 corridors. The "Dig Once" policy within the Basin is an excellent example of the type of initiative that needs to be fully programmed and implemented.

The TTD should consider taking the lead in planning, promoting and where appropriate implementing the wireless network with sufficient capacity and reliability to support the many technological initiatives.

- Implement technologies associate with operational efficiency initiatives such as queue jumping, signal prioritization and coordination, as outlined in the LTCCP.
- The TTD should consider partnering with Transit to implement their "Transit+" trip planning enhancement. Currently Uber and Lyft are offered as an alternative to public transit and not part of a coordinated trip. Transit+ does incorporate Uber/Lyft as a connection to transit services. The application is referred to by the company as "transit-oriented ride hailing".
- The TTD should review the evaluation reports as they become completed by Booz Allen Hamilton on the relevant MOD Sandbox programs for applicable lessons learned and the development of best practices.
- The TTD should consider application to the various Federal transit automation grant programs, including the Advanced Transportation and Congestion Management Technologies Deployment Program. These programs are discretionary and could provide funding for such eligible projects for:
    - Advanced traveler information systems.
    - Advanced transportation management technologies.
    - Infrastructure maintenance, monitoring, and condition assessment.
    - Advanced public transportation systems.
    - Transportation system performance data collection, analysis, and dissemination systems.
    - Advanced safety systems, including vehicle-to-vehicle and vehicle-to-infrastructure communications.
    - Technologies associated with autonomous vehicles, and other collision avoidance technologies, including systems using cellular technology.
    - Integration of intelligent transportation systems with the Smart Grid and other energy distribution and charging systems.
    - Electronic pricing and payment systems; or
    - Advanced mobility and access technologies, such as dynamic ridesharing and information systems to support human services for elderly and disabled individuals.

- Additionally, the TTD should consider opportunities for agencies to participate in peer exchanges and communities to share lessons learned and best practices. There has also been significant state and local investment in automation, and additional state funding may be available.

Automated Vehicles (AVs) in the context of the Tahoe Basin.

There has been keen interest nationally and globally in the introduction of automation to our transportation systems. The current status of automated vehicles, particularly the potential impacts of fully autonomous vehicles, in the Basin was examined in the memorandum included in Appendix K.

The key findings regarding AVs in the context of the Tahoe Basin were:

- AV technology is among the key topics of research and development in the U.S. and worldwide. AVs could alter mobility in a way that could potentially help solve or could negatively affect the transportation issues related to safety, congestion, accessibility and GHG emissions. The effects of AVs are not yet fully understood, and predictions vary on how fast the technology will

develop and how AVs will be deployed and adopted in the future. However, there are significant investments in developing and testing AVs and some cities are already preparing for them.

- For TTD, AV considerations are highly dependent on the way the technologies and vehicle market evolve and the specific operating environment of Lake Tahoe, something TTD has little opportunity to control. If AV technology proves operationally feasible in the Tahoe Basin, and actually becomes cost-effective compared to conventional transit, the TTD will likely be a leader in procurement and use of AV vehicles. The best opportunities in the near-term are likely to follow the changes in technology, provide input into the state-level AV discussions as state regulations on vehicle permitting and licensing will have a major impact on the vehicles that access Tahoe. The TTD should consider the communication needs of AVs as part of the communications infrastructure planning process, even though AVs will likely be a small portion of the private vehicle fleet for many years. In the longer term, if AVs eventually become a significant part of the private vehicle fleet, there will be a need to study their impacts in the Tahoe Basin and make regulatory adjustments as necessary, to minimize congestion and parking impacts.
- The idea that TNCs will provide large fleets of Shard Autonomous Vehicles (SAV) to serve the Tahoe region is unlikely, given the extreme peaking of demand for relatively short periods. The idea of deadheading large numbers of TNC vehicles from an hour or more away seems very unlikely. The policy direction is to greatly increase public transit service and then provide free local service within the Tahoe Basin, making the profitability of deadheading in a fleet of SAVs even more questionable. Cost considerations aside, if fleets of light-duty AVs, (whether operated by TNCs or individuals), increase VMT and congestion, this could compel the use of public policy tools to encourage moving trips to larger transit vehicles where and when this would be appropriate.

Transportation Networking Companies (TNCs) in the context of the Tahoe Basin.

