

# Lake Tahoe Performance-Based Planning: Regional Transit Asset Management Targets and Tahoe Fleet Replacement Fund

**September 2018**

Tahoe Regional Planning Agency

Tahoe Transportation District

Placer County - Department of Public Works

## Performance-Based Planning and Programming Requirements

In 2012, the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) required Metropolitan Planning Organizations (MPOs) to establish and use a performance-based approach to transportation decision making and development of transportation plans. Each MPO must establish performance targets that address the MAP-21 transit asset management (TAM) performance measures by October 1<sup>st</sup>, 2018. The Tahoe Regional Planning Agency (TRPA), acting as the Tahoe Metropolitan Planning Organization (TMPO), will reassess and set TAM targets every four years for the Lake Tahoe Region through a collaborative process with both transit agencies, the Tahoe Transportation District (TTD) and Placer County operating Tahoe Truckee Area Regional Transit (TART). TRPA, TTD, and TART will cooperatively develop and share information related to transportation performance data and targets to be used in tracking progress toward attainment of critical outcomes for the Region.

In addition to setting TAM targets, every transit agency is required to develop a TAM Plan if it owns, operates, or manages capital assets to provide public transportation and if it receives federal financial assistance as a recipient or subrecipient. The Federal Transit Administration (FTA) classifies transit agencies into two groups with different TAM Plan requirements. TTD and TART are both considered Tier II agencies because they operate fewer than 100 vehicles across all fixed route modes. As Tier II agencies, TTD and TART included in their TAM Plans an inventory of assets, a condition assessment of inventoried assets, a description of their decision support tools and methodology, and a prioritized list of investments. TRPA will incorporate each agency’s TAM goals, performance measures, targets, and process into the regional performance-based planning process and TAM/SGR funding program.

## Transit Asset Management Target Setting

The TAM Final Rule 49 US 625 became effective October 1<sup>st</sup>, 2016 and established four performance measures. Transit agencies and MPOs must set performance targets for asset classes in rolling stock, equipment, facilities, and infrastructure. Neither TTD nor TART own or operate infrastructure. Transit agencies set targets based on their own fiscal year and asset class and document their transit asset management process in the TAM Plan. TRPA, in coordination with TTD and TART, sets one region-wide target for each asset type for all transit providers in the Lake Tahoe Region. This allows TRPA to assess progress towards region-wide attainment of transit SGR and better determine how funding decisions support regional targets.

**Table 1: Transit Asset Management Asset Categories**

Asset Category	Examples	Performance Measure
<b>Rolling Stock</b>	Revenue service vehicles such as buses, cutaway buses, trolley buses, vans.	The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB).
<b>Equipment</b>	Non-revenue service vehicles including automobiles, other rubber tire vehicles, and other steel wheel vehicles.	The percentage of non-revenue service vehicles (by type) that exceed the ULB.
<b>Facilities</b>	Administrative, maintenance, passenger, and parking facilities.	The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) scale.

<b>Infrastructure</b> *Not applicable in Tahoe	Fixed guideway, signal systems, and structures (bridges, tunnels, etc.).	The percentage of track segments (by mode) that have performance restrictions. Track segments are measured to the nearest 0.01 of a mile.
---	--	---

## Useful Life Benchmark

The FTA requires transit agencies to inventory their assets and assign ratings based on the asset’s age and condition. Useful life benchmark (ULB) is used to measure the performance of revenue vehicles (rolling stock) and service vehicles (equipment) and is a baseline for setting performance measure targets. Each vehicle type’s ULB estimates how many years that vehicle can remain in service and still be in a state of good repair. Measuring vehicles based on ULB allows agencies to determine whether it is cost effective to operate an asset before ongoing maintenance costs outweigh replacement costs. When an asset reaches the maximum ULB, it enters the state of good repair backlog and is prioritized for replacement. Lake Tahoe transit operators must deal with difficult winter weather and provide services during severe snow storms. Icy roads, extreme cold weather, and difficult terrain put stress on transit operations and diminish the life cycle of assets. Costs associated with preventative maintenance typically increase when weather conditions worsen. Due to these operational hazards, Lake Tahoe transit operators determined FTA’s default ULBs do not accurately reflect actual asset life cycles for Tahoe assets, and are too high to ensure TART and TTD maintain assets in a state of good repair. Under FTA’s default ULB, the life cycle for automobiles (AO), buses (BU), cutaway buses (CU), other rubber tire vehicles, and vans are eight years, fourteen years, ten years, fourteen years, and eight years, respectively. TTD, TART, and TRPA met to define the ULB for each vehicle type operating at Lake Tahoe based on actual maintenance data. TART and TTD will use a ULB of eight years for automobiles (AO), twelve years for buses (BU), seven years for cutaway buses (CU), ten years for other rubber tire vehicles, and five years for small cutaways/vans (VN).

**Table 2: Lake Tahoe Adjusted Useful Life Benchmark (ULB)**

Vehicle Type		Tahoe Adjusted ULB (in years)
AO	Automobile	8
BU	Bus	12
CU	Cutaway bus	7
	Other rubber tire vehicles	10
VN	Small Cutaway/Van	5

## Regional Transit Asset Management Targets

TTD and TART set regional asset management targets through the next four fiscal years using the adjusted ULB and FTA’s Transit Economic Requirements Model (TERM) scale.

