

STAFF REPORT

Date: October 16, 2019

To: TRPA Regional Plan Implementation Committee

From: TRPA Staff

Subject: VMT Threshold Update – Mobility Metrics

Summary and Staff Recommendation:

At its August 2019 meeting, the Regional Plan Implementation Committee (RPIC) approved the VMT Threshold Update workplan and directed staff to bring back in October a recommended metric as the basis for setting a transportation mobility target. Consistent with the workplan, staff researched six alternatives and recommend that mode share be used for mobility target setting. Mode share is a direct measure of the use of different forms of transportation (e.g., walking, biking, driving, transit). Staff also recommends that project level analysis of the mode share target be implemented using a transparent framework that promotes transportation demand management and improvements in multi-modal infrastructure. Staff recommends the RPIC endorse the use of mode share for mobility and direct staff to work towards the establishment of a regional mode share target and implementation framework.

Required Motion:

In order to recommend approval of the requested action, the Regional Plan Implementation Committee should make the following motion based on the staff summary:

- 1) A motion to endorse the use of mode share as a regional mobility metric and to develop a target for mode share and an associated implementation framework.

Background:

Within transportation planning, mobility is a concept that expands analysis of travel options beyond simply the automobile, to include a variety of options (e.g., walking, biking, transit) and the quality of those options. Enhancing mobility is consistent with the Bi-State Compact guidance that the Regional Transportation Plan reduce dependence on the automobile.

In 2017, the TRPA Advisory Planning Commission convened a transportation measures working group to review the landscape of performance measures used in transportation planning. Building on that review, staff identified six metrics for additional consideration as the potential basis for a mobility target. Those six metrics: Mode Share, Multi-Modal Level of Service (MMLOS), Travel Time Reliability, Multi-Modal Accessibility, Person Miles Traveled by Mode, Cost of Travel per Person Trip, were presented at the July

RPIC meeting and affirmed after no additional comments or suggestions were received. The findings of staff's research into each metric is provided in Attachment A. Based on that research, staff recommend the use of Mode Share to establish a mobility target for the Region, focusing on increasing non-auto mode share as a fraction of all trips. A brief overview of the recommendations is included below.

1. Mode Share – Expresses the proportion of trips taken by each mode (e.g., walking, biking, driving, transit). A direct and outcome-based measure of the Region's dependence on the automobile that is commonly used in other regions to establish goals for increasing non-auto travel.
2. Travel Time Reliability – Assesses the consistency or dependability of travel times. It is an automobile and transit centric metric that does not reflect the full breadth of the Region's mobility goals. Not recommended as the primary mobility metric because of the narrow modal focus.
3. Multi-Modal Level of Service – Assesses the quality of the transportation network across multiple modes (e.g., walking, biking, driving, transit). Not recommended as the primary mobility metric because it focuses on quality rather than utilization, integrating this metric into project-level evaluation is feasible.
4. Multi-Modal Accessibility – Integrates the quality of the transportation network with regional land use. Not recommended as the primary mobility metric because it focuses on quality rather than utilization, integrating this metric into project-level evaluation is feasible.
5. Person Miles Traveled by Mode – Tracks total miles traveled by mode. The emphasis on distance traveled by non-auto modes is not well aligned with the mobility goals of mixed-use compact development which are intended to reduce trip length and promote non-auto trips. Not recommended as the primary mobility metric because of the emphasis on longer trip length and traveling more miles.
6. Cost of Travel per Person-Trip – Assesses the efficiency of alternative investments in transportation infrastructure. Efficiency is clearly important but does not capture the breadth of the Region's mobility goals. Not recommended as the primary mobility metric because of the narrow focus but could be integrated into project level analysis.

The focus on mode share is consistent with the Bi-State Compact guidance to reduce dependence on the automobile. Mode share is a direct measure of automobile dependence because it measures the extent to which people are utilizing non-auto modes and expresses that as a proportion of overall trips in the Region. The recommendation is also consistent with the recently adopted adaptive management structure which suggests focusing higher level goals on the desired end state and identifying performance

measures to assess interim progress and the effectiveness and contribution of management actions towards those goals.

TRPA already uses mode share as an established transportation performance measure, sustainability indicator, and a Regional Plan performance measure. Data for mode share has been collected since 2006 and is collected every two years, alternating between summer and winter surveys; the data are then aggregated into a four-year running average percentage (see Figure 1). As of the 2018 summer mode share survey, non-auto mode share was 25.4%, and the 2016/2018 non-auto mode share running average was 19.4%. A winter survey is planned for winter 2020.

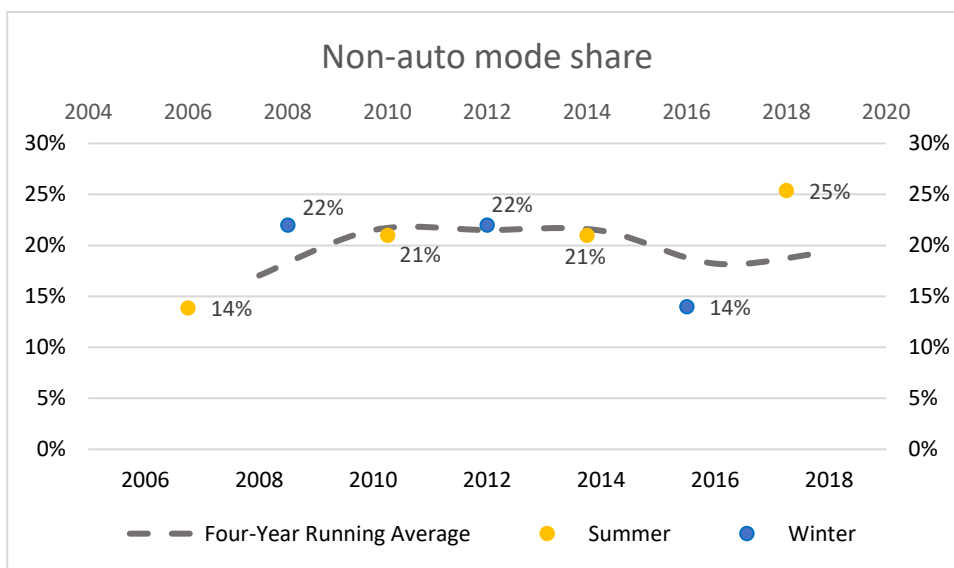


Figure 1. Non-Auto mode share in the Tahoe Basin (2006-2018)

At the plan and project level, staff recommends that the mode share goal be supported by a consistent and transparent multi-modal evaluation and mitigation framework. Practically speaking, plans and projects would need to show that they support, or do not alter, the region’s ability to meet its mode share goal. Projects would be linked to the mode share goal by participating in Transportation Demand Management strategies and constructing or contributing to improvements in the Region’s multi-modal infrastructure. Transportation demand management refers to the use of tools and strategies to make the most efficient use of the transportation system during peak periods or in congested areas by shifting trips to different modes (e.g., transit, biking, walking), different times, or different routes. The structure of this implementation framework and specific target setting for regional and plan/project implementation is the focus of the next product in the work plan.

The presentation and discussion at the October 23, 2019 meeting of the RPIC will include an overview of the research into mobility metrics and the basis for recommending mode share as the primary mobility metric for the Region.

Contact Information:

For questions regarding this agenda item, please contact Dan Segan, Principal Natural Resource Analyst, at dsegan@trpa.org or (775) 589-5233 or John Marshall, General Counsel, at jmarshall@trpa.org or (775) 303-4882.

Attachment:

- A. Mobility metrics report

Attachment A

Mobility metrics report