Transportation Networking Companies (TNCs) are an emerging form of mobility that utilize technology to match passengers needing to travel with drivers available to take them. The two largest TNCs are currently Uber and Lyft. TNCs have been hailed by some as having the potential to dramatically reshape our current patterns of mobility, vehicle ownership, and the use of public mass transit, while solving our congestion and auto pollution problems. Others are far less sanguine about TNCs and their ability to address these issues. TNCs and the role that they might play in the specific context of the Tahoe Basin were examined in the memorandum at Appendix L. While the longer-term impacts of TNCs are difficult to predict there are some factors that were identified as having particular significance to Tahoe:

- Air travel into Tahoe Basin is outside the normal travel shed for TNC transport, resulting in higher than normal personal car travel to the region; this is also impacted by the requirement of Nevada and California that TNC trips cannot cross the state line (owned or rental car).
- Congestion in Basin impacts TNC and personal cars alike—there is limited advantage to using TNC over driving a personal car.
- Public transportation that avoids congestion has the potential to be more attractive than using a TNC or driving.
- TNCs may actually increase vehicular trips, congestion, and emissions by inducing additional vehicular travel and drawing trips from non-auto modes.

- Public transportation in the Tahoe Basin is planned to be free service (local service), thus it will always have a price advantage over TNC trips. It is unclear whether the conversion of TNC vehicles from conventional driver to AV will have a large impact on price per trip.
- TNC provision of first/last mile connection to public transit could play a key role in increasing mobility in Tahoe Basin.
- TNC availability, both conventional driver and AV, will be limited in the Tahoe Basin during peak periods, given the long deadhead distance that would need to be traveled, to address the weekend peaks during winter and summer months; and
- TNC AV operation in the Tahoe Basin in the winter will likely be a difficult operating environment.
- Growth in the TNC market may require intervention and regulation to preserve curb space and prevent loading and unloading related congestion and safety issues.
- Arterial road capacity in the Tahoe Basin is limited and expansion is prohibited. Allocation of this capacity at peak times between cars (including TNC vehicles) and more efficient transit vehicles is a public policy.
- There are also short- and long-term impacts on the labor market as TNCs create new jobs while eliminating some traditional roles. TNC use of AVs, if it happens in the Tahoe Basin, would obviously have a negative effect on transportation jobs.
- TNCs such as Uber and Lyft have not demonstrated long-term financial sustainability at this point. There is significant speculation within the industry that they must automate their vehicles and eliminate the drivers in order to do so.
- Even if TNC's utilize fully automated vehicles, providing door-to-door service to ride-hailers while interacting with all modes, day or night, in all weather conditions, with a safety record that inspires consumer confidence in the Tahoe Basin may be problematic or uneconomic.
- TNCs could well serve as a complementary transportation service to a greatly enhanced public transportation system in the Tahoe Basin in the future.

