

Threshold & Project Impact Regional Transportation Plan Project Assessment/Fee Update

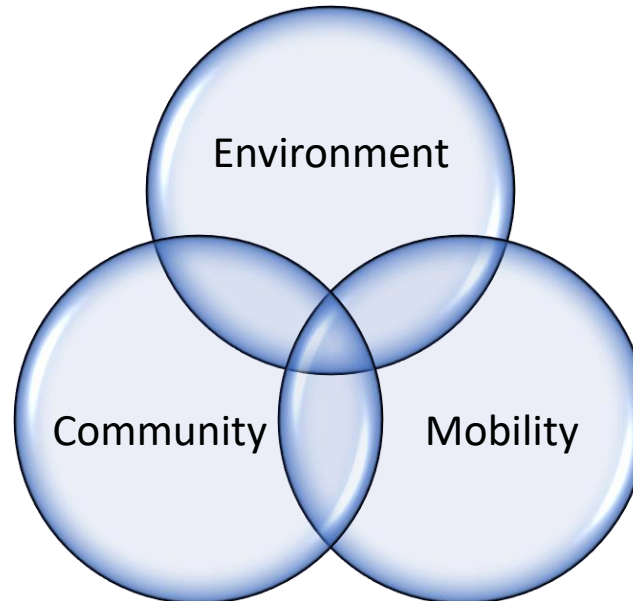
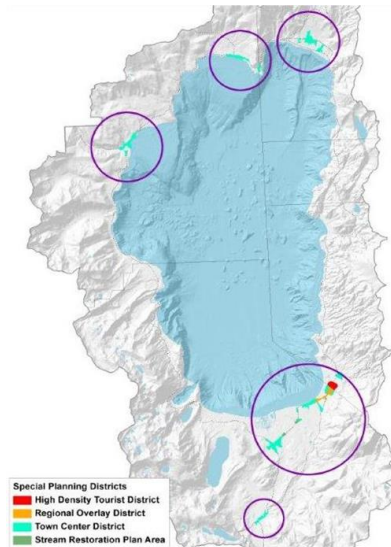
TRPA GOVERNING BOARD

APRIL 28, 2021



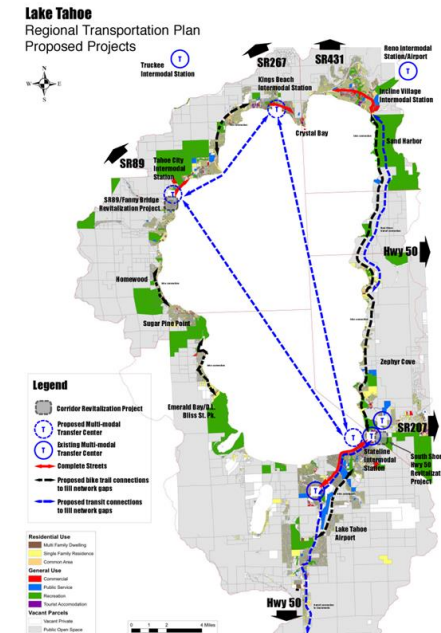
Regional Vision

- Improved Environment
- Viable Communities
- Multi-Modal Mobility



System for Achieving Regional Vision

- Threshold Standard(s)
- Plans
(i.e., Regional Plan, RTP/SCS)
- Implementation Tools
(i.e., Code, EIP)



Threshold Standard Update



Threshold standards

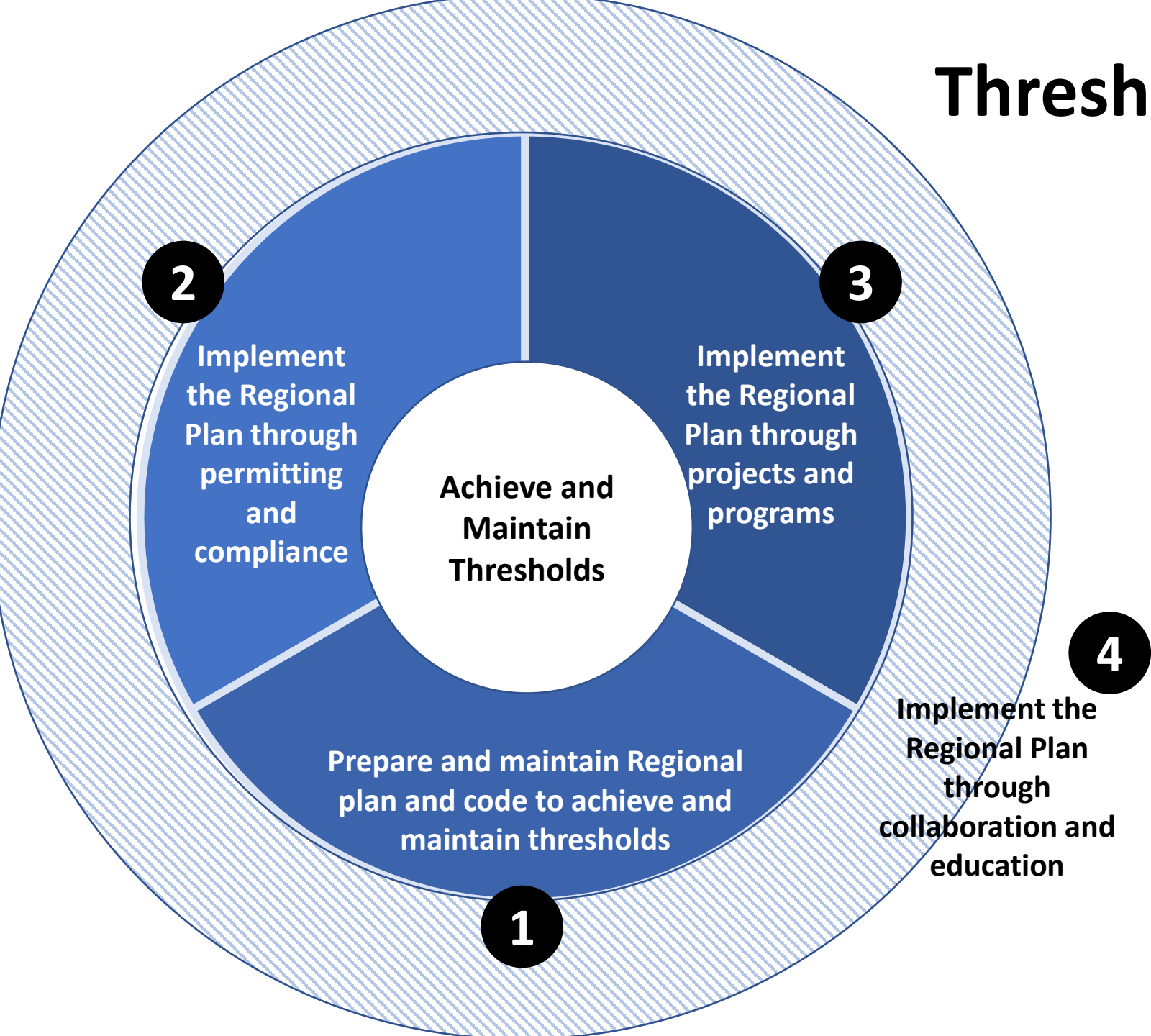




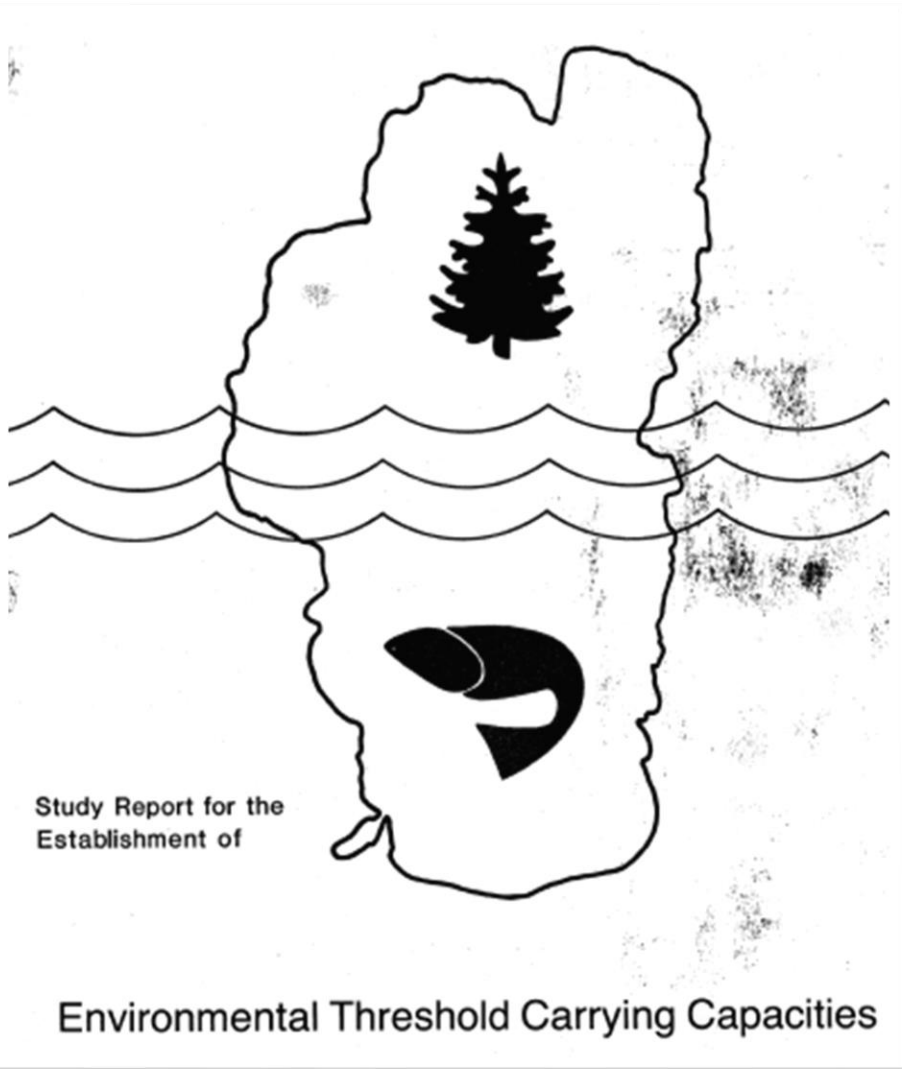
Photo Credit: Robert.Pittman is licensed under CC BY-NC-SA 2.0

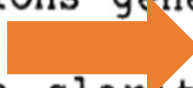






Origin of the VMT standard



Nitrate Deposition. Nitrates deposited from the atmosphere originate from automobile emissions generated within the Basin and from sources upwind of the  Nitrates contribute to algal growth which affects the clarity of Lake Tahoe. The corresponding threshold is to:

Reduce the transport of nitrates into the Basin and reduce oxides of nitrogen (NO_x) produced in the Basin consistent with the water quality thresholds

POLICY: It shall be the policy of the TRPA Governing Board in the development of the Regional Plan to reduce vehicle miles of travel in the Basin by 10 percent of the 1981 base year values.