**Table 3: Transit Economic Requirements Model (TERM) Scale**

TERM Rating	Condition	Description
Excellent	4.8 – 5.0	No visible defects, near-new condition
Good	4.0 – 4.7	Some slightly defective or deteriorated components
Adequate	3.0 – 3.9	Moderately defective or deteriorated components
Marginal	2.0 – 2.9	Defective or deteriorated components in need of replacement
Poor	1.0 – 1.9	Seriously damaged components in need of immediate repair

Considering targets each agency set for their asset classes, pending fleet and equipment purchases, and future funding, TRPA, TTD, and TART set interim regional targets for each asset category and transit asset class operated in Lake Tahoe. Interim targets in Table 4 will be reassessed during the next update of the Regional Transportation Plan (RTP) and memorialized by an amendment to the TRPA/Transit Operator Memorandum of Understanding (MOU).

**Table 4: Regional Transit Asset Management Performance Targets**

Asset Category	Performance Measure	Estimated Current % (TART)	Estimated Current % (TTD)	Regional Target for 2020 RTP Cycle
<b>ROLLING STOCK</b>				
Bus (BU)	Percentage of buses that exceed ULB of 12 years	36%	38%	42%
Cutaway bus (CU)	Percentage of cutaway buses that exceed ULB of 7 years	100%	0%	100%
Small Cutaway/Van (VN)	Percentage of small cutaway buses and vans that exceed ULB of 5 years	N/A	58%	80%
<b>EQUIPMENT</b>				
Automobile (AO)	Percentage of automobiles that exceed ULB of 8 years	0%	0%	50%
Other rubber tire vehicles	Percentage of other rubber tire vehicles that exceed ULB of 10 years	0%	33%	50%
<b>FACILITIES</b>				
Administrative and maintenance facilities	Percentage of administrative and maintenance facilities rated less than 3.0 on the TERM scale	0%	N/A	0%
Passenger facilities	Percentage of passenger facilities rated less than 3.0 on the TERM scale	16%	22%	30%

## State of Good Repair Regional Funding Program

In April 2013, the FTA estimated the nation had an accumulated state of good repair reinvestment shortfall of \$77.7 billion. Many transit agencies lack effective asset condition assessment tools and capacity to establish capital spending priorities. New requirements to complete TAM Plans will help transit agencies prioritize capital spending and coordinate with other regional transit providers. The Tahoe Region receives just over \$1 million from the FTA 5307 and 5339 formula grant programs annually to cover capital transit costs, as shown below.

**Table 5: FTA 5307, 5339, 5310 Full-Year Apportionments (FY 2018)**

<b>Totals by Operator (Earned + Base)</b>					
	<b>5307-Total</b>	<b>5307-Ops (75%)</b>	<b>5307-Cap (25%)</b>	<b>5339</b>	<b>5310</b>
<b>TTD</b>	\$1,922,810	\$1,442,108	\$480,703	\$255,032	\$49,588
<b>Placer (TART)</b>	\$968,722	\$726,541	\$242,180	\$146,641	\$0
<b>Total</b>	<b>\$2,891,532</b>	<b>\$2,168,649</b>	<b>\$722,883</b>	<b>\$401,673</b>	<b>\$49,588</b>

Source: FTA Full Apportionments FY 2017-2018

TTD and TART both utilize nearly all of the apportioned 5307 capital funds (just over \$700,000 total) for annual preventative maintenance. This leaves about \$400,000 in federal funds to replace, rehabilitate, or purchase buses and equipment. In addition to \$400,000 from the FTA, Lake Tahoe annually receives around \$150,000 through the California Transportation Development Act (TDA) state of good repair (SGR) program. The TDA SGR program is funded through Senate Bill 1 to provide funding to repair highways, bridges and local roads, to make strategic investments in congested commute and freight corridors, and to improve transit service. In sum, the total federal and state money received annually for capital asset replacements or purchases barely covers the cost of a new 35-foot CNG or Diesel bus and would leave a \$300,000 deficit with the purchase of a new electric bus. The funds are currently split between TART and TTD using formulas defined in the TRPA/Transit Operator MOU. With limited funding for fleet replacement, a regional replacement program identified below will be updated and memorialized into the MOU.

### Tahoe Fleet Replacement Fund

To maximize limited federal and state funding for transit asset replacement, TRPA, TTD, and TART developed a regional SGR funding program. Beginning next fiscal year (FY 2020) TRPA will annually apportion federal and state capital replacement money from FTA 5339, 5310, and TDA SGR programs into a “Tahoe Fleet Replacement Fund”.

This will fund TTD and/or TART projects from a priority list, which is determined using replacement criteria developed collaboratively by TRPA, TTD, and TART. Each vehicle will be evaluated annually based on the following criteria:

1. **Age** – Vehicles whose age exceeds the defined ULB will be prioritized for replacement.
2. **Mileage** – Vehicles with above average mileage will be prioritized for replacement.
3. **Condition assessment** – Maintenance technicians will assess each vehicle using the TERM scale criteria. Vehicles with condition ratings below 3.0 on the TERM scale will be prioritized for replacement.
4. **Maintenance costs** – Vehicles whose cost per mile exceeds the average cost per mile will be prioritized for replacement.

Using these four criteria, assets will be placed on the priority replacement list ranking from greatest replacement need to lowest replacement need. TRPA is responsible for tracking the available funding and authorizing replacement vehicles annually through consultation with TTD and TART. Upon authorization, the operator will be responsible for entering and administering the project in FTA’s TrAMS system. The list will be adjusted annually as new vehicles are purchased, old vehicles are replaced, and as new needs arise. Despite a need to increase fleet sizes to accomplish regional transit mode share goals of five percent, the Tahoe Fleet Replacement Fund will be limited to asset replacement only and will not fund new bus purchases for fleet expansion. TRPA, TTD, and TART will continue working together to identify new funding sources for transit and asset management that can potentially be added to this funding program. The new Tahoe Fleet Replacement Fund and TAM program will be amended in to the Transit MOU between TRPA, TART, and TTD.