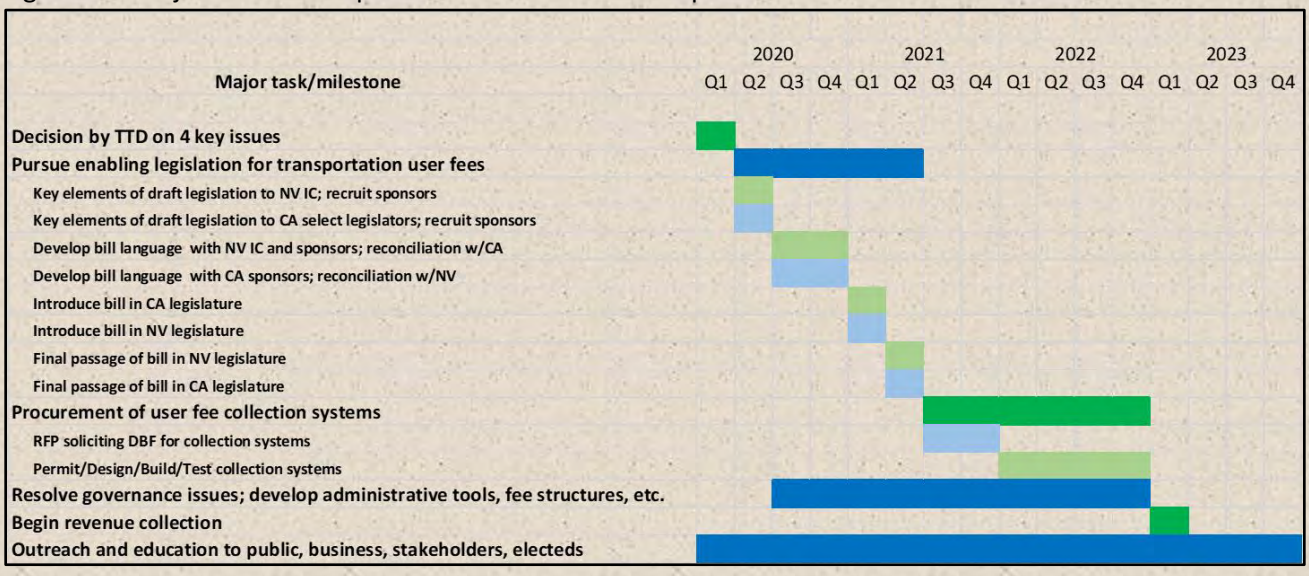
Section 9: Action Plan

ONE TAHOE: A Transportation Funding Initiative

Section 9: Action Plan

Addressing the transportation needs of the Tahoe Basin is urgent. Decades of underinvestment in transportation have significantly contributed to a degradation of the Tahoe "Experience" and the Lake's environment, undermining the lynchpins of the Basin economy. In developing an action plan for ONE TAHOE, the consultant team focused on an aggressive schedule that would allow collection and investment of user fees at the earliest time reasonably possible. Figure 27 shows a high level task schedule that could potentially allow fee collections to commence in Q1 of 2023. It should be noted that many of the tasks would need to run concurrently. Additional explanation of these tasks is given below.

Figure 27: Major Tasks for Rapid ONE TAHOE Revenue Implementation



Task/Milestone - Decision by TTD on key issues

Several key issues have been identified to the TTD Board that require decisions and/or direction in order to proceed with eventual implementation of a ONE TAHOE funding mechanism:

- Affirm that user fees are the funding mechanism the Board wants to pursue.
- Authorize the pursuit of enabling legislation for user fees in NV and CA by amending Article IX.
- Authorize the development of governance/administrative policies, procedures, processes, etc.

Task/Milestone - Pursue enabling legislation authorizing TTD to impose transportation user fees:

- Identify key elements of the enabling legislation and recruit sponsors. In order to develop appropriate legislation, it is essential to start with an unambiguous and shared understanding of the desired outcomes. This is optimally accomplished by working with potential legislative sponsors and other stakeholders to articulate these outcomes in plain language, not legalese. This will also require considerable work communicating and coordinating with individuals and stakeholders that may be directly or indirectly impacted to ensure that their concerns are understood, and where feasible, accommodated.
- Develop specific legislative language. Once the desired outcomes are clearly understood, restating these in language appropriate for actual legislation can proceed. Those formally tasked with drafting legislative language may miss the mark because they do not have a clear understanding of the desired outcomes. To ensure that the final legislative language

appropriate, TTD might be able to arrange with legislative staff to take the lead in drafting language. If this cannot be accomplished, TTD would certainly want to monitor and rigorously review products from the drafters. This actually will have to take place in both California and Nevada to ensure that the proposed legislation in both states is substantively identical as required by Article IX of the Bi-state Compact.

- Introduce Bills in the 2021 California and Nevada legislative sessions. Once final legislative language has been agreed upon by both the California and Nevada legislative sponsors, it will need to be formally introduced as bills in the respective state legislatures. There are a number of legislative deadlines that must be met and formal hearings at which presentations and testimony will be required. There may also be proposed amendments to the bill language which must be analyzed and addressed. Again, just as importantly, a considerable effort will need to be made to constantly communicate with both supporters of the legislation as well as those stakeholders that have concerns that their collateral interests may be directly or indirectly impacted. All these efforts must be coordinated across the two states.
- Final passage of enabling legislation in California and Nevada. Final passage may be relatively straightforward or it may require additional efforts to ensure deadlines are met, and possibly to address veto threats.

Task/Milestone - Procurement of user fee collection systems:

The collection system for the transportation user fees has a number of elements including the physical equipment at the data collection points, software that utilizes the data, back office operations for billing, collection, enforcements, and data analysis. Given the desire to begin revenue collection as soon as possible, it is likely the procurement could best be accomplished using a design-build process that integrates, if possible, all of these elements with a single prime contractor. Decisions will also need to be made on whether the same contractor(s) will be responsible for operations, maintenance, and financing of all or a portion of the project. As a preliminary step in this process, it may be necessary to do additional, detailed data collection and analysis of travel characteristics of both visitors and residents to provide more detailed understanding of traffic and revenue potential. The TTD will need to develop comprehensive performance requirements not just for individual items of equipment and software but also for the collection system that integrates all of these components to work together.