1. Basis for Recommendation. Initial studies have shown that airborne sources of nitrate contribute significant quantities of this element to the lake and land surfaces. In order to attain the water quality thresholds, a reduction in atmospheric deposition of inorganic nitrogen will be required.

2001 Threshold Evaluation



Regional Plan for the Lake Tahoe Basin
2001 Threshold Evaluation Draft

G. AQ-7: VEHICLE MILES TRAVELED (VMT)

Vehicle miles traveled or VMT is a computed value that measures the extent to which an area is reliant on the private automobile for trip making. The TRPA transportation model calculates number of trips made on the highway network and the distance between trip origins and destinations, for each trip purpose. Total VMT is the sum of all of the trip lengths of all trip purposes. TRPA calculates VMT for the average peak summer day. In

AQ-7 2001 Recommendations

1. Evaluate VMT and its effectiveness as a threshold standard for air quality. Determine whether another indicator would allow for better evaluation of air quality impacts (i.e., transit performance standard, Level Of Service). Determine level of significance VMT plays in visibility impacts and increased NO_x concentrations. (Dec 2004).

2006 Threshold Evaluation

**2006
Threshold Evaluation
Report**

Prepared by TRPA Staff
September
2007



2.5.7 AQ-7 VEHICLE MILES TRAVELED (VMT)

Threshold Recommended Changes

The purpose of the VMT threshold is to reduce the amount of nutrients deposited to the lake through vehicular activity. This included the nitrogen emission from the tailpipe as well as the nutrients associated with re-entrained road dust. However, because emissions associated with VMT vary greatly depending on the type or mode of transportation, lowering VMT can actually increase nutrients and other pollution to the Basin. For this reason, TRPA will be developing a new program after 2008 that incorporates VMT with emissions from each class of vehicle or mode of travel. By combining VMT with mode specific emission factors, this will provide much more valuable information and allow us to recommend improvements based on emission reduction potentials.

Rationale for Change

The existing threshold does not correlate well with the intended purpose of reducing NOx emissions or nitrogen deposition to Lake Tahoe. The recommended changes are based on the finding that substantial evidence to provide a basis for a threshold standard does not exist. As written, it is possible to actually increase nutrients and other harmful pollution to the Basin by decreasing VMT, although it seems intuitive that if there were less vehicle miles traveled there would be fewer emissions. However, because emission levels per mile from passenger vehicles have significantly outpaced those of other modes of travel over the last ten years, it

2011 Threshold Evaluation



CHAPTER 3 Air Quality

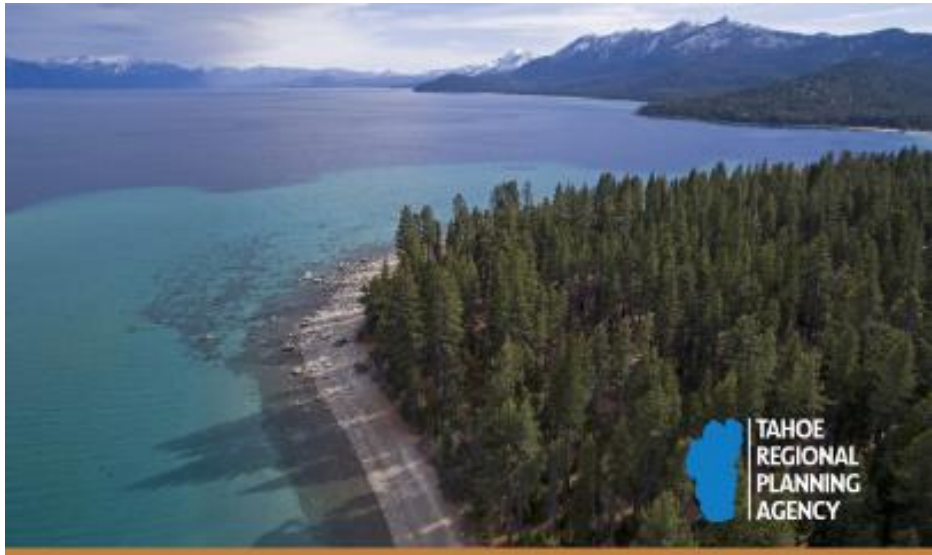
Chapter Contributors:

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projects and the lagging economic conditions may have resulted in effectively reducing VMT.

Recommendations for Additional Actions – The original supposition that there is a relationship between VMT and air and water pollutant loads needs to be further evaluated. For example, the question of what level of VMT needs to be maintained in order to avoid excessive loading of nitrate to Lake Tahoe, should be addressed by research. Alternatively, consider revising the VMT Threshold Standard to better measure the use alternative modes of transportation.

2015 Threshold Evaluation



CHAPTER 3 Air Quality

2015 THRESHOLD EVALUATION

TAHOE REGIONAL PLANNING AGENCY || *lake tahoe*



RECOMMENDATIONS



Analytic Approach – No changes recommended.

Monitoring Approach – No changes recommended.

Modification of the Threshold Standard or Indicator – As fuel mix technology, vehicle emissions standards, and overall fuel economy of the nation’s vehicle fleet improve, the relationship between VMT and NOx emissions has evolved. Nationally, VMT continues to increase while NOx emissions have drastically declined. On average, NOx emissions have decreased from 3.6 grams/mile in 1955 to 0.217 grams/mile in 2013, and are forecast to be 0.13 grams/mile in 2020. Consistent with the recommendations of past threshold evaluation report, the link between the standard and the desired conditions should be assessed to ensure that it is still the appropriate air quality measure.

Cleaner Cars

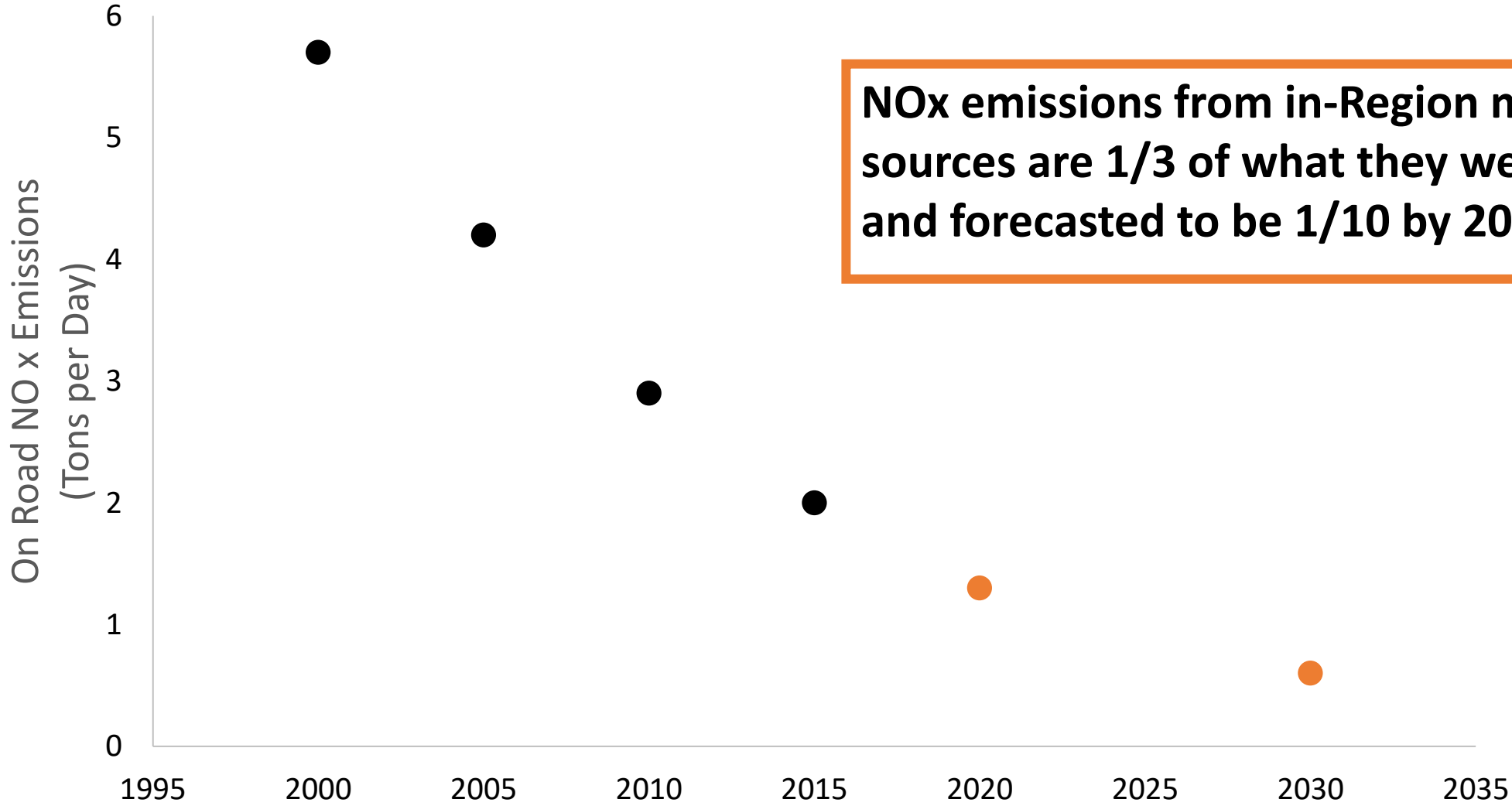
Cleaner Cars, Trucks, and Fuels

Compared to 1970 vehicle models, new cars, SUVs and pickup trucks are roughly 99 percent cleaner for common pollutants (hydrocarbons, carbon monoxide, nitrogen oxides and particle emissions). New heavy-duty trucks and buses are roughly 99 percent cleaner than 1970 models.



<https://www.epa.gov/air-pollution-transportation/accomplishments-and-success-air-pollution-transportation>

VMT and NOx



Source: <https://www.arb.ca.gov/ei/maps/basins/abltmap.htm>

Lake Tahoe TMDL

Final
Lake Tahoe Total Maximum Daily Load
Report
November 2010



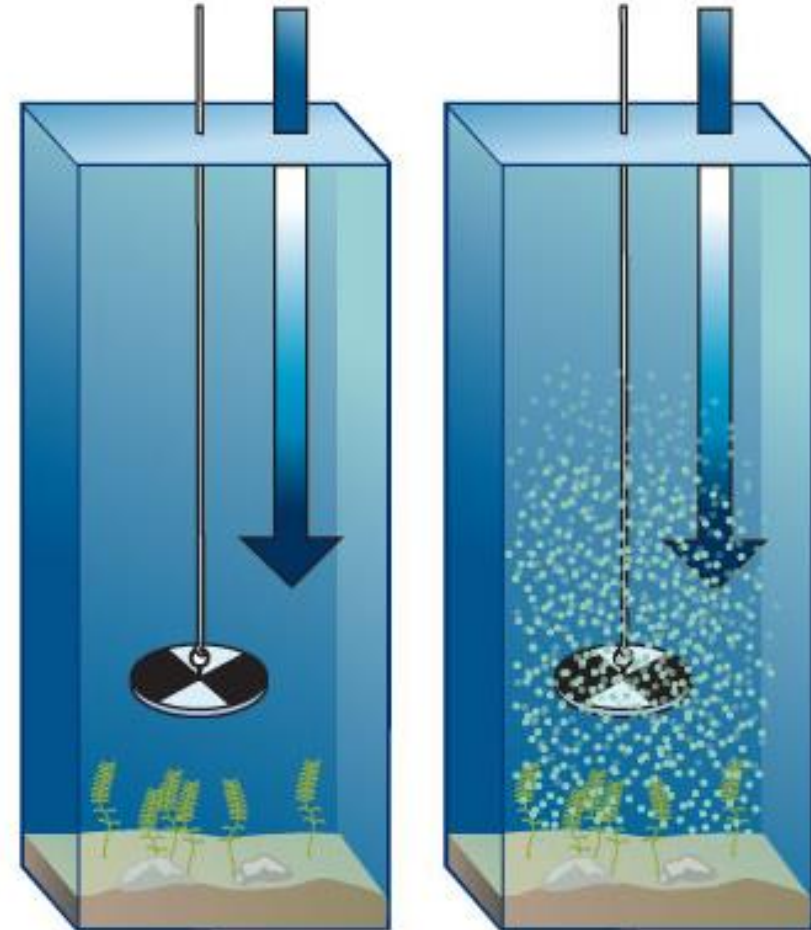
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Contact Person:
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Senior Engineering Geologist
Telephone: (530) 542-5453
DFS@waterboards.ca.gov



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jkuchnic@ndep.nv.gov



Tahoe Science Advisory Council

Natural Resource Evaluation Systems: Assessment of Best Practices for the Tahoe Regional Planning Agency

Tahoe Science Advisory Council Technical Report | October 2017



A product of the Tahoe Science Advisory Council prepared by:

Alan Heyvaert - *Desert Research Institute; TSAC co-chair*
Christopher Knopp - *Desert Research Institute consultant*
Ed Parvin - *U.S. Geological Survey*
Casey Schmidt - *Desert Research Institute*

TSAC

Specific –

Defined/understood the same way by all people

Measurable -

Able to measure progress towards achievement

Achievable –

Realistic given the realities faced

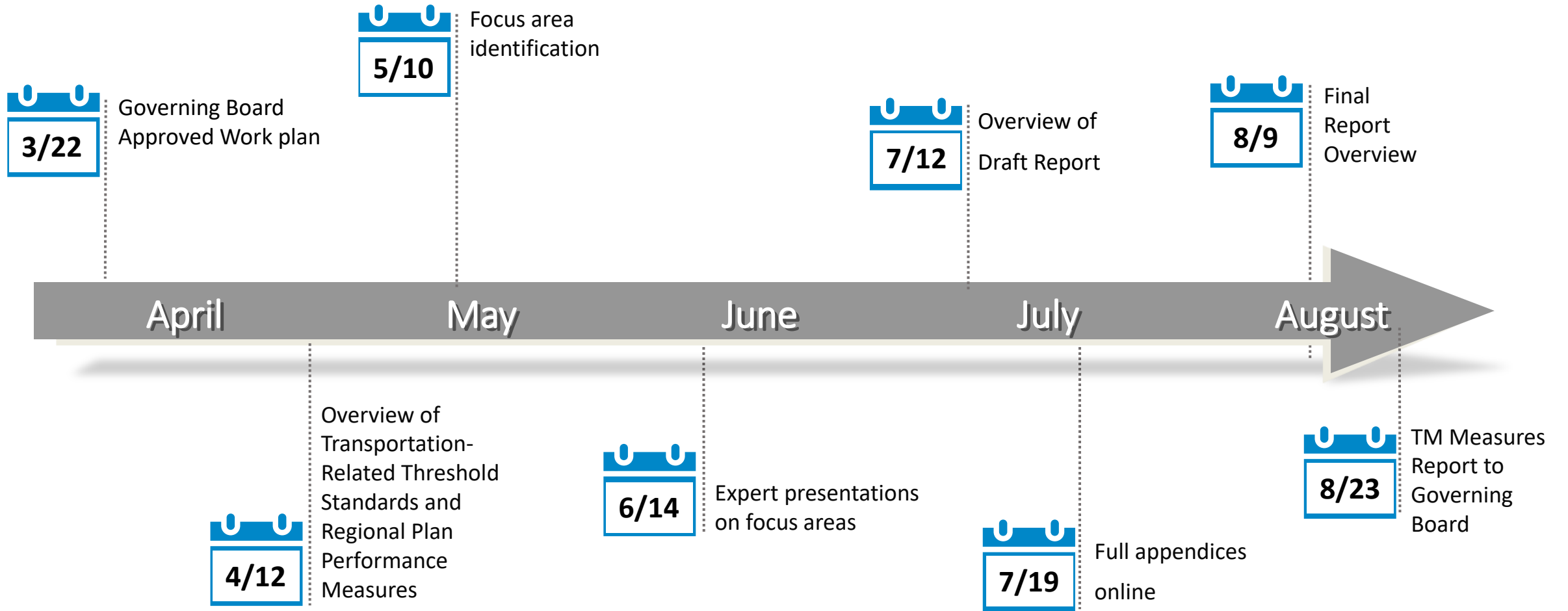
Relevant –

Goal/standard relates to priority issues and is used to inform management

Time Bound -

Clearly linked to a specific time when achievement is expected

Transportation Measures Working Group (2017)



Goal

1982

- Reduce NOx emissions and control algae growth



2021

- Promote Mobility
- GHG Emissions
- Reduce Dependence on the Automobile

An Act

gress to the Tahoe Regional Planning Com
others to cooperate with the planning agency th

ate and House of Representatives of the Unites States of
er to encourage the wise use and conservation of the waters
ea around said lake, the consent of the Congress is hereby gi
compact heretofore adopted by the States of California and Nev

TAHOE REGIONAL PLANNING COMPACT

ARTICLE I. - FINDINGS AND DECLARATIONS OF POLICY

d and declared that:

e waters of Lake Tahoe and other resources of the region are
degeneration, which endangers the natural beauty and eco

tic and private interests and investments in the re

hibits unique environmental and ecol

“To reduce dependency on the automobile by making more effective use of existing transportation modes and of public transit to move people and goods within the region;”



Tamiami Trail
EXIT 3/4 MILE

1/4 MILE
EXIT ONLY

Photo Credit: <https://www.thecarconnection.com>

The Plan



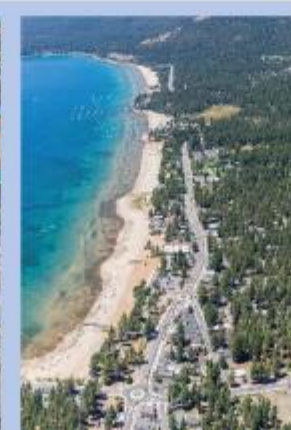
THRESHOLD STANDARDS AND REGIONAL PLAN

TAHOE REGIONAL PLANNING AGENCY || *Lake Tahoe*

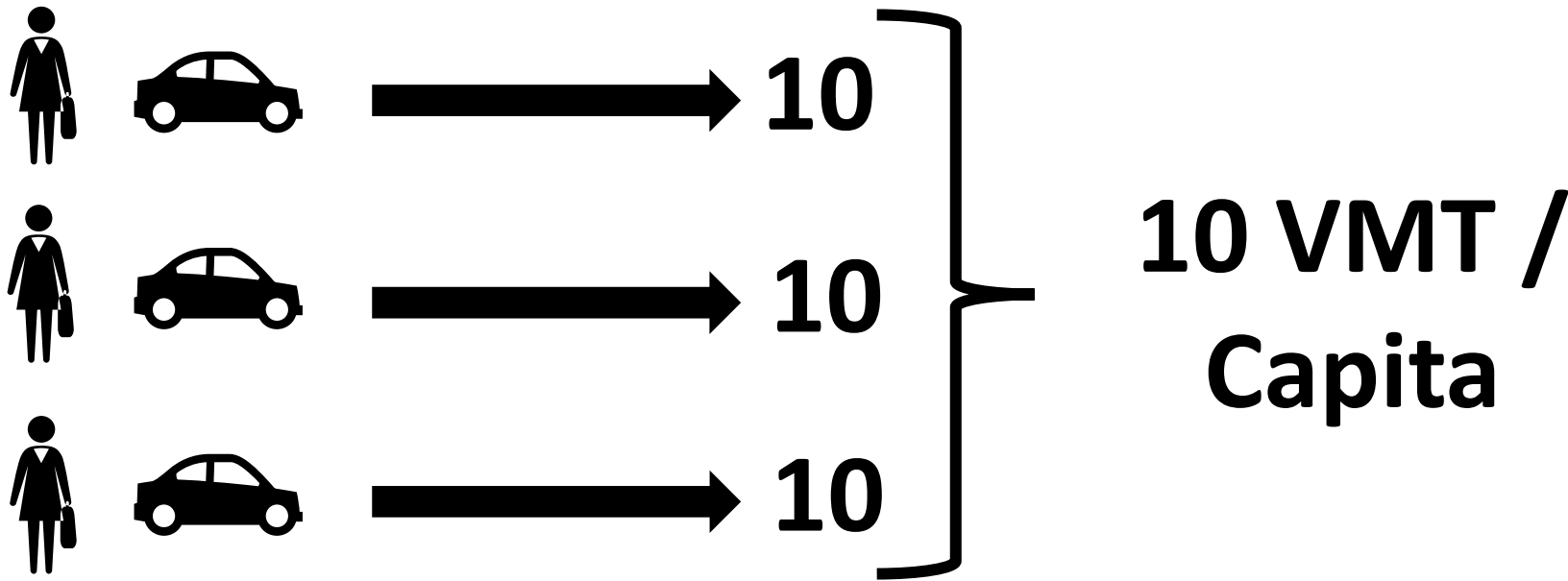


REGIONAL TRANSPORTATION PLAN

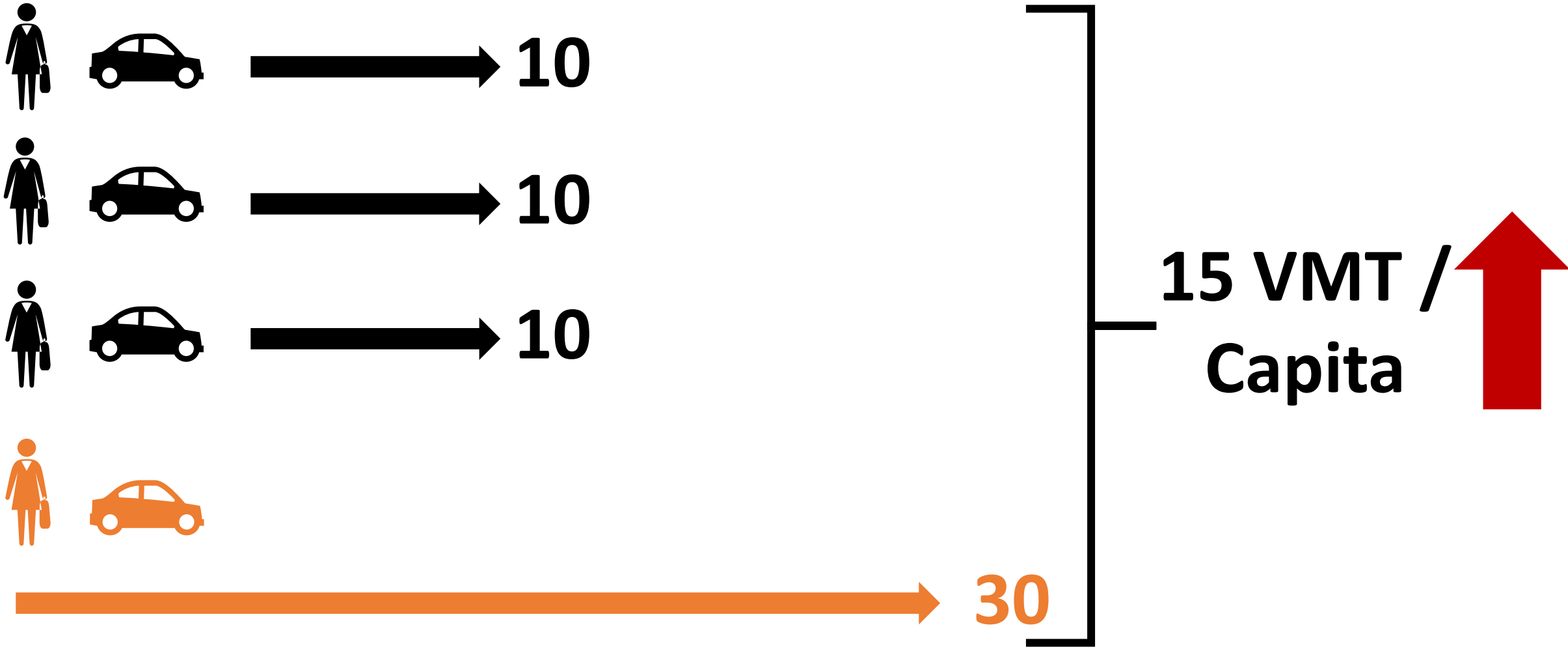
TAHOE REGIONAL PLANNING AGENCY || *Lake Tahoe*



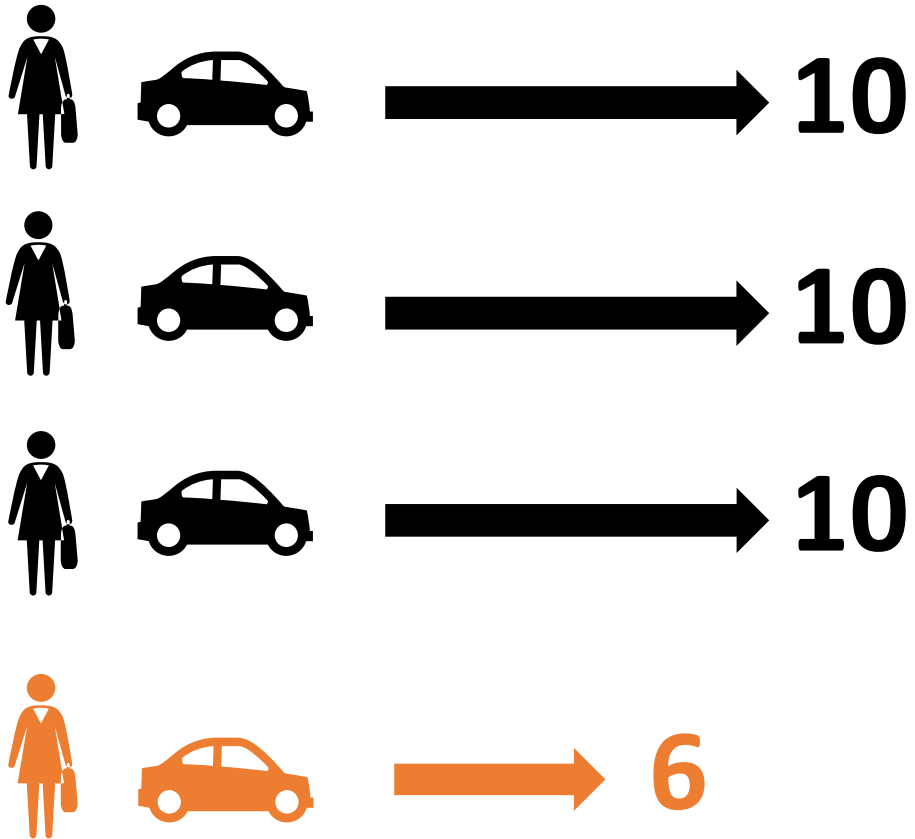
Measuring Success



Old model



New model



**9 VMT /
Capita**



Three step process

$$\frac{\text{VMT}^{(1)}}{\text{All travelers}^{(2)}} = 12.48 \quad \Rightarrow \quad \text{Target}^{(3)}$$

VMT / Capita

1 1,483,050 (Source: HPMS 2017-2019)

2 118,856 (Source: TEPM)

3 Target Setting

Analyzed Full Implementation



THRESHOLD STANDARDS AND REGIONAL PLAN

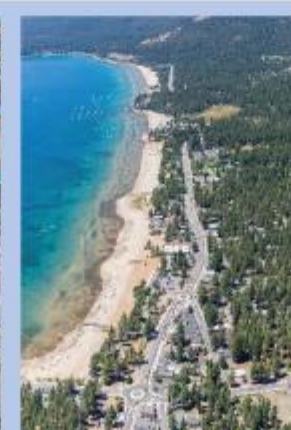
TAHOE REGIONAL PLANNING AGENCY || *Lake Tahoe*



Executive Summary

REGIONAL TRANSPORTATION PLAN

TAHOE REGIONAL PLANNING AGENCY || *Lake Tahoe*



DRAFT
September 2020

Three step process

$$\begin{array}{r}
 \text{VMT} \quad \textcircled{1} \\
 \hline
 \text{All travelers} \quad \textcircled{2}
 \end{array}
 = 12.48 \quad \Rightarrow \quad 11.63 \quad \textcircled{3}$$

VMT / Capita VMT / Capita

Reduce miles traveled by the average person in the Tahoe Region by 6.8%

1 1,483,050 (Source: HPMS 2017-2019)

2 118,856 (Source: TEPM)

3 6.8% Reduction

Recommended Standard

Transportation and Sustainable Communities

TSC1 – Reduce Annual Daily Average VMT Per Capita by 6.8% from 12.48, the 2018 baseline, to 11.63 in 2045

Management Framework

1. Independent Guidance
2. Established Milestones
3. “Triggered” Responses



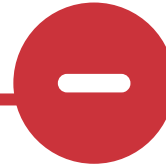
1. Independent Advisory Body

- Summarize performance, findings, and provide recommendations.
- Transmit recommendations every two years.



What's working

1. X.....
2. X.....
3. X.....



What's not working

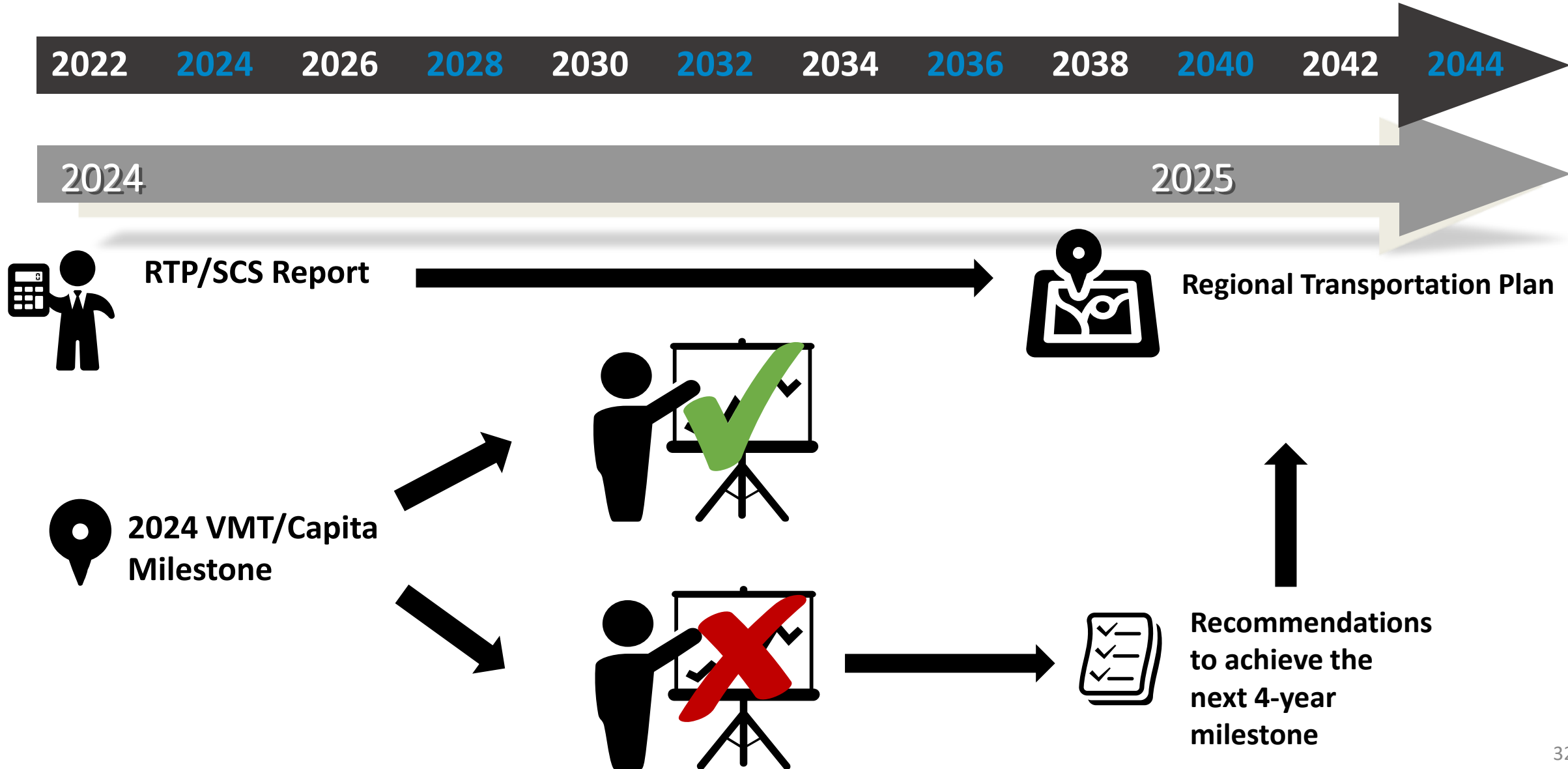
1. Y.....
2. Y.....
3. Y.....



Recommendations

What should we change?

2) Adaptive management process



3) “Triggered” management responses



2024 Funding Milestone

(1) Standard of significance increases to no-net unmitigated VMT

VMT per Capita Milestones

(1) 10% mobility mitigation fee increase
(2) Standard of significance outside of town centers and buffers increases to no-net unmitigated VMT

Threshold Standards

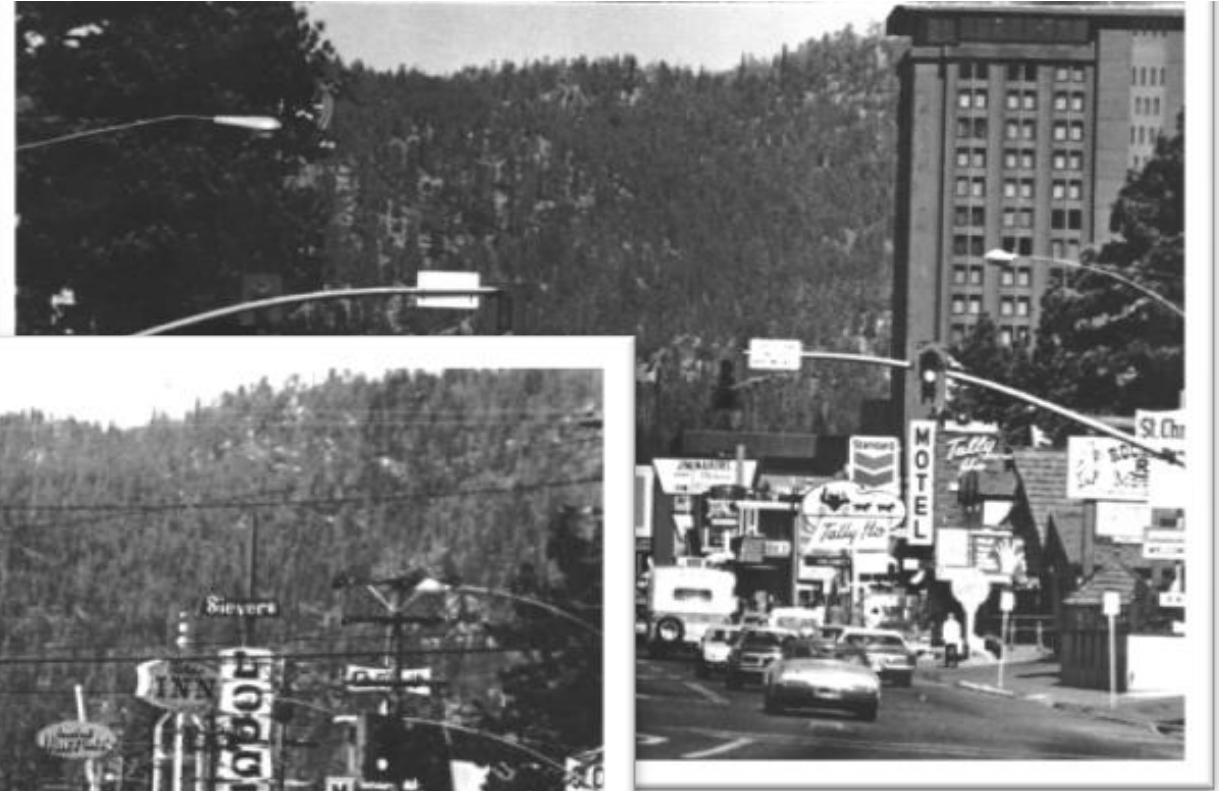
Restore



Protect



Tahoe through the years



Threshold Standards

Restore



Protect

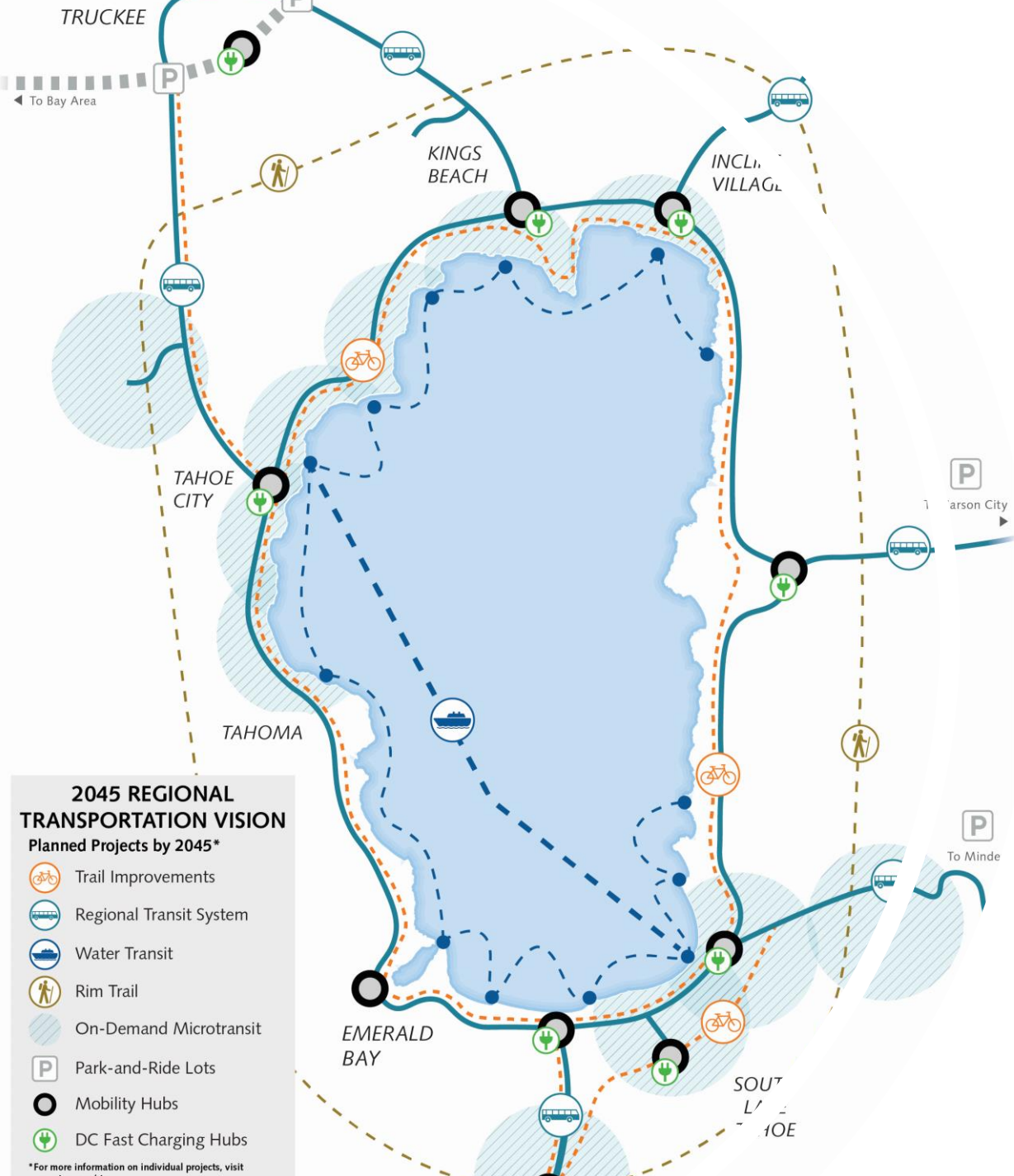


Create



2020 REGIONAL TRANSPORTATION PLAN/ SUSTAINABLE COMMUNITIES STRATEGY





21st Century VISION

Tahoe’s transportation system is interconnected, inter-regional, and sustainable, connecting people and places in ways that reduce reliance on the private automobile.

Enhanced Elements of RTP/SCS

Meet GHG Goals/Curbing VMT

New Funding

Bi-State & Regional Alignment on Priorities

Innovation & Technology

Increasing Private Sector Role

Recreation Travel & Access


RTP Goals – New & Enhanced Policies

- **Environment:**

- Implement GHG Policies
- Project Impact Analysis

- **Connectivity:**

- Emphasis on TMA and regional partner collaboration
- Call out “trail heads and shoreline access points’ for frequent transit service
- Focus on parking coordination and maintaining parking maximums and shared parking standards
- Incorporating development of multimodal amenity guidelines

A circular icon containing a stylized map with a location pin and a road network.

Enhance and sustain the connectivity and accessibility of the Tahoe transportation system, across and between modes, communities, and neighboring regions, for people and goods.

A circular icon containing a stylized recycling symbol (three arrows forming a triangle) with a tree in the center.

Protect and enhance the environment, promote energy conservation, and reduce greenhouse gas emissions.

RTP Goals – New & Enhanced Policies

- **Safety:**

- Encourage appropriate agencies to use traffic incident management performance measures
- Support emergency preparedness and response planning, including the development of regional evacuation plans
- Emphasis on safety data collection and analysis

- **Operations and Congestion Management:**

- Making policies relevant with new shared on demand mobility services such as ride share, bike share
- Coordinate policies across multiple partners to support new mobility devices
- Invest resources in marketing and outreach campaigns to promote the use of non-auto travel options
- Track and prepare for emerging transportation technologies



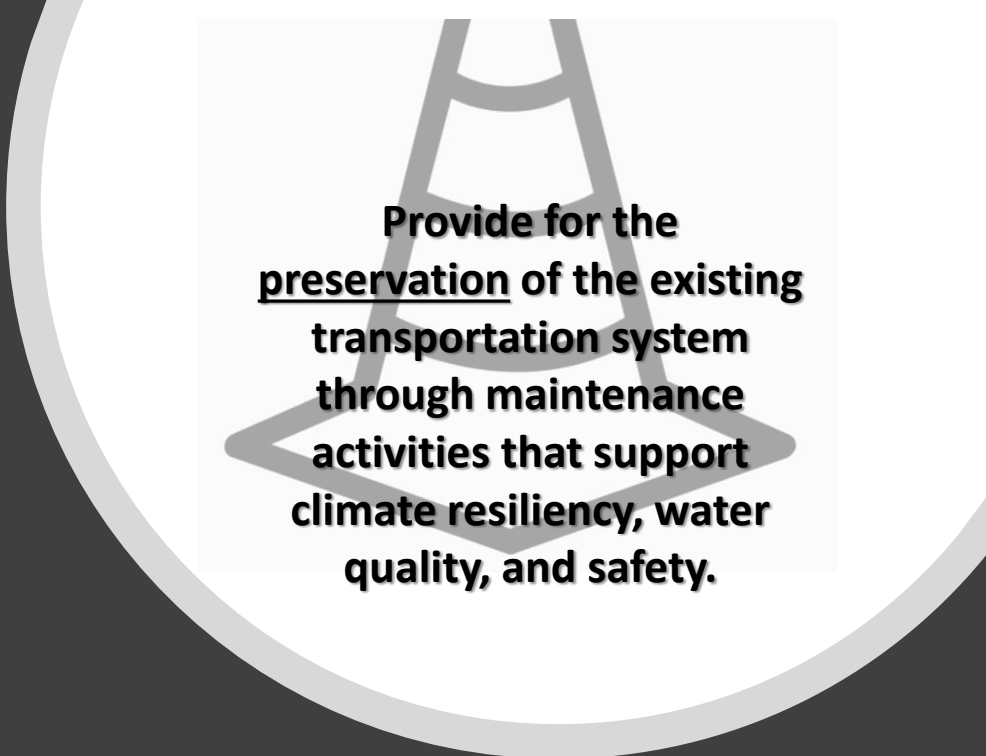
Provide an efficient transportation network through coordinated operations, system management, technology, monitoring, and targeted investments.




Increase safety and security for all users of Tahoe's transportation system.

RTP Goals – New & Enhanced Policies

- Economic Vitality & Quality Of Life:
 - New focus on public transit in identified Priority Communities
 - Collaboration emphasized with bi-state partners regional and inter-regional partners to establish efficient rail, air, and bus transportation connections...
 - Collaboration between public lands managers, departments of transportation, transit providers, and other regional partners to support sustainable recreation and multi-modal access to recreation sites
- System Preservation:
 - Emphasis on improving winter transit access
 - Advancing transportation planning through public participation and collaboration



Provide for the preservation of the existing transportation system through maintenance activities that support climate resiliency, water quality, and safety.



Support the economic vitality of the Tahoe Region to enable a diverse workforce, sustainable environment, and quality experience for both residents and visitors.

Project Impact Assessment & Fee



Proposed Framework Objectives

Update

To align with the VMT threshold update and its focus on promoting mobility, reducing mobile source greenhouse gas (GHG) emissions, and reducing dependence on the automobile.

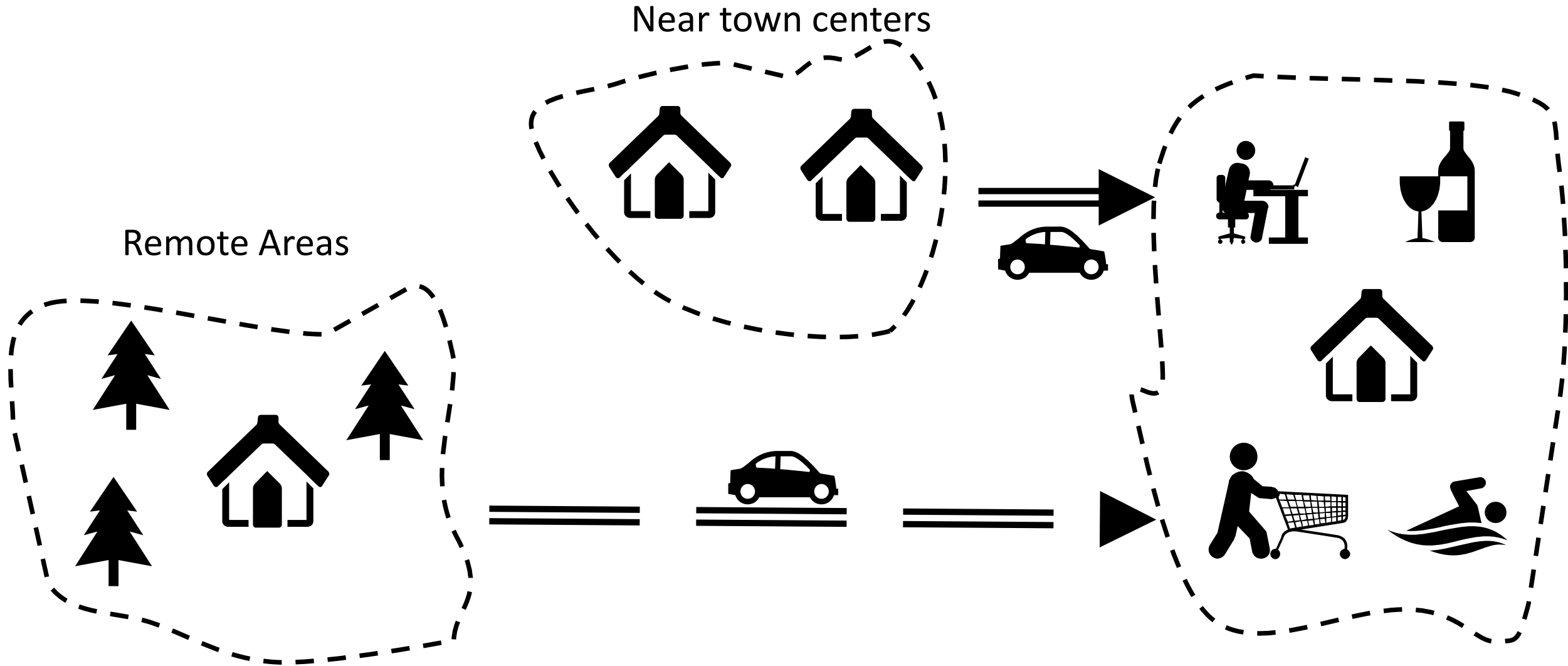
Connect and Align

Better connect and align TRPA and California jurisdiction's project impact assessment for VMT (SB 743).

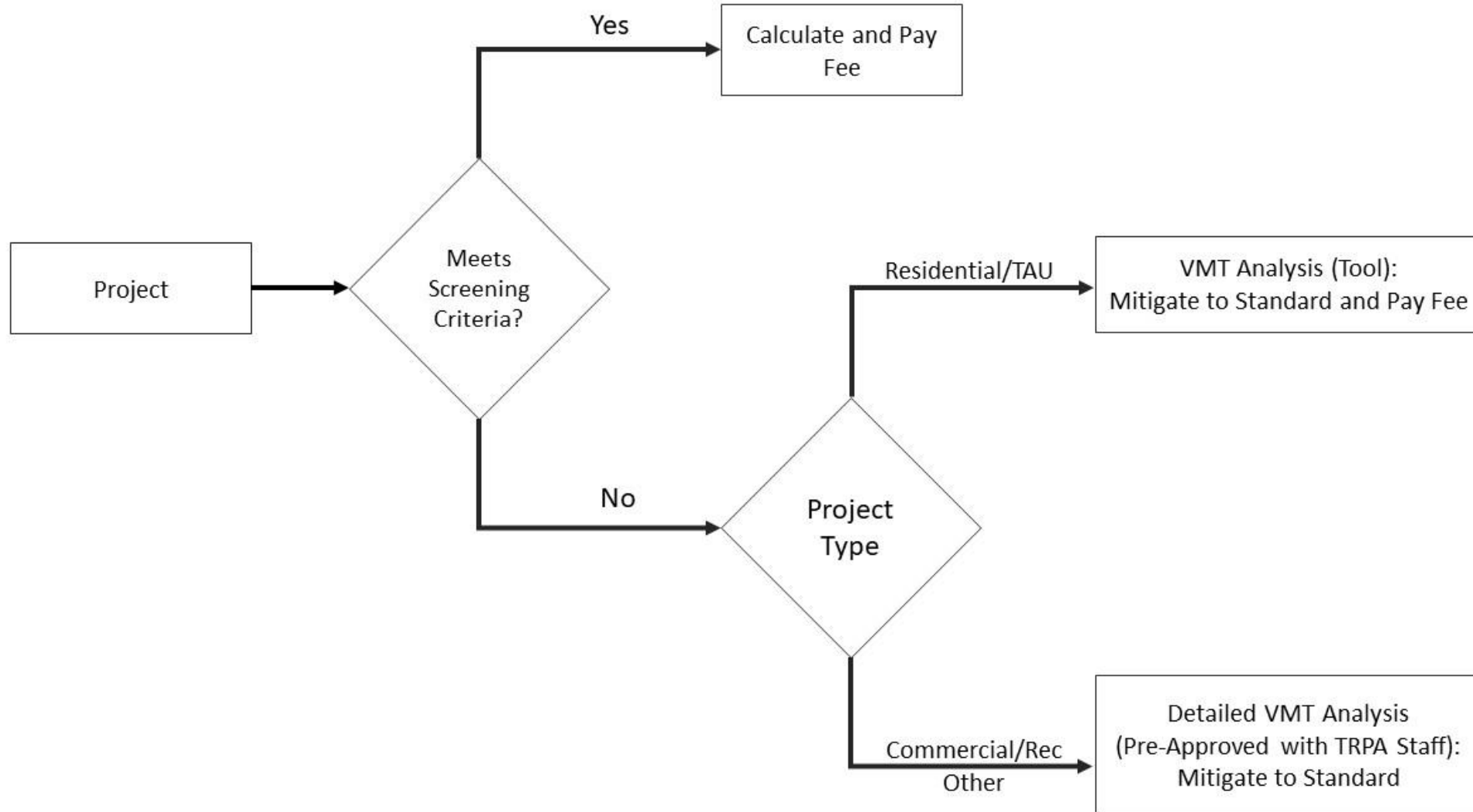
Accelerate

Accelerate development of the walkable, bikeable, transit-friendly vision of the Regional Plan and Regional Transportation Plan.

Trips to Vehicle Miles Travelled (VMT)

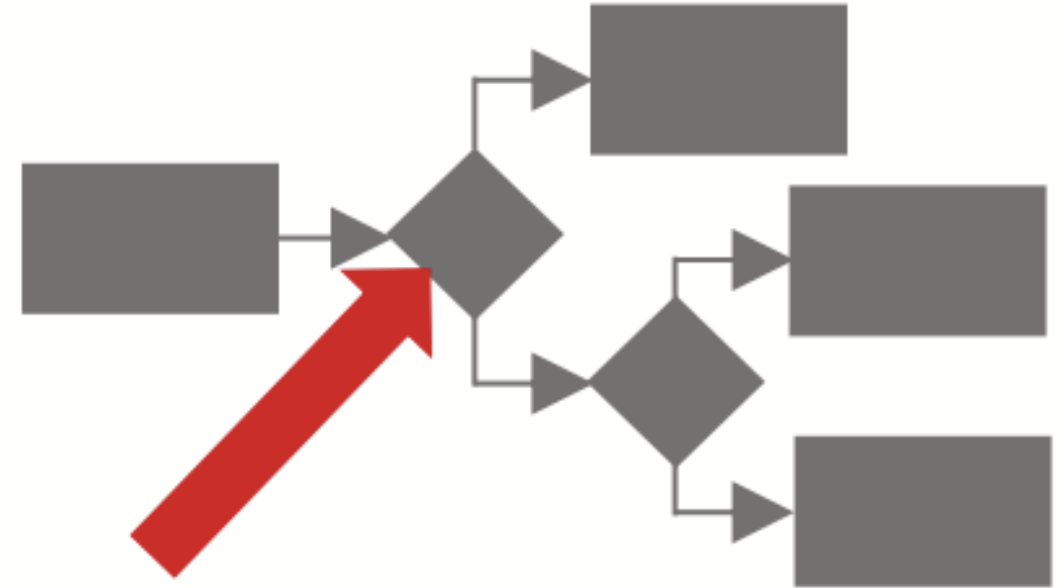


Framework

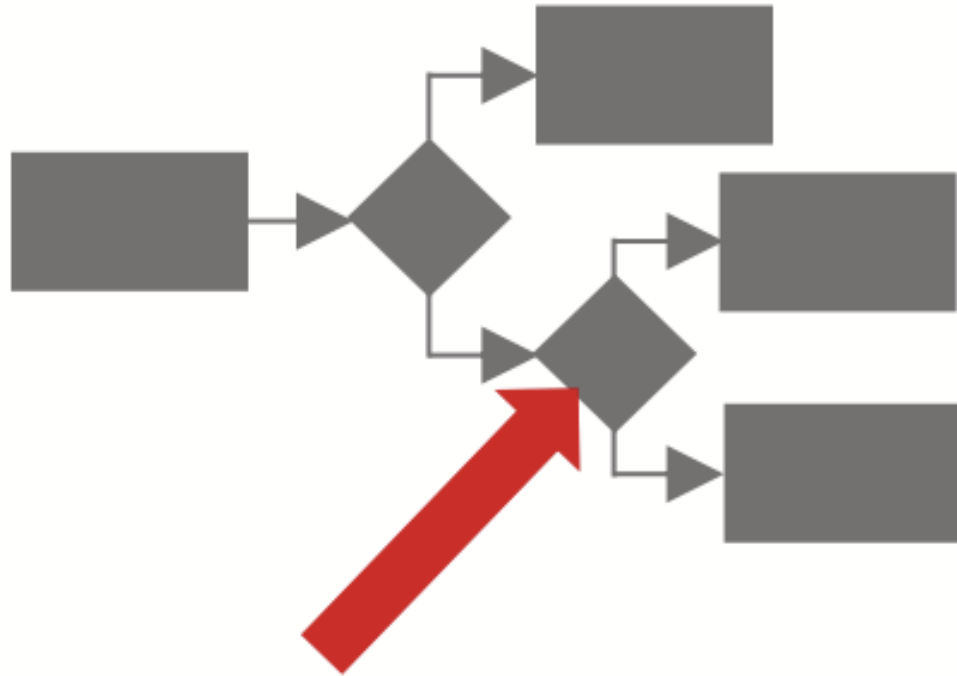


Screening Criteria

- Town and Regional Centers Incentives
 - 200 DVTE → 1,300 VMT
- All Other Areas
 - Aligns with CA jurisdictions/SB 743
 - 110 DVTE → 715 VMT



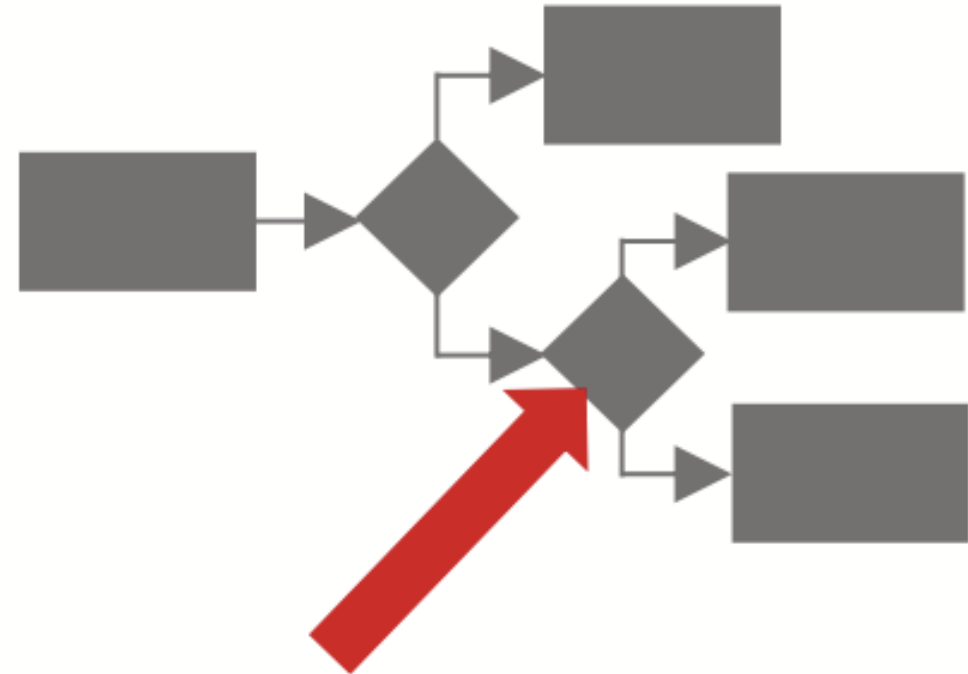
Standards of Significance



- For non-screened projects
- A defined level above which a project would have a significant transportation impact, measured with VMT
 - Adapted to Tahoe
 - Sub-regional by land use type
 - Applies to net overall change in VMT

Mitigations

- Projects mitigate new VMT
 - Linked to the RTP
- Index fee rate to CPI
- Recognizes jurisdiction level VMT credits



Project Impact Assessment Tool

South Lake Tahoe Town Center: 60 Unit Multi-Family Residential Development

yapps.io/PIA_Tool_Demo/

Enter Project Name

Select Project Type

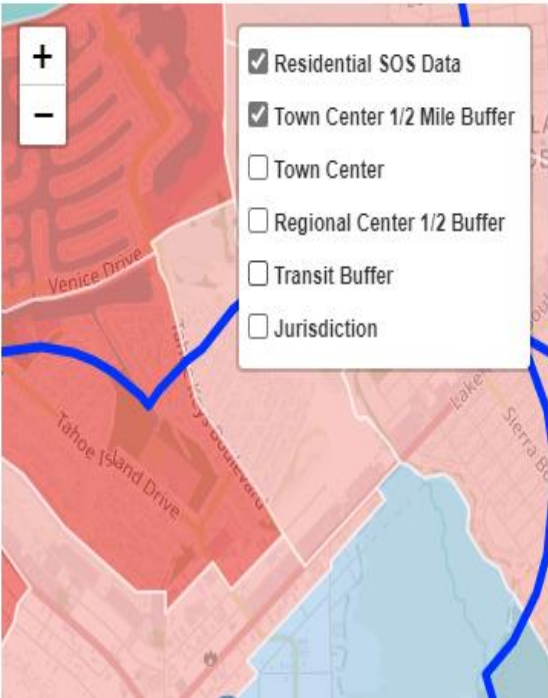
Residential ▾

Number of Residential Units

Low Income Units

Yes
Screened

Select Project Location



1,195

Project Total VMT

1,276

Project SOS VMT

0

VMT Mitigation Needed

South Lake Tahoe Outside of Town Center: 25 Unit Multi-Family Residential Development

★ apps.io/PIA_Tool_Demo/

Enter Project Name

Select Project Type

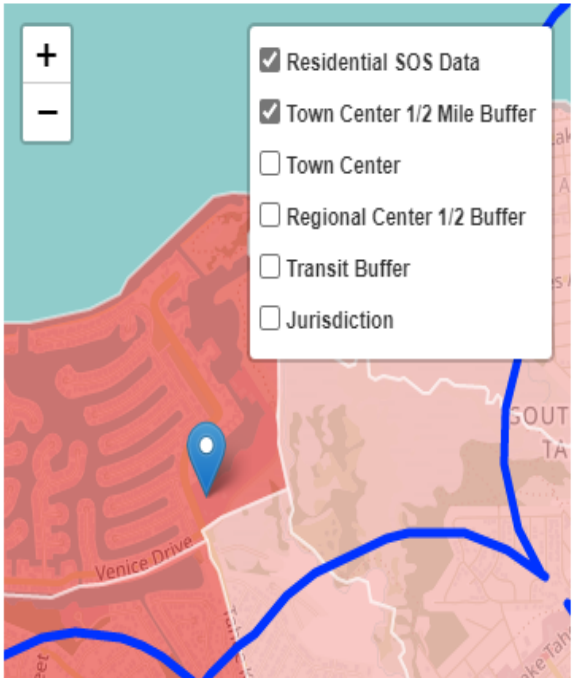
Residential ▾

Number of Residential Units

Low Income Units

No
Screened

Select Project Location



773

Project Total VMT

532

Project SOS VMT

241

VMT Mitigation Needed

Next Steps

Mobility Fee Update

- Finalize the mitigation fee

Project Tool

- Complete build out and include analysis for CA jurisdiction projects (for SB 743)

Roll Out

TRPA staff will work with local jurisdictions to prepare them for the new processes

Monitoring

- Informed by UC-Davis work with TRPA and ongoing research

Thank you!



A Voice for Lake Tahoe

Board Q & A

Comments/Issues/Concerns



Public Comment



Discussion & Motions:

1. A motion to approve the required findings, including a finding of no significant effect, for amendments to Thresholds, Regional Plan, and Code of Ordinances, as provided in Attachments K and L.
2. A motion to adopt Ordinance 2021-____, amending Ordinance 2019-03, as previously amended, to amend Air Quality Threshold Standard 14 as set forth in Attachment M1 of the staff report.



Discussion & Motions:

3. A motion to adopt Ordinance 2021-___, amending Ordinances 87-9 , as previously amended, to amend the Regional Plan Goals and Policies as set forth in Attachment M2 of the staff report.
4. A motion to adopt Ordinance 2021-___, amending Ordinance 2019-03, as previously amended, to amend the Code of Ordinances as set forth in Attachment M3.



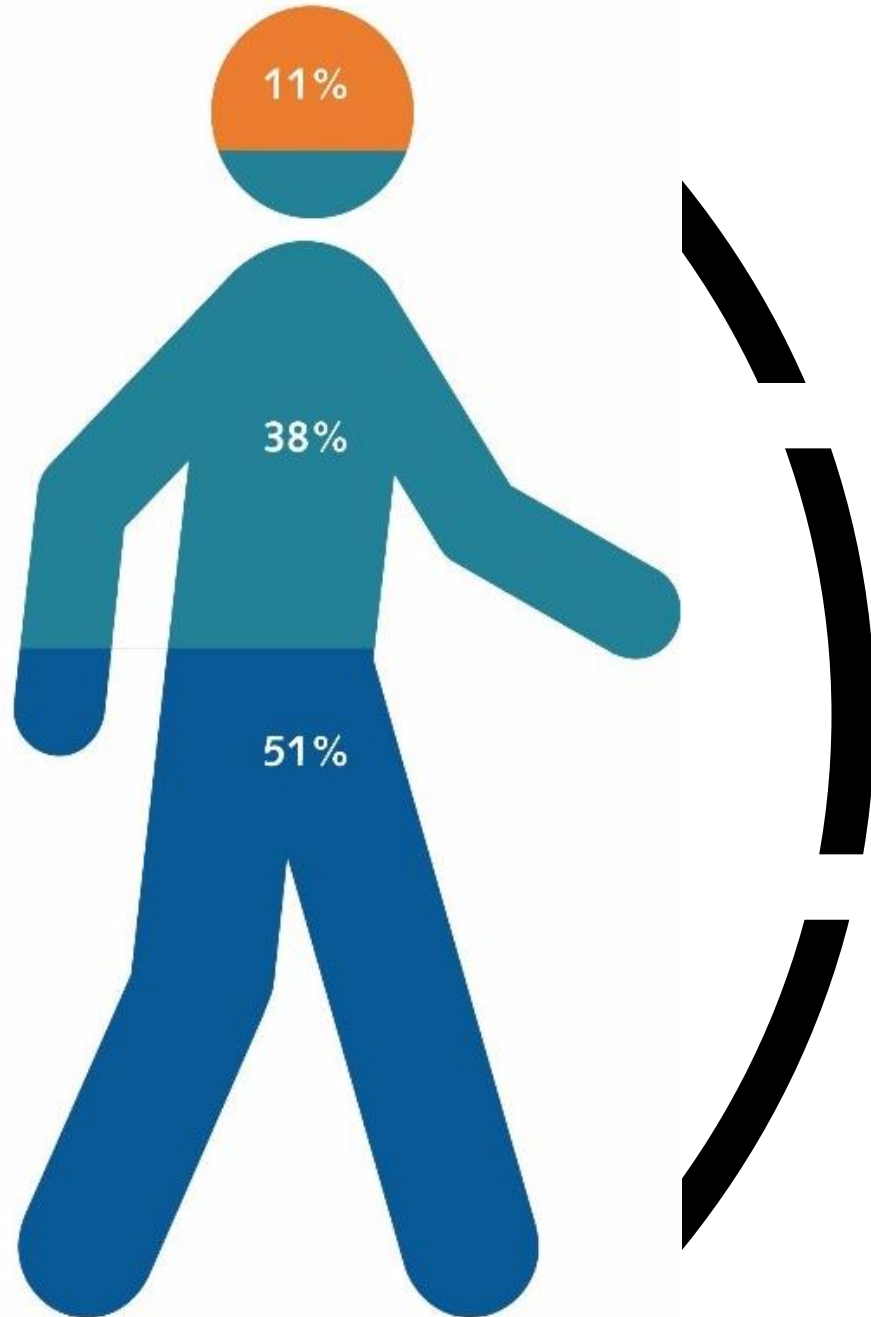
Appendices



TOOL

Schedule

	March	April
Tahoe Transportation Commission		4.9.21 RTP Recommendation
Advisory Planning Commission	3.10.21	4.14.21 Recommendation
Environmental Improvement Transportation & Public Outreach	3.24.21	
Regional Planning Implementation Committee	3.24.21 Recommendation	
Governing Board		4.28.21 Action



TRAVEL TYPES

Regional Entry and Exit Travel

long-distance trips to and from Tahoe from the Northern California and Nevada Mega-region, and across the country and the globe

Recreation Travel

residents and visitors traveling longer distance to recreation areas around the Region

Resident and Workforce Travel

commutes to work or school and routine short trips around town

Framework