Task/Milestone - Develop governance/administrative policies, processes, procedures, and tools for a complete system:

The collection systems by themselves do not comprise a complete transportation user fee system. In addition, the system will require an established body of policies, procedures, processes and tolls that deal with such things as:

- Planning, programming, and budgeting of projects and services.
- Priority setting.
- Financial accounting and reporting.
- Establishing and documenting revenue targets.
- Fee structure.
- Fee rates.
- Credits/offsets for resident fees.

- Adjustments to fee rates:
    - Annual inflationary.
    - Annual target revenue variance.
    - Periodic with RTP updates.
- Appeals.
- Pass-through funding and conjunctively funded projects.
- Funding of administrative costs.
- Regional minimal standards for eligible projects, investment, transit, and road LOS.
- Tracking, monitoring, and reporting:
    - Intergovernmental equity.
    - Resident versus non-resident equity.
    - Needs versus investments.
- Identification and implementation of early action items that can show early returns for user fee revenues such as:
    - "Fare free" transit.
    - Expanded transit service hours.
    - Expanded transit service frequency.
    - Expanded transit service geographic coverage
    - Accelerated project implementation for such things as road repairs, bike and ped facilities, etc.
- Cost/revenue sharing with external entities.

Task/Milestone - Permit/Design/Build/Test Revenue collection system:

As stated previously, to meet the aggressive schedule for commencing fee collection, it is likely that a design-build process for the fee collection system will be necessary. Multiple permits will be required which will probably be a shared responsibility between the TTD and the contractor. Real world acceptance testing of the installed system will need to be conducted to ensure that the overall performance specifications are met.

Task/Milestone - Begin revenue collection:

With this aggressive schedule, collection of user fees could commence in the first quarter of calendar year 2023. As a minimum for this to be possible, all other tasks/milestones identified above would need to be achieved on time. Even if this were to occur, delays to beginning collections could be caused by legal challenges or other events.

Task/Milestone - Outreach and education to the public, stakeholders, and elected officials:

While the implementation of transportation user fees may be done administratively, it is essential to create and maintain a strong degree of support from the public, stakeholders, and elected officials for this program to be successful. These efforts need to commence well before user fee collections begin and continue for an indefinite period of time thereafter.

Implementing the ONE TAHOE recommendations will be key to sustaining the quality of the "Tahoe Experience" for residents and visitors alike, our economic prosperity, and the Lake's fragile environment.

The work done with ONE TAHOE indicates that there is a strong general consensus among the public, elected officials, and other key stakeholders on a number of key issues:

- Lake Tahoe is very important to the regional economy.
- Traffic congestion is harming the Lake and this is getting worse.
- The science documenting the impacts of traffic on the Basin is real.
- Transportation user fees should be paid by all who travel within the Basin.
- It is urgent to get transportation user fees for Tahoe in place.
- A daily transportation fee on non-resident groups traveling in the Basin by vehicle of about $4.10-4.30 is reasonable.

Future outreach and education efforts in support of a new regional transportation revenue source can build upon this foundation. Since there are variations in the knowledge and understanding that individuals have about transportation in the Basin, these efforts should continually inform and reinforce with the audience the value they are receiving for their transportation user fees by:

- Explaining the transportation problems.
- Articulating the community transportation vision including planned projects, services, and outcomes.
- Describing the steps being taken to ensure that adequate funding is available to translate this vision to reality.
- Previewing upcoming improvements and the benefits they will bring.
- Making explicit connections between how transportation investments contribute to the accomplishment of other important community goals such as economic prosperity, good paying jobs, addressing climate change, improving traffic and fire safety, generating money for schools and public services, etc.
- Reporting on and celebrating what is being accomplished both in terms of projects and services, as well as progress towards meeting desired outcomes.
- Using a combination of polling, focus groups, social media, and other techniques to solicit ongoing feedback on transportation issues and concerns, and addressing these through the public outreach process or other appropriate inclusive and collaborative efforts.

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Appendices

Appendix A: Transportation Needs, Revenues, and Shortfalls

Appendix B: Screening and Evaluation Process for Potential Funding Mechanisms

Appendix C: Evaluation of Potential Funding Mechanism Ideas

Appendix D: Current Transportation Funding Level-of-Effort

Appendix E: Public Listening Sessions

Appendix F: Representative Briefing Materials

Appendix G: Polling

Appendix H: Endorsements and Letters of Support

Appendix I: Transit Peer Review

Appendix J: Transit Automation

Appendix K: Automated Vehicles in the Tahoe Context

Appendix L: Transportation Networking Companies (TNCs) in the Tahoe